USDA

United States Department of Agriculture

Office of the Secretary
Washington, D.C. 20250

AUG - 5 2014

The Honorable Debbie Stabenow
Chairwoman
Committee on Agriculture, Nutrition, and Forestry
United States Senate
328A Russell Senate Office Building
Washington, D.C. 20510

Dear Madam Chair:

The enclosed report is being provided pursuant to Section 1546 of the Farmland Protection Policy Act (FPPA), 7 U.S.C. 4207. Section 1546 of FPPA requires that the Secretary of Agriculture report each year to the Senate Committee on Agriculture, Nutrition, and Forestry and the House Committee on Agriculture regarding the progress made in implementing the provisions of that subtitle.

The FPPA annual report includes information on the progress of Federal agencies in implementing FPPA; the review and revision of Federal policies and procedures affecting farmland conversion; and Federal, State, and local efforts to protect farmland. The enclosed FPPA Annual Report for fiscal year 2013 fulfills the requirement of Section 1546. A copy of the report is being sent to Congressmen Frank D. Lucas and Collin C. Peterson, and Senator Thad Cochran.

Sincerely,

Thomas J. Vilsack
Secretary

Enclosures

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Office of the Secretary
Washington, D.C. 20250

AUG - 5 2014

The Honorable Frank D. Lucas
Chair
Committee on Agriculture
U.S. House of Representatives
1301 Longworth House Office Building
Washington, D.C. 20515

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Ranking Member
Committee on Agriculture, Nutrition, and Forestry
United States Senate
328A Russell Senate Office Building
Washington, D.C. 20510

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Ranking Member
Committee on Agriculture
U.S. House of Representatives
1305 Longworth House Office Building
Washington, D.C. 20515

Dear Congressman Peterson:

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Thomas J. Vilsack
Secretary

Enclosures

U.S. Department of Agriculture
Natural Resources Conservation Service

# FARMLAND PROTECTION POLICY ACT ANNUAL REPORT FOR FY 2013

REPORT FROM THE SECRETARY OF AGRICULTURE

TO THE COMMITTEE ON
AGRICULTURE, NUTRITION, AND FORESTRY
UNITED STATES SENATE

AND

THE COMMITTEE ON AGRICULTURE
UNITED STATES HOUSE OF REPRESENTATIVES

**February 2014**

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The fiscal year (FY) 2013 Farmland Protection Policy Act Annual Report consists of three components:

I. Progress of Federal agencies in implementing Farmland Protection Policy Act;
II. Review and revision of Federal policies and procedures affecting farmland conversion; and
III. Federal, State, and local efforts to protect farmland.

## *I. Progress of Federal Agencies in Implementing Farmland Protection Policy Act*

Under the Farmland Protection Policy Act (FPPA), Federal agencies are required to evaluate the impacts of federally funded projects that may involve converting prime and important farmlands to nonagricultural uses and to consider alternative actions that would lessen the adverse effects of the land's conversion. In complying with the FPPA, Federal agencies request assistance from the Natural Resources Conservation Service (NRCS) by submitting a Farmland Conversion Impact Rating Form (Form AD-1006). The requesting agency then conducts a Land Evaluation and Site Assessment (LESA) of the project area. NRCS provides land evaluation information, while the responsible Federal agency completes the site assessment portion of the analysis. To implement FPPA, Federal agencies address the potential conversion of agricultural land when reviewing internal projects or providing assistance to local communities.

Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses (the land could be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water). Land used for a specific high-value food or fiber crop is classified as unique farmland. Generally, additional farmlands of statewide importance include those that are nearly prime farmland and that economically produce high yields of crops when treated and managed according to acceptable farming methods. In some local areas, there is concern for certain additional farmlands, even though these lands are not identified as having national or statewide importance. These farmlands are identified as being of "local importance" through ordinances adopted by local government. The NRCS State Conservationist reviews and certifies lists of farmland of State and local importance. These lists along with State and locally established LESA systems, if applicable, are used by Federal agencies to review and evaluate activities that may impact farmland.

According to 2010 Department of Agriculture (USDA) National Resources Inventory (NRI) data, in the twenty-eight years from 1982 to 2010, about 13 million acres or 30 percent of the land that was converted from agricultural use through urban, sub-urban, and infrastructure development was prime farmland. More than 80 percent of these prime farmland conversions occurred during the 20-year span from 1987 to 2007. The rate at which prime farmland was converted decreased from an average of over 500,000 acres per year during the period from 1997 to 2002 to an average of nearly 300,000 acres per year during the period from 2007 to 2010. For more information about the NRI, visit http://www.nrcs.usda.gov/technical/NRI/.

As defined in 7 CFR part 657, important farmland encompasses prime and unique farmland, as well as farmland of statewide and local importance. Table 1 summarizes the proportion and amount of important farmland considered for conversion as a part of Federal projects under FPPA in fiscal years 2004 through 2013.

**Table 1 – Important Farmland Evaluated under FPPA 2004–2013 (percent and acres)**

| | IMPORTANT FARMLAND (within land evaluated) | PERCENT IMPORTANT FARMLAND (of total land evaluated) | AGENCIES SUBMITTING REQUESTS |
|---|---|---|---|
| Fiscal Year | Acres | % Total Acres | No. of Agencies |
| 2004 | 60,040 | 52% | 38 |
| 2005 | 73,007 | 67% | 25 |
| 2006 | 65,989 | 62% | 26 |
| 2007 | 74,220 | 39% | 25 |
| 2008 | 87,902 | 71% | 25 |
| 2009 | 58,106 | 67% | 23 |
| 2010 | 54,103 | 38% | 30 |
| 2011 | 99,386 | 49% | 29 |
| 2012 | 36,146 | 33% | 33 |
| 2013 | 245,972 | 60% | 33 |

In Fiscal Year 2013, NRCS received 2,054 AD-1006 forms from about 33 Federal agencies requesting assistance to evaluate the impact of proposed conversions of lands that would result from their projects. A total of 407,194 acres of land from 44 States were proposed for conversion to nonagricultural uses. Of the acres reviewed, 60% (245,972 acres) were identified as important farmland (as defined in 7 CFR part 657); of these, 223,107 acres were prime or unique farmland and 22,865 acres were State or locally important farmland.

Arkansas and Virginia had the highest number of farmland acres proposed for conversion, with 337,719 acres and 11,359 acres, respectively. Eight states reported no acres, and 10 states reported fewer than 100 acres with proposed Federal actions that would result in farmland conversion (Tables 2 and 3).

In FY 2013, the Department of Energy reported the largest amount of important farmland proposed for conversion, 212,398 acres. This accounts for more than a third of all proposed important farmland conversion (Table 4).

**Table 2 - Top Ten States with Acres of Farmland Proposed for Conversion by Federal Projects**

| STATE | ACRES |
|---|---|
| Arkansas | 337,719† |
| Virginia | 11,359 |
| Utah | 9,395 |
| Texas | 4,728 |
| Florida | 4,430 |
| Indiana | 3,813 |
| Illinois | 3,468 |
| Nebraska | 3,369 |
| Alabama | 2,778 |
| Mississippi | 2,275 |

† The acres of farmland proposed for conversion in Arkansas is attributed to a Department of Energy interstate and multi-corridor power line connection project.

## Table 3 - Acres of Farmland Proposed by State for Conversion due to Federal Projects

| *State* | *Total Land Acres Proposed* | *Percentage Total Land Acres Proposed* | *Total Important Farmland Acres Proposed* | *Percentage Important Farmland Acres Proposed* | *State* | *Total Land Acres Proposed* | *Percentage Total Land Acres Proposed* | *Total Important Farmland Acres Proposed* | *Percentage Important Farmland Acres Proposed* |
|---|---|---|---|---|---|---|---|---|---|
| **AK** | 4 | 0.00% | 0 | 0.00% | **NC** | 2,094 | 0.51% | 1,750 | 0.71% |
| **AL** | 2,778 | 0.68% | 706 | 0.29% | **ND** | 127 | 0.03% | 28 | 0.01% |
| **AR** | 337,719 | 82.94% | 213,665 | 86.87% | **NE** | 3,369 | 0.83% | 304 | 0.12% |
| **AZ** | 724 | 0.18% | 723 | 0.29% | **NH** | 72 | 0.02% | 7 | 0.00% |
| **CA** | 1,763 | 0.43% | 718 | 0.29% | **NJ** | 0 | 0.00% | 0 | 0.00% |
| **CO** | 12 | 0.00% | 12 | 0.00% | **NM** | 0 | 0.00% | 0 | 0.00% |
| **CT** | 253 | 0.06% | 5 | 0.00% | **NV** | 0 | 0.00% | 0 | 0.00% |
| **DE** | 101 | 0.02% | 90 | 0.04% | **NY** | 1,591 | 0.39% | 1,237 | 0.50% |
| **FL** | 4,430 | 1.09% | 605 | 0.25% | **OH** | 1,322 | 0.32% | 1,094 | 0.44% |
| **GA** | 927 | 0.23% | 463 | 0.19% | **OK** | 2,008 | 0.49% | 644 | 0.26% |
| **HI** | 0 | 0.00% | 0 | 0.00% | **OR** | 165 | 0.04% | 165 | 0.07% |
| **IA** | 1,724 | 0.42% | 1,479 | 0.60% | **PA** | 1,543 | 0.38% | 799 | 0.32% |
| **ID** | 31 | 0.01% | 22 | 0.01% | **PR** | 0 | 0.00% | 0 | 0.00% |
| **IL** | 3,468 | 0.85% | 3,318 | 1.35% | **RI** | 0 | 0.00% | 0 | 0.00% |
| **IN** | 3,813 | 0.94% | 2,411 | 0.98% | **SC** | 371 | 0.09% | 233 | 0.09% |
| **KS** | 720 | 0.18% | 692 | 0.28% | **SD** | 267 | 0.07% | 223 | 0.09% |
| **KY** | 2,013 | 0.49% | 480 | 0.20% | **TN** | 1,493 | 0.37% | 360 | 0.15% |
| **LA** | 1,088 | 0.27% | 406 | 0.17% | **TX** | 4,728 | 1.16% | 4,382 | 1.78% |
| **MA** | 0 | 0.00% | 0 | 0.00% | **UT** | 9,395 | 2.31% | 2,031 | 0.83% |
| **MD** | 118 | 0.03% | 110 | 0.04% | **VA** | 11,359 | 2.79% | 3,289 | 1.34% |
| **ME** | 10 | 0.00% | 10 | 0.00% | **VT** | 105 | 0.03% | 62 | 0.03% |
| **MI** | 153 | 0.04% | 142 | 0.06% | **WA** | 110 | 0.03% | 37 | 0.01% |
| **MN** | 688 | 0.17% | 354 | 0.14% | **WI** | 536 | 0.13% | 462 | 0.19% |
| **MO** | 1,575 | 0.39% | 924 | 0.38% | **WV** | 34 | 0.01% | 3 | 0.00% |
| **MS** | 2,275 | 0.56% | 1,409 | 0.57% | **WY** | 4 | 0.00% | 4 | 0.00% |
| **MT** | 117 | 0.03% | 117 | 0.05% | **Totals** | **407,194** | **100.0%** | **245,972** | 100.00% |

## Table 4 - Breakdown of Acres and AD-1006 Forms Received by Federal Agencies in FY 2013

| *Federal Agency* | *No. of AD-1006 Requests to NRCS* | *No. of Acres Proposed for Conversion* | *No. of Acres Identified as Important Farmland* | *Of which:* | |
|---|---|---|---|---|---|
| | | | | *Prime or Unique* | *State or Locally Important* |
| ***Appalachian Regional Commission*** | 4 | 275 | 120 | 104 | 16 |
| ***Delta Regional Authority*** | 2 | 2 | 0 | 0 | 0 |
| ***Department of Agriculture*** | | | | | |
| • Natural Resources Conservation Service | 44 | 1,668 | 433 | 421 | 12 |
| • Rural Development | 429 | 20,387 | 5,683 | 3,924 | 1,759 |
| • Rural Utilities Service | 127 | 887 | 368 | 235 | 133 |
| ***Department of Commerce*** | | | | | |
| • Economic Development Administration | 36 | 1,059 | 347 | 262 | 85 |
| • Others (unspecified agencies) | 1 | 22 | 22 | 22 | 0 |
| ***Department of Defense*** | | | | | |
| • Department of Army | 5 | 515 | 219 | 136 | 82 |
| • Department of Navy | 2 | 38 | 38 | 33 | 5 |
| • U.S. Army Corps of Engineers | 13 | 3,958 | 1,393 | 1,393 | 0 |
| • Others (unspecified agencies) | 1 | 3 | 0 | 0 | 0 |
| ***Department of Energy*** | 17 | 326,378 | 212,398 | 197,335 | 15,063 |
| ***Department of Health and Human Services*** | | | | | |
| • Health Resources and Services Administration | 11 | 10 | 5 | 4 | 0 |
| • National Institutes of Health | 1 | 4 | 4 | 1 | 3 |
| • Others (unspecified agencies) | 11 | 144 | 5 | 0 | 5 |
| ***Department of Homeland Security*** | | | | | |
| • Federal Emergency Management Agency | 31 | 292 | 101 | 100 | 0 |
| • Others (unspecified agencies) | 7 | 101 | 70 | 70 | 0 |
| ***Department of Housing and Urban Development*** | | | | | |
| • Federal Housing Administration | 1 | 0 | 0 | 0 | 0 |
| • Others | 355 | 2,557 | 861 | 815 | 46 |
| ***Department of Interior*** | | | | | |
| • Bureau of Indian Affairs | 19 | 929 | 574 | 439 | 135 |
| • Bureau of Reclamation | 1 | 494 | 299 | 89 | 210 |
| • National Park Service | 1 | 153 | 125 | 73 | 52 |
| • Office of Surface Mining | 2 | 8,896 | 1,726 | 1,726 | 0 |
| • Others (unspecified agencies) | 4 | 385 | 319 | 314 | 5 |
| ***Department of State*** | 1 | 871 | 606 | 401 | 205 |
| ***Department of Transportation*** | | | | | |
| • Federal Aviation Administration | 43 | 938 | 879 | 738 | 141 |
| • Federal Highway Administration | 531 | 25,224 | 13,940 | 9,608 | 4,332 |
| • Federal Railroad Administration | 9 | 7,351 | 3,689 | 3,340 | 349 |
| • Others (unspecified agencies) | 207 | 2,665 | 1,298 | 1,208 | 90 |
| ***Department of Veterans Affairs*** | 3 | 31 | 21 | 3 | 18 |
| ***Environmental Protection Agency*** | 114 | 423 | 276 | 170 | 106 |
| ***Federal Communications Commission*** | 17 | 54 | 54 | 42 | 12 |
| ***Tennessee Valley Authority*** | 4 | 483 | 101 | 101 | 0 |
| **TOTAL** | **2,054** | **407,194** | **245,972** | **223,107** | **22,865** |

## *II. Review and Revision of Federal Policies and Procedures Affecting Farmland Conversion*

Based on ongoing reviews, there are no revisions of federal policies and procedures affecting farmland conversion. To simplify completion of required forms for projects that impact important farmland, NRCS developed and released Farmland Conversion Impact Rating (Form AD-1006) and Farmland Conversion Impact Rating for Corridor Type Projects (Form NRCS-CPA-106) in fillable portable document format or PDF. These forms are updated regularly and can be downloaded from the FPPA section of the NRCS website:
http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/.

## *III. Federal, State, and Local Effort to Protect Farmland*

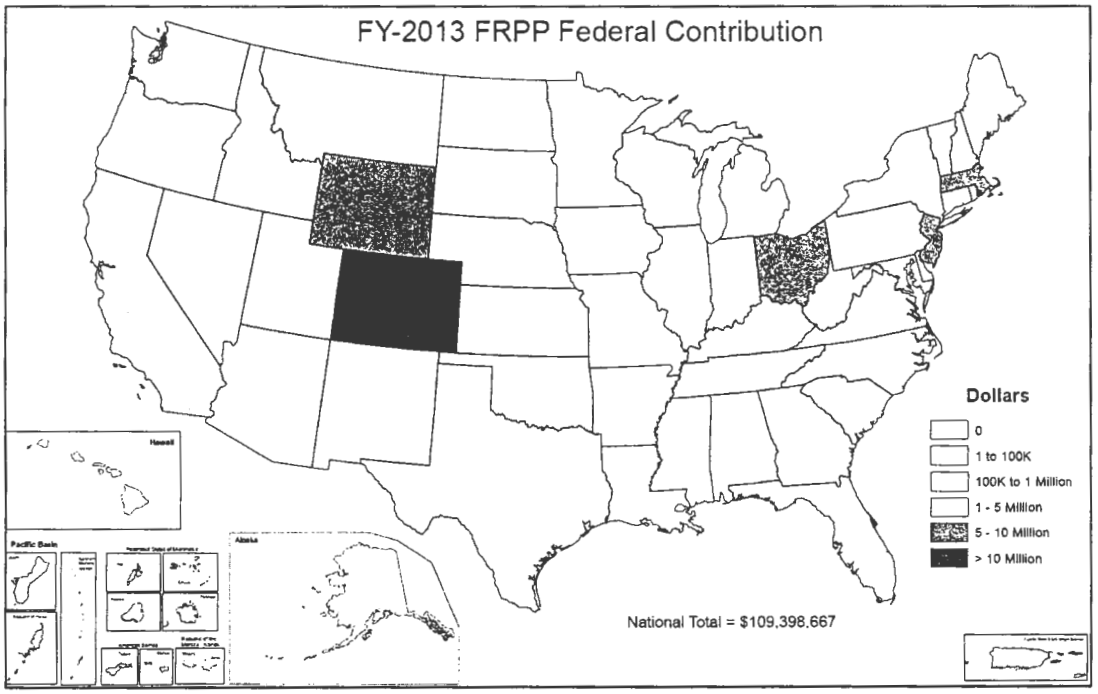
### *Farm and Ranch Lands Protection Program*

The Farm and Ranch Lands Protection Program (FRPP), first authorized by Congress in 1996, provides financial assistance to farmers and ranchers, enabling them to keep their land in agriculture. More specifically, the FRPP provides matching funds to State, Tribal, or local governments and non-governmental organizations with existing farmland protection programs to purchase conservation easements from farmers and ranchers. These entities purchase easements from landowners in exchange for a lump sum payment not to exceed the appraised fair market value of the land's development rights. Participating landowners agree not to convert their land to non-agricultural uses and to develop and implement a conservation plan for any highly erodible land. Landowners retain all rights to use the property for agriculture.

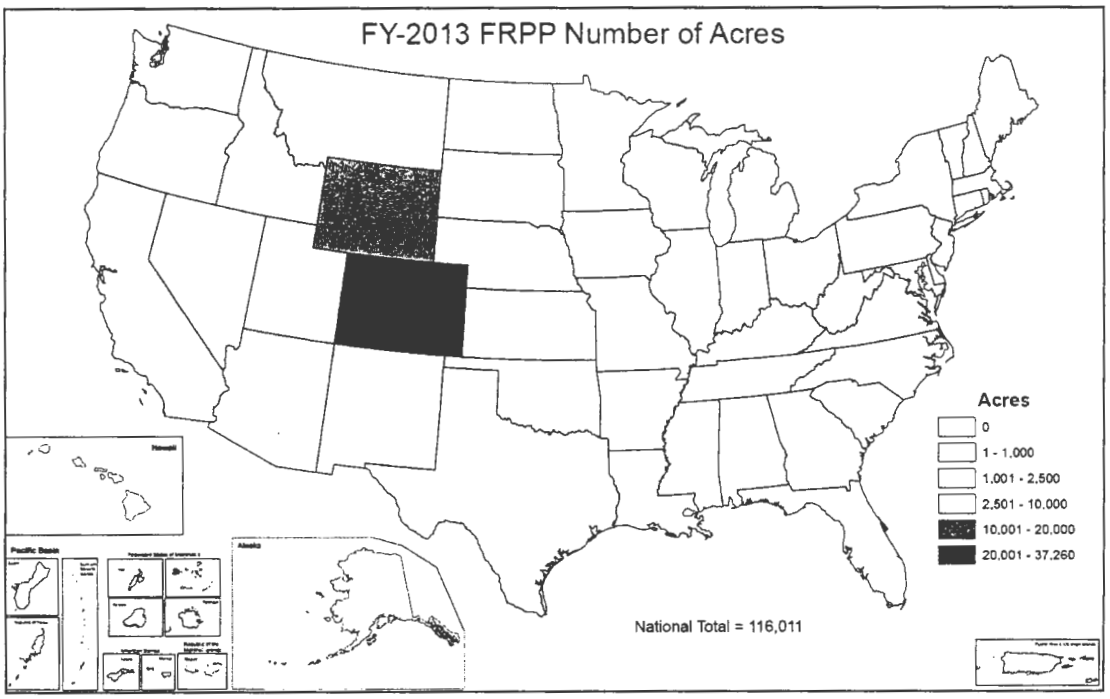
In the period 1996-2013, over $1.2 billion in FRPP financial assistance was provided in 49 States to purchase easements on 4,675 farms and ranches, totaling over 1.2 million acres.

Figures 1 and 2 display information on FRPP cooperative agreements in FY 2013 that obligated over $109 million to protect over 116,000 acres on 344 farms. Additional information on FRPP can be viewed at http://www.nrcs.usda.gov/programs/frpp/.

## Figure 1 – FY 2013 FRPP Financial Assistance Dollars Obligated by State




## Figure 2 – Number of Acres Protected by FRPP in FY 2013 by State



## *FARMLAND INFORMATION CENTER*

Since 1994, NRCS and American Farmland Trust (AFT) have entered into contribution agreements to fulfill the public education role related to farmland protection outlined in the FPPA. AFT developed and oversees the Farmland Information Center (FIC) with support from NRCS. The FIC offers a staffed answer service and online collection of resources at www.farmlandinfo.org. In addition, FIC staff monitor and report on farmland protection activities nationwide through surveys of existing programs and policies, develop educational materials, and provide more in depth research assistance to key stakeholders. In FY 2013, NRCS contributed $100,000 to this project.

### *KEY ACTIVITIES IN FISCAL YEAR 2013*

#### *Answer Service and Web site*

During FY 2013, FIC staff provided direct technical assistance to 414 individuals from 46 states, the District of Columbia, Canada, and Pakistan; 33,651 unique visitors to the FIC Web site generated 40,965 visits (an average of 112 visits per day) and 110,245 pageviews. The FIC Web site (www.farmlandinfo.org) was upgraded this year to incorporate new search capabilities and improved access to resources and statistics of farmland protection. FIC staff continued to build the online collection of resources, adding model documents and laws related to programs that buy easements on agricultural land, food system and farmland protection plans, and policies and programs that support beginning farmers. The Web site now also includes a directory of land trusts that conserve agricultural land and state and local farmland protection programs. Information about land trusts that protect farm and ranch land for agriculture was collected in 2012 during our nationwide survey of agricultural land trusts (Attachment A).

Here is a sampling of technical assistance provided by FIC staff this year:

- Provided information to a planner from the Delaware Department of Agriculture Farmland Preservation Program about bond-funded state-level farmland protection programs.
- Provided examples to the Massachusetts Purchase of Agricultural Conservation Easements (PACE) program manager of policy, process, and guidelines for issuing special permits for non-agricultural activities used by other state-level PACE programs.
- Provided NRI data to staff of the Maryland Department of Natural Resources seeking information about agricultural and rural land converted between 2002–2007.
- Provided information to a researcher from the University of Tennessee Agricultural Policy Analysis Center about state and county programs and regional groups that developed successful food system plans incorporating land use elements and farmer mentoring, and that promote farmland protection policies.

#### *Educational Materials*

In 2013, FIC staff updated existing fact sheets and produced new summaries of farmland protection research. FIC staff updated the Farm and Ranch Lands Protection Program (FRPP) fact sheet, which includes a table of final FRPP allocations by state and year through fiscal year 2012 to support the national FRPP program manager and FRPP implementation (Attachment B). The FIC also updated a fact sheet on Agricultural Conservation Easements (Attachment C).

The most frequently viewed FIC fact sheets throughout the year were the Farm and Ranch Lands Protection Program fact sheet (752 pageviews), the Farmland Protection Policy Act fact sheet (640 pageviews) and Agricultural Conservation Easements fact sheet (596 pageviews). Other frequently visited FIC educational materials include Agricultural Conservation Easement Provisions from Selected Farmland Protection Programs

(1,103 pageviews), the report of our survey of Agricultural Land Trusts (706 pageviews), and the 2007 NRI handout, Changes in Land Cover/Use–Agricultural Land (430 pageviews).

Staff produced a summary of findings from our *Impacts of the Federal Farm and Ranch Lands Protection Program.* The purpose of this study was to examine the programs outcomes. The summary makes key findings more accessible. It was distributed to all FRPP and PACE program managers and land trusts who have an interest in saving farm and ranch land identified during our survey of agricultural land trusts. The assessment found that FRPP keeps land available for agriculture, improves agricultural viability, encourages on-farm conservation, and helps farmers gain access to land. The research demonstrates the FRPP is a comprehensive response to an urgent issue. The full technical report and summary of findings are available on the FIC Web site (Attachments D and E). From the time the new FIC Web site was launched in September 2013, the report and summary have had 777 page views to date.

Staff also developed a summary of findings from the nationwide survey of land trusts. The four-page brochure was distributed to farmland protection entities and is posted online where it has had 888 pageviews to date.

***Farmland Protection Survey***

FIC staff completed the annual survey of established state PACE programs. A survey of local PACE programs was not completed in FY 2013. The State PACE survey results are summarized in a table posted on the FIC Web site and distributed to the State and local PACE program managers (Attachment F). The updated State PACE table provides a summary of PACE activity including easements acquired, acres protected, and funds spent by program. State programs have protected more than 2,373,470 acres to date. Tracking PACE program activity enables FIC staff to direct landowners to active programs. Survey results also are used by Federal, State, and local officials, lawmakers, researchers and the media.

***Research Assistance***

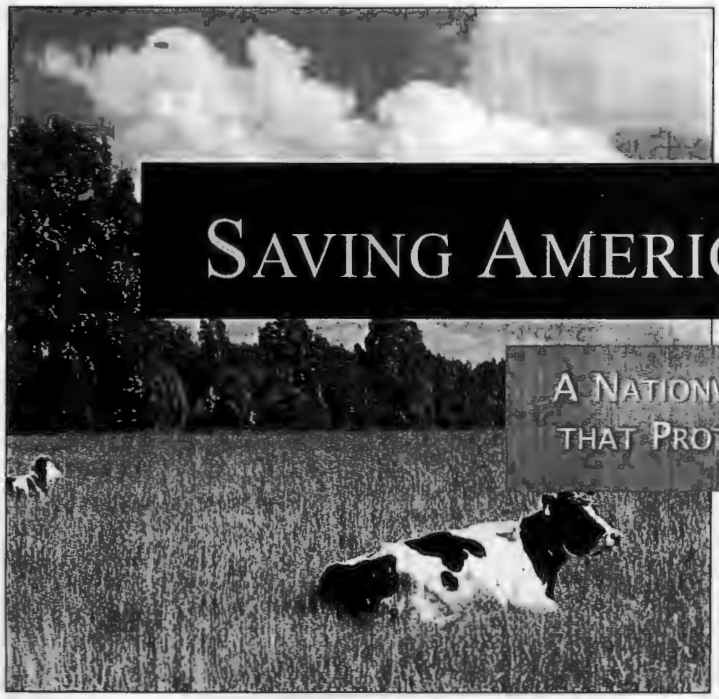
For the Farm Credit National Contributions Program, FIC staff investigated the challenges and opportunities facing beginning farmers and ranchers, especially those wanting to enter local and regional food markets. Staff conducted a literature search, interviewed beginning farmer organizations, researched state and federal policies and programs, and collected resources. Related resources, policies and programs have been added to the FIC Web site.

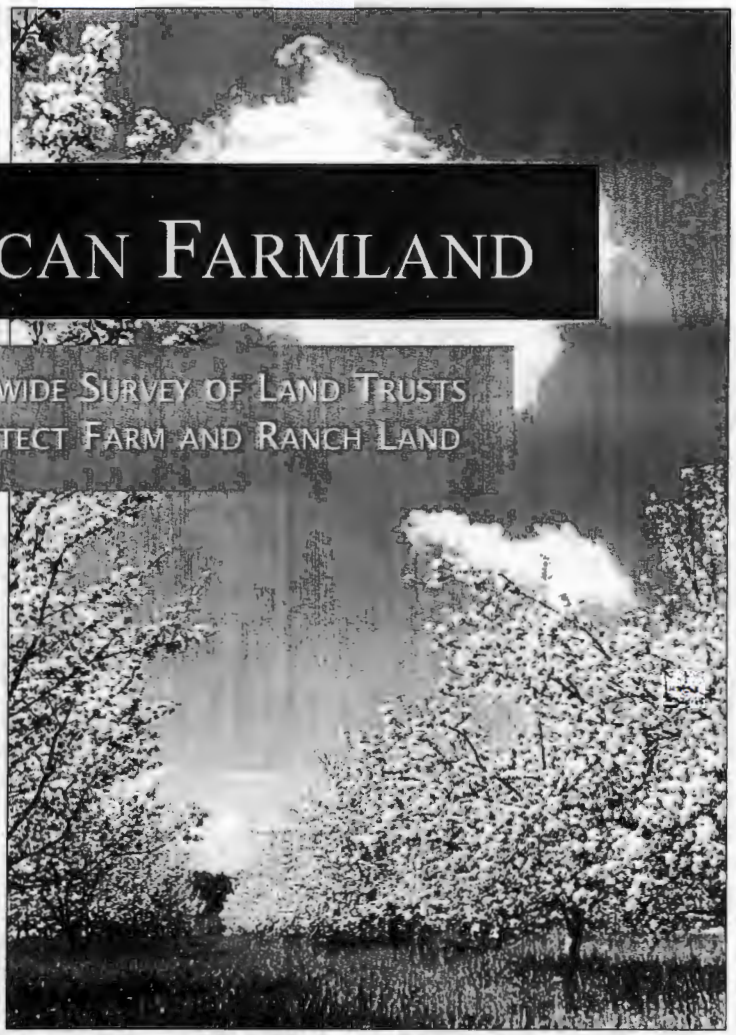
Kane County, Illinois, hired the FIC to conduct research and suggest recommendations to inform local decision-makers about the potential health impacts of amending the county's farmland protection ordinance. The County sought to expand its eligibility criteria to include small food-producing farms and to ensure that acreage remains available to local food production. AFT identified measurable economic indicators, plans and policies to support community economic development through local food production, and cases where any or all of these had been associated with a purchase of development rights or other kind of farmland protection programs.

Attachment A Nationwide Survey of Land Trusts that Protect Farm and Ranch Land
Attachment B Farm and Ranch Lands Protection Program fact sheet
Attachment C Agricultural Conservation Easements fact sheet
Attachment D Impacts of the Federal Farm and Ranch Lands Protection Program: Full Report
Attachment E Impacts of the Federal Farm and Ranch Lands Protection Program: Summary of Findings
Attachment F Status of State PACE Programs

# Saving American Farmland

## A Nationwide Survey of Land Trusts that Protect Farm and Ranch Land





American Farmland Trust

Farmland Information Center
www.farmlandinfo.org

NRCS

# A Nationwide Survey of Land Trusts that Protect Farm and Ranch Land

Agricultural land is at risk. According to the National Resources Inventory (NRI), 23 million acres of agricultural land were developed between 1982 and 2007[1]—an area the size of Indiana. As development encroaches on farmland it increases the costs and risks of production and drives up land values beyond the reach of producers.

State and local governments have led the response to agricultural land conversion. Thirty-one states have authorized purchase of agricultural conservation easement (PACE) programs that buy easements from willing landowners to keep land available for agriculture. As of January 2012, state and local programs had acquired 16,548 easements on more than 2.7 million acres of farm and ranch land.[2]

Private land trusts also save farm and ranch land. Land trusts are conservation organizations that protect natural resources by acquiring or helping other entities acquire land or conservation easements. Land trusts' role in farm and ranch land protection has grown since the expansion of the federal Farm and Ranch Lands Protection Program (FRPP) in 2002. Changes to the program made land trusts eligible for matching funds to buy easements on productive agricultural land.

To better understand the part land trusts play, American Farmland Trust (AFT) with support from the USDA Natural Resources Conservation Service (NRCS) conducted a nationwide survey of land trusts. The purpose was to:

- Identify organizations that actively protect farm and ranch land for agriculture; and
- To quantify the total amount of farm and ranch land protected by land trusts and public programs.

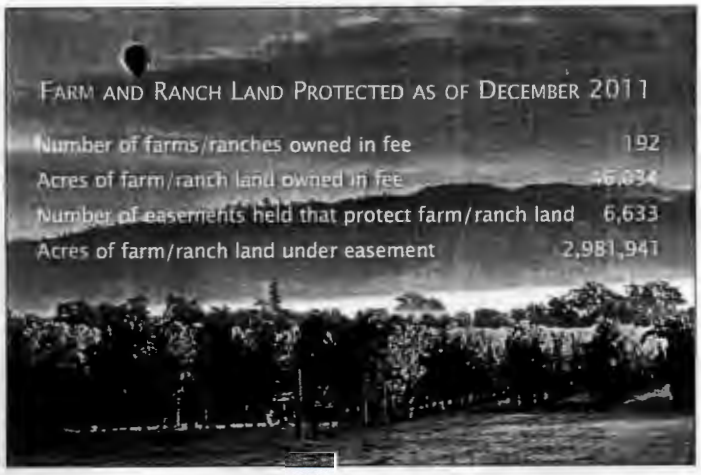
## RESEARCH METHOD

AFT developed a Web-based survey that included questions about the organization, farm and ranch land protection activity, partnerships with public programs including FRPP, easement provisions and additional activities offered to support agriculture.

To build the survey distribution list, AFT started with the Land Trust Alliance (LTA) list of land trusts and narrowed it to organizations that had reported during LTA's 2010 census that protecting "working farms or ranchlands" was a priority.[3] AFT also reviewed the list of non-respondents to the LTA census and added organizations to the survey list if their name, mission statement or other information available online indicated that they protected working land. Lastly, AFT added entities that had participated in FRPP but were missing from the list.

An e-mail invitation and link to the survey was delivered to 763 land trusts in April 2012. Staff followed up over the next four months. The survey's overall response rate was 36 percent.

## FINDINGS



Farm and Ranch Land Protected as of December 2011

| | |
|---|---|
| Number of farms/ranches owned in fee | 192 |
| Acres of farm/ranch land owned in fee | 46,034 |
| Number of easements held that protect farm/ranch land | 6,633 |
| Acres of farm/ranch land under easement | 2,981,941 |

### Land Trusts Complete the Picture

Survey respondents have protected close to 3 million acres of farm and ranch land nationwide. Nearly all is under easements *(see figure, left)*.

AFT estimates that land trusts protected more than 2.2 million acres *without* assistance from state and local easement acquisition programs. Most of this activity—83 percent—was the result of landowner donations. Some involved *other* public programs including the federal easement programs.[4]

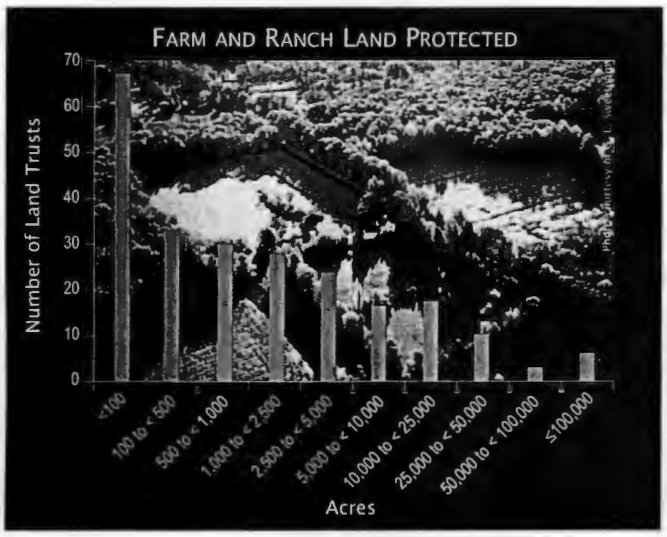
The survey results provide a more complete picture of how much farm and ranch land has been saved nationwide for the next generation. Altogether, AFT estimates that nearly 5 million acres of farm and ranch land have been protected by 192 land trusts and 119 state and local PACE programs.

## ■ Land Trusts Saved More Ranchland Than Cropland

Approximately 76 percent of the agricultural land protected by survey respondents is ranchland.[5] Several land trusts have formed to protect ranchland, which involves more extensive tracts of land that are typically less productive and expensive on a per acre basis. In comparison, AFT estimates that less than one third of the agricultural land protected by state PACE programs is ranchland. PACE programs have been most active in states with productive cropland.

## ■ Small Subset Saved Most of the Land

Although hundreds of land trusts report that agricultural land protection is important, most have not protected significant amounts of farm and ranch land and/or have not acquired many easements on farm and ranch land. Twenty-eight percent of respondents had protected fewer than 100 acres of agricultural land, and more than half of these organizations had not protected *any* farm and ranch land. Just 52 land trusts had protected at least 5,000 acres. These land trusts accounted for 95 percent of the total farm and ranch land protection activity reported by respondents *(see chart)*.




In addition, 59 percent of respondents held fewer than 10 easements on agricultural land, and more than half of these organizations did not hold *any* easements on farm and ranch land. Only 55 responding land trusts had acquired at least 25 agricultural easements; they accounted for 87 percent of the total number of easements. All told, 70 land trusts have protected at least 5,000 acres or hold at least 25 easements; only 37 land trusts have protected 5,000 acres *and* hold at least 25 easements.

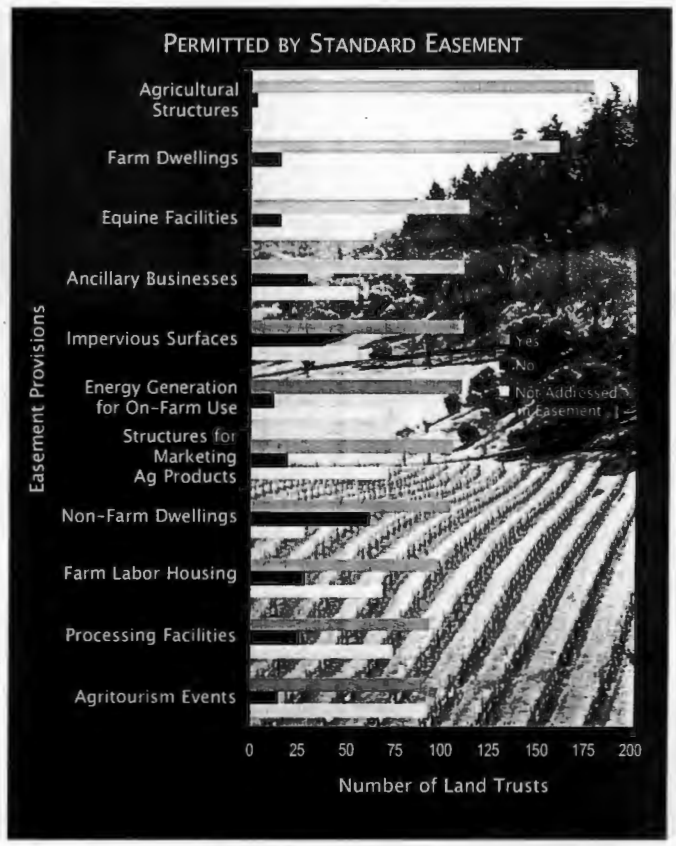
## ■ Donations Drive Activity

Overall, 62 percent of protected farm and ranch land was donated. As noted above, 83 percent of the *independent* land trust activity was generated by donations. When asked whether their organization planned to offer land protection and other activities in the next five years, 84 percent said they would accept donated easements on farms and ranches and 46 percent said they would accept farms and ranches donated in fee. In contrast, only 58 percent said that they would *buy* easements on farms and ranches; only 18 percent said they would *buy* farms and ranches in fee. Among the 135 land trusts that said they would buy land outright or purchase easements on farm and ranch land in the next five years, 72 percent had partnered with a state or local public program and/or had participated in FRPP.

## ■ Easements Prioritize Agricultural Resources and Support Agriculture

The vast majority—92 percent—of respondents said that their easement document used to protect farm and ranch land included an explicit right to use the property for agricultural production. In addition, 78 percent reported that their easement's purpose statement included references to productivity of the land or agricultural viability, and 72 percent said that their easement established the protection of agricultural resources or agricultural viability as the *primary* purpose.

Two activities were allowed by overwhelming majorities of the land trusts: 90 percent permit agricultural structures (e.g., barns and fences) and 81 percent permit farm dwellings. Significant majorities allow activities that would enhance income or reduce production expenses. These include equine facilities (57 percent), ancillary businesses (55 percent), impervious surfaces (55 percent), energy generation for on-farm use (55 percent) and structures for marketing agricultural products (53 percent) *(see chart)*.



## FINDINGS (continued)

### ■ Other Activities Support Farmers and Farming

In addition to land protection, 78 percent offer at least one other activity to support farming and ranching. The top response was supporting conservation planning and implementation of conservation practices on agricultural properties (120 land trusts). One hundred seven land trusts said they encourage local planning for agriculture. Seventy land trusts deliver public education programs about agriculture, which helps build a constituency for farm and ranch land protection.

### ■ Dozens Work to Improve Access to Land

A small group works to expand opportunities for new and established farmers to acquire land. Forty-seven land trusts provide assistance with farm succession planning; 30 buy land, protect it with an easement and sell it to farmers or ranchers; 22 provide technical assistance to farmers and ranchers looking for land; and 21 maintain a list of farm seekers or farms for sale.

In addition, 67 organizations reported that they lease fee-owned land to farmers or ranchers. Most (83 percent) enter into leases of five years or less. Seventy-six land trusts plan to lease land to producers in the next five years.

Land trusts also reported that their standard easements included provisions to help farmers and ranchers gain access to land. For instance, 61 percent place limits on the size of future housing, which may help keep the property affordable. In addition, 25 percent said they included affirmative obligations to keep the land in agricultural use, and 9 percent of respondents from 12 states said they included terms to protect future affordability.

## DISCUSSION

Private land trusts have saved a significant amount of farm and ranch land nationwide. However, the survey results highlight some issues that may create barriers for agricultural landowners and impede land trusts' efforts at protecting land for agriculture.

### ■ Active Land Trusts Are in States with PACE Programs

When we analyzed where the most active land trusts were located, we found that the vast majority are in states with public PACE programs. For instance, among land trusts that hold at least 25 easements, 87 percent were located in states with state-level programs. Likewise among organizations that had protected at least 5,000 acres, 81 percent were in states with PACE programs. This pattern presents a significant problem for agricultural landowners and leaves agricultural land in some parts of the country—like the Cornbelt—at risk. Strengthening land trusts' capacity in underserved states while advocating for public programs and funding to support them could help fill the gaps.

### ■ Many Land Trusts Rely on Donations

As noted above, much of the farm and ranch land protection activity reported by respondents was generated through donations. Land trusts' inability to provide compensation is a serious drawback for agricultural landowners. Their land may be their most valuable asset, and they may not be in a financial position to take advantage of federal and state tax benefits that encourage conservation. In addition, relying on donations forces the land trust to be less strategic.

To expand viable options for commercial farmers and the extent and strategic importance of land projects, more land trusts need to be able to *buy* land or easements. This points to the need for public funding at the federal, state and local levels to support land trusts' efforts.

For the full survey report, visit www.farmlandinfo.org.

## NOTES

1. The NRI is a survey of the nation's non-federal lands conducted by the USDA Natural Resources Conservation Service in cooperation with Iowa State University since 1982. The 2007 NRI report is available at: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1041379.pdf
2. Farmland Information Center, *Status of State PACE Programs* and *Status of Local PACE Programs*, Northampton, Mass.: American Farmland Trust, 2012.
3. Katie Chang, *2010 National Land Trust Census Report: A Look at Voluntary Land Conservation in America*, Washington, D.C.: Land Trust Alliance, 2011.
4. Eighty-two respondents said they had participated in FRPP as a cooperating entity. This subset reported that they had enrolled 186,440 acres in the program. The proportion of participation was higher among the land trusts that work in multiple states or nationwide (35 percent compared to 30 percent). A handful of land trusts also reported protecting land through the Grassland Reserve Program.
5. This analysis is based on the names of the organizations, location of the land trusts and review of projects on land trusts' websites.

This survey was made possible through a contribution agreement with the USDA Natural Resources Conservation Service. AFT is grateful for assistance provided by Katie Chang and the Land Trust Alliance. Thank you to the land trusts that responded to the survey and work with agricultural landowners to protect farm and ranch land nationwide.

**American Farmland Trust** (AFT) is the nation's leading conservation organization dedicated to protecting farmland, promoting sound farming practices and keeping farmers on the land. For more information, visit www.farmland.org or call (202) 331-7300.

The **Farmland Information Center** is a clearinghouse for information about farmland protection and stewardship. It is a project of AFT maintained on behalf of the USDA NRCS. Visit www.farmlandinfo.org or call (800) 370-4879.



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# Farm and Ranch Lands Protection Program

The Farm and Ranch Lands Protection Program (FRPP) is a voluntary federal conservation program that provides matching funds to eligible entities to buy conservation easements on farm and ranch land. The USDA Natural Resources Conservation Service (NRCS) may pay up to 50 percent of the appraised fair market value of the easement. The program was originally enacted in the Federal Agriculture Improvement and Reform Act of 1996. It was reauthorized and expanded in the Farm Security and Rural Investment Act of 2002. The Food, Conservation, and Energy Act of 2008 (the 2008 Farm Bill P.L.110-234) changed the purpose of the program from protecting topsoil to protecting "...the agricultural use and related conservation values of eligible land by limiting nonagricultural uses..." (16 U.S.C.§3838i). It also expanded the types of eligible entities and categories of eligible land. Most importantly, the 2008 Farm Bill changed the nature of the program from a federal real estate acquisition program to a federal financial assistance program that provides funds to entities for easement acquisitions. Funding for the FRPP comes from the Commodity Credit Corporation, the same federal entity that finances farm income support payments and conservation payments. The NRCS manages the program.

## Eligibility

### Land

To qualify for the FRPP the land must be part of a privately owned farm or ranch and must:

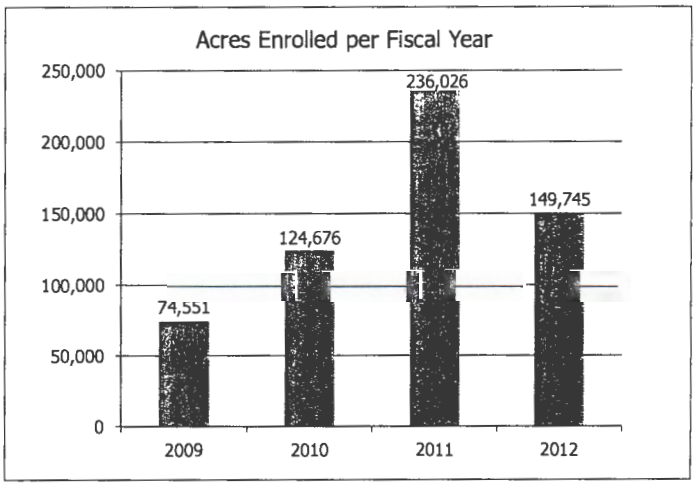
- Contain prime, unique or other productive soil—at least 50 percent unless otherwise determined by the State Conservationist, contain historical or archaeological resources, or support a state or local policy consistent with the purpose of the program;
- Be included in a pending offer from a state, tribal or local government or non-governmental organization's farmland protection program;
- Include cropland, rangeland, grassland, pasture land or forest land that contributes to the economic viability of an agricultural operation or serves as a buffer to protect an agricultural operation from development; and
- Possess onsite and offsite characteristics consistent with the purpose of the program.

Forest land cannot make up more than two-thirds of the acreage submitted in the pending offer. The NRCS requires a forest management plan for forest land in excess of 40 acres or 20 percent of the easement area. Other incidental land may be considered eligible if inclusion is necessary for the efficient administration of a conservation easement.

### Landowner

For the purposes of FRPP, landowner means a person, legal entity or Indian Tribe with legal ownership or an agreement to purchase eligible land. In general, eligible entities (see below) are not considered landowners. The correction to the interim final rule published on July 2, 2009, in the *Federal Register*, however, amended the definition giving the agency more flexibility. At the Chief's discretion in limited circumstances, the NRCS may facilitate the placement of a conservation easement on parcels owned by eligible entities. The parcel, however, must be transferred back to private ownership at or before closing on the easement.

Eligible landowners must comply with USDA's conservation requirements for highly erodible land and wetlands. In addition, they must meet the Adjusted Gross Income (AGI) limitations for program eligibility set forth in the 2008 Farm Bill. Landowners that have an average AGI exceeding $1.0 million for the three tax years preceding the year the contract is approved are not eligible to receive program benefits or payments. An exemption is provided in cases where 66 percent of the AGI is derived from farming, ranching or forestry operations.




*continued on page 2*

## Farm and Ranch Lands Protection Program

*continued from page 1*

### Eligible Entities

Federally recognized Indian tribes, states, units of local government or non-governmental organizations that buy agricultural conservation easements for the purpose of protecting agricultural use can apply for FRPP matching funds. "Non-governmental organization" means a tax-exempt organization formed for the conservation purposes set forth in Internal Revenue Code Section 170(h)(4)(A). These purposes include the preservation of land areas for outdoor recreation, natural habitat, open space—including farmland and forest land—and the preservation of historic resources. The 2008 Farm Bill amended the definition of eligible entities to add churches, universities and hospitals.

In addition, eligible entities must demonstrate:

- A commitment to long-term conservation of agricultural lands;
- A capacity to acquire, manage and enforce easements;
- Sufficient staff to monitor and enforce easements; and
- Available funds.

The 2008 Farm Bill established "certified entities" as a special class of eligible entities that have demonstrated a capacity to complete land projects using FRPP funds and an ongoing commitment to monitoring and stewardship. Certified entities can enter into longer cooperative agreements for up to five years.

The final rule, published on January 24, 2011, and final rule amendment, published on February 10, 2012, included more robust certification requirements. Entities submit written requests for certification. State Conservationists then make recommendations to the NRCS Chief. To be certified, eligible entities must:

- Agree to use the Uniform Standards for Professional Appraisal Practice or the Uniform Appraisal Standards for Federal Land Acquisitions in conducting appraisals for FRPP funded projects;
- Hold a minimum of 25 agricultural land conservation easements, unless the entity requests and receives a waiver from the Chief;
- Hold at least five FRPP funded easements;
- Demonstrate ability to complete projects in a timely manner (i.e., on average close half of the projects submitted during the past five years in 18 months or less);
- Have the capacity to enforce the terms of the easements;
- For non-governmental organizations, possess a dedicated fund that is sufficiently capitalized for the management, monitoring and enforcement of easements held by the entity;
- Adjust procedures to ensure the conservation easements meet FRPP purposes and are enforceable; and
- Have a plan for administering easements, as determined by the Chief.

Certification helps streamline the process for more experienced entities. Certified entities may close easements without NRCS review and approval of appraisals, titles and easements. The NRCS will review 10 percent of the transactions submitted by each certified entity to ensure that they are completed in accordance with NRCS procedures. Entities will have 180 days to correct any problems that are identified. State Conservationists may initiate decertification if entities fail to come into compliance. The NRCS also will review certified entities every three years to ensure that they still meet certification criteria.

### Application and Ranking Process

The NRCS Chief allocates FRPP funds to the states following Congressional budget approval. Previously, eligible entities submitted applications in response to requests for proposals published in the *Federal Register*. Now, State Conservationists announce one or more project ranking periods each fiscal year at least 30 days prior to the ranking date. Eligible entities may submit applications throughout the fiscal year. All parcels submitted by entities within a given application period are ranked. At the end of the fiscal year, the list of pending unfunded parcels is cancelled unless the eligible entity requests that specific parcels be considered in the next fiscal year.

The NRCS State Conservationist ranks parcels using national and state criteria. National ranking criteria are developed by the Chief in consultation with the national program manager and consider:

- Percent of prime, unique and important farmland;
- Percent of cropland, pastureland, grassland and rangeland;
- Ratio of total acres in the parcel to be protected to average farm size in the county;

## Farm and Ranch Lands Protection Program

- Decrease in the percentage of acreage of farm and ranch land in the county between the last two USDA Censuses of Agriculture;
- Percent county population growth;
- Population per square mile;
- Proximity to other protected land;
- Proximity to other agricultural operations and infrastructure; and
- Additional criteria as determined by the Chief.

State and local criteria are developed by the State Conservationist with advice from the state technical committee—a technical advisory group of individuals who represent natural resource sciences and occupations from state and federal agencies and the private sector. State and local criteria may include but are not limited to:

- Location in an area zoned for agriculture;
- Entity's experience managing and enforcing easements;
- Additional social, economic, historical and archaeological and environmental benefits;
- Degree to which enrollment may help achieve national, state and regional conservation goals or enhance existing conservation projects;
- Diversity of natural resources to be protected;
- Land Evaluation and Site Assessment score; and
- Existence of a farm or ranch succession plan established to encourage farm viability for future generations.

The State Conservationist must make the national and state ranking criteria available to the general public. To learn more about how the FRPP program is administered in your state, go to: www.nrcs.usda.gov/about/organization/regions.html for a link to the appropriate state office. On the state page, go to "programs" and select the federal Farm and Ranch Lands Protection Program. The program page will provide important information including application deadlines and state ranking criteria.

### Fund Allocation

When a proposal from an entity is approved, the NRCS executes a cooperative agreement on behalf of the Commodity Credit Corporation. The cooperative agreement describes the transaction, cost, an estimate of the federal share and responsibilities of each party. The term of cooperative agreements is five years for certified entities and three years for other eligible entities. It includes an attachment listing the parcels selected by the State Conservationist. During their duration, cooperative agreements will be amended each fiscal year to include the list of parcels receiving FRPP funds.

Eligible entities are able to use their own conservation easement deed. The NRCS, however, can establish minimum requirements as a condition of receiving funds. The easement, for instance, must contain a right of enforcement clause for the United States, which empowers the NRCS to inspect and enforce the easement if the eligible entity fails to uphold it. The right of enforcement is considered a "vested property right" and cannot be condemned by state or local governments, but this right has not been acquired by the NRCS. Instead, it is a condition the eligible entity must meet in order to receive FRPP funds. This interpretation means that federal real property acquisition requirements no longer apply.

Land subject to the easement must be managed in accordance with a conservation plan for highly erodible land developed in accordance with the standards in the *NRCS Field Office Technical Guide* and approved by the local conservation district. Conservation easements also must include a limit on impervious surfaces. In general, the NRCS requires a limit of 2 percent of the area subject to the easement. The State Conservationist may grant waivers on a case by case basis not to exceed 10 percent. The NRCS does not consider approved conservation practices, roads and parking areas with soil or gravel surfaces, or temporary greenhouses that cover soil for less than six months to be impervious surfaces.

The State Conservationist determines the NRCS share awarded for a given parcel. The NRCS may pay up to 50 percent of the appraised fair market value of the easement. Entities must provide at least 25 percent of the final negotiated purchase price.

### History

The federal government's efforts to stem farmland conversion began with the passage of the Farmland Protection Policy Act (FPPA) in 1981. The FPPA directs federal agencies to evaluate the extent to which federally funded projects lead to the conversion of agricultural land and to consider less harmful alternatives. The regulations were issued in 1994 but have failed to effectively prevent farmland conversion.

*continued on page 6*

# FEDERAL FARM AND RANCH LANDS PROTECTION PROGRAM ALLOCATIONS

| State | 1996 | 1997 | 1998 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|
| Alabama | $0 | $0 | $0 | $0 | $0 | $0 | $1,221,901 | $1,063,321 | $48,104 |
| Alaska | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $7,507 | $0 |
| Arizona | $0 | $0 | $0 | $0 | $0 | $1,750,000 | $0 | $687,639 | $18,492 |
| Arkansas | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $1,676 |
| California | $2,080,000 | $416,300 | $1,042,000 | $0 | $1,117,400 | $2,470,500 | $3,213,682 | $3,713,015 | $5,865,805 |
| Colorado | $1,040,000 | $0 | $1,042,000 | $0 | $540,200 | $2,099,700 | $3,491,161 | $3,499,863 | $4,527,904 |
| Connecticut | $1,040,000 | $0 | $1,042,000 | $0 | $623,500 | $2,101,035 | $2,034,693 | $2,970,308 | $3,420,407 |
| Delaware | $1,040,000 | $0 | $1,385,000 | $0 | $617,300 | $1,956,500 | $2,812,604 | $4,212,200 | $4,100,865 |
| Florida | $453,000 | $0 | $625,000 | $0 | $729,600 | $1,000,000 | $3,230,596 | $2,855,047 | $4,500,562 |
| Georgia | $0 | $0 | $0 | $0 | $0 | $1,095,900 | $1,136,839 | $1,440,697 | $1,588,207 |
| Hawaii | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $2,406 | $2,153,520 |
| Idaho | $0 | $0 | $0 | $0 | $212,200 | $450,000 | $904,958 | $370,492 | $56,200 |
| Illinois | $0 | $0 | $0 | $0 | $520,000 | $1,319,430 | $1,439,727 | $1,767,477 | $1,779,871 |
| Indiana | $0 | $0 | $0 | $0 | $0 | $901,200 | $101,402 | $7,075 | $754 |
| Iowa | $0 | $0 | $0 | $0 | $289,100 | $766,311 | $382,017 | $266,660 | $1,055,670 |
| Kansas | $0 | $0 | $0 | $0 | $0 | $165,000 | $488,702 | $119,420 | $76,100 |
| Kentucky | $416,000 | $0 | $729,000 | $0 | $635,800 | $2,878,500 | $3,136,810 | $2,862,143 | $3,745,262 |
| Louisiana | $0 | $0 | $0 | $0 | $0 | $0 | $21,020 | $998 | $16,437 |
| Maine | $0 | $0 | $375,000 | $0 | $663,800 | $972,000 | $1,141,447 | $1,566,500 | $38,769 |
| Maryland | $1,555,000 | $104,300 | $1,457,997 | $0 | $718,400 | $2,622,400 | $5,032,549 | $6,658,459 | $8,720,347 |
| Massachusetts | $1,040,000 | $208,300 | $1,250,000 | $0 | $637,800 | $2,304,200 | $2,932,471 | $4,526,816 | $4,746,323 |
| Michigan | $1,040,000 | $364,300 | $1,094,000 | $0 | $562,200 | $2,238,600 | $3,102,026 | $2,684,099 | $4,163,108 |
| Minnesota | $0 | $0 | $0 | $0 | $0 | $0 | $1,302,625 | $1,135,953 | $1,593,018 |
| Mississippi | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Missouri | $0 | $0 | $0 | $0 | $0 | $408,000 | $1,218,553 | $670,130 | $628,505 |
| Montana | $0 | $0 | $0 | $0 | $103,200 | $1,338,400 | $2,003,840 | $2,287,642 | $1,260,781 |
| Nebraska | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $539,022 | $10,942 |
| Nevada | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $566,900 | $1,260,437 |
| New Hampshire | $0 | $104,300 | $234,000 | $250,000 | $527,900 | $1,856,467 | $1,954,102 | $3,195,205 | $3,507,384 |
| New Jersey | $1,040,000 | $208,300 | $1,458,000 | $0 | $765,600 | $2,300,928 | $4,476,298 | $5,714,994 | $6,439,064 |
| New Mexico | $0 | $0 | $0 | $0 | $0 | $0 | $1,423,893 | $434,700 | $680,480 |
| New York | $416,000 | $104,300 | $1,458,000 | $0 | $440,900 | $1,650,782 | $2,847,539 | $3,301,635 | $5,713,403 |
| North Carolina | $159,000 | $0 | $313,000 | $0 | $598,100 | $2,193,428 | $2,168,361 | $2,399,224 | $3,664,957 |
| North Dakota | $0 | $0 | $0 | $0 | $0 | $0 | $701,100 | $446,496 | $370,213 |
| Ohio | $0 | $0 | $0 | $0 | $0 | $1,612,800 | $2,428,786 | $3,346,079 | $3,974,570 |
| Oklahoma | $0 | $0 | $0 | $0 | $26,000 | $0 | $1,199,957 | $1,390,598 | $861,287 |
| Oregon | $0 | $0 | $0 | $0 | $0 | $0 | $1,188,484 | $175,131 | $675,783 |
| Pennsylvania | $1,664,000 | $281,300 | $1,458,000 | $0 | $665,800 | $2,870,316 | $5,027,444 | $4,244,350 | $6,899,419 |
| Rhode Island | $520,000 | $0 | $703,000 | $0 | $527,300 | $1,328,600 | $1,282,460 | $2,675,154 | $3,506,411 |
| South Carolina | $0 | $0 | $0 | $0 | $299,500 | $534,950 | $1,186,487 | $1,666,904 | $1,623,621 |
| South Dakota | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $271,271 |
| Tennessee | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $917,922 | $518,522 |
| Texas | $0 | $0 | $0 | $0 | $480,500 | $0 | $1,320,503 | $1,559,561 | $712,585 |
| Utah | $0 | $0 | $0 | $0 | $116,500 | $40,500 | $1,157,901 | $1,201,142 | $1,334,346 |
| Vermont | $1,040,000 | $104,300 | $1,250,000 | $0 | $3,452,800 | $1,859,600 | $2,036,124 | $3,519,873 | $3,553,722 |
| Virginia | $104,000 | $0 | $0 | $0 | $521,800 | $1,496,131 | $921,344 | $1,421,900 | $1,733,381 |
| Washington | $208,000 | $0 | $469,000 | $0 | $588,800 | $2,088,422 | $1,947,491 | $1,716,240 | $2,112,853 |
| West Virginia | $0 | $0 | $0 | $0 | $0 | $400,000 | $1,003,992 | $1,628,585 | $2,052,080 |
| Wisconsin | $145,000 | $104,300 | $615,000 | $0 | $518,000 | $1,635,200 | $1,803,867 | $2,088,000 | $3,592,567 |
| Wyoming | $0 | $0 | $0 | $0 | $0 | $0 | $809,644 | $1,014,288 | $1,245,344 |
| Pacific Basin | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Puerto Rico | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,341 |
| **Total** | $15,000,000 | $2,000,000 | $17,999,997 | $250,000 | $17,500,000 | $50,705,800 | $77,235,400 | $90,539,770 | $110,427,670 |

Figures represent funds for easement acquisitions (i.e., financial assistance) and technical assistance.
Historically, technical assistance has represented approximately 3% of funds allocated to the states.
There were no allocations in fiscal year 1999.

Source: USDA Natural Resources Conservation Service Easement Programs Division

# FEDERAL FARM AND RANCH LANDS PROTECTION PROGRAM ALLOCATIONS

| 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Cumulative Total | State |
|---|---|---|---|---|---|---|---|---|
| $1,645,209 | $964,625 | $1,073,396 | $570,387 | $568,434 | $129,328 | $56,784 | $7,341,489 | Alabama |
| $54,071 | $443,128 | $363,497 | $716,873 | $10,439 | $5,379 | $471,660 | $2,072,554 | Alaska |
| $5,470 | $6,982 | $7,881 | $131,178 | $8,983 | $22,130 | $248,041 | $2,886,796 | Arizona |
| $156,001 | $5,698 | $6,422 | $20,618 | $0 | $6,804 | $9,129 | $206,348 | Arkansas |
| $2,444,060 | $2,462,827 | $6,149,543 | $3,755,987 | $5,132,343 | $3,279,794 | $4,054,653 | $47,197,909 | California |
| $2,307,342 | $2,112,600 | $2,861,397 | $5,700,954 | $6,581,176 | $8,584,230 | $7,322,521 | $51,711,047 | Colorado |
| $3,132,506 | $2,925,228 | $3,067,797 | $5,909,290 | $6,504,267 | $6,551,257 | $6,773,340 | $48,095,628 | Connecticut |
| $3,179,442 | $3,092,174 | $6,330,496 | $5,767,819 | $5,063,248 | $5,068,415 | $4,892,478 | $49,518,541 | Delaware |
| $1,695,786 | $1,678,077 | $2,278,271 | $1,510,964 | $8,621,090 | $5,194,551 | $5,031,440 | $39,403,984 | Florida |
| $801,432 | $943,664 | $1,166,923 | $22,582 | $24,472 | $830,860 | $159,902 | $9,211,479 | Georgia |
| $1,886,349 | $1,116,459 | $1,122,092 | $339,710 | $15,463 | $653,229 | $2,564,173 | $9,853,401 | Hawaii |
| $618,563 | $418,210 | $44,096 | $1,094,344 | $1,373,318 | $1,220,716 | $1,147,995 | $7,911,092 | Idaho |
| $1,783,486 | $1,435,226 | $1,848,022 | $1,876,114 | $16,871 | $11,817 | $36,977 | $13,835,018 | Illinois |
| $824 | $0 | $0 | $2,231 | $191 | $9,359 | $0 | $1,023,036 | Indiana |
| $8,370 | $34,537 | $7,211 | $247 | $0 | $644 | $0 | $2,810,767 | Iowa |
| $500,126 | $1,330,436 | $1,364,872 | $1,036,832 | $835,611 | $424,427 | $1,737,969 | $8,079,495 | Kansas |
| $2,452,218 | $2,959,715 | $2,651,474 | $3,189,464 | $2,514,154 | $2,203,235 | $442,682 | $30,816,457 | Kentucky |
| $1,398 | $6,313 | $0 | $1 | $0 | $0 | $0 | $46,167 | Louisiana |
| $944,359 | $1,103,324 | $2,272,702 | $376,641 | $674,251 | $2,167,339 | $1,443,168 | $13,739,300 | Maine |
| $3,010,946 | $2,962,099 | $2,914,415 | $4,338,428 | $4,565,682 | $2,531,093 | $1,236,004 | $48,428,119 | Maryland |
| $3,757,318 | $3,961,185 | $5,941,764 | $6,094,039 | $8,844,152 | $5,680,778 | $9,632,096 | $61,557,242 | Massachusetts |
| $1,811,745 | $1,695,365 | $2,486,416 | $3,012,459 | $6,272,636 | $2,123,087 | $3,315,292 | $35,965,333 | Michigan |
| $563,489 | $701,843 | $2,659,023 | $3,061,214 | $1,434,207 | $1,208,332 | $1,287,902 | $14,947,606 | Minnesota |
| $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | Mississippi |
| $9,593 | $1,256,358 | $82,330 | $26,436 | $20,891 | $146,130 | $4,580 | $4,471,507 | Missouri |
| $1,567,468 | $935,414 | $2,099,410 | $2,780,313 | $2,652,862 | $6,515,710 | $4,273,433 | $27,818,473 | Montana |
| $139,244 | $8,164 | $9,738 | $1,481,913 | $1,144,373 | $1,517,564 | $1,078,142 | $5,929,102 | Nebraska |
| $1,530,121 | $1,960,423 | $8,751 | $3,626,948 | $5,435,925 | $30,707 | $5,428,861 | $19,849,073 | Nevada |
| $3,378,274 | $3,339,447 | $1,357,352 | $3,962,125 | $2,681,474 | $2,539,339 | $1,941,680 | $30,829,049 | New Hampshire |
| $4,120,272 | $4,740,488 | $8,486,474 | $6,838,653 | $9,130,636 | $8,370,967 | $10,062,828 | $74,153,502 | New Jersey |
| $306,922 | $428,372 | $27,506 | $624,658 | $617,841 | $814,256 | $867,321 | $6,225,948 | New Mexico |
| $2,241,158 | $1,772,001 | $1,443,633 | $2,530,397 | $4,308,195 | $5,781,196 | $5,429,784 | $39,438,923 | New York |
| $1,757,731 | $1,614,567 | $2,657,991 | $3,021,553 | $2,620,532 | $2,511,161 | $2,517,507 | $28,197,112 | North Carolina |
| $415,655 | $5,683 | $8,467 | $5,567 | $10,606 | $10,606 | $0 | $1,974,393 | North Dakota |
| $2,008,037 | $2,856,580 | $3,514,186 | $3,379,364 | $3,765,464 | $12,115,155 | $8,652,449 | $47,653,470 | Ohio |
| $719,557 | $79,698 | $113,235 | $308,892 | $345,726 | $63,093 | $16,341 | $5,124,385 | Oklahoma |
| $4,826 | $574,492 | $14,986 | $8,066 | $6,753 | $6,877 | $0 | $2,655,398 | Oregon |
| $2,840,139 | $3,067,978 | $6,225,588 | $5,823,055 | $6,820,254 | $4,344,596 | $4,585,969 | $56,818,208 | Pennsylvania |
| $3,816,524 | $2,916,852 | $1,563,560 | $5,432,162 | $3,048,425 | $4,298,535 | $6,480,210 | $38,099,192 | Rhode Island |
| $2,369,293 | $1,211,644 | $430,601 | $2,823,699 | $3,564,544 | $2,727,240 | $1,552,503 | $19,990,985 | South Carolina |
| $2,047 | $161 | $6,802 | $5,219 | $307 | $1,240 | $0 | $287,048 | South Dakota |
| $551,655 | $752,600 | $971,002 | $1,035,750 | $1,271,533 | $4,970 | $4,021 | $6,027,975 | Tennessee |
| $1,998,599 | $1,525,682 | $4,085,557 | $2,212,904 | $2,110,064 | $2,962,685 | $5,695,800 | $24,664,440 | Texas |
| $473,673 | $1,327,614 | $526,616 | $922,004 | $270,408 | $1,007,187 | $1,907,587 | $10,285,478 | Utah |
| $3,138,224 | $3,048,322 | $3,009,047 | $3,372,551 | $3,216,785 | $3,200,941 | $3,645,670 | $39,447,958 | Vermont |
| $931,724 | $1,091,895 | $2,188,704 | $1,801,825 | $1,226,881 | $962,761 | $4,283,403 | $18,685,749 | Virginia |
| $1,190,602 | $1,181,980 | $2,017,850 | $6,096,996 | $6,301,953 | $1,767,429 | $4,042,977 | $31,730,592 | Washington |
| $1,933,575 | $2,248,675 | $2,873,475 | $5,624,854 | $5,798,148 | $2,587,487 | $3,263,458 | $29,414,329 | West Virginia |
| $1,571,197 | $1,678,137 | $2,644,803 | $1,501,091 | $1,942,949 | $822,334 | $977,447 | $21,639,892 | Wisconsin |
| $549,893 | $741,616 | $2,184,345 | $3,848,714 | $21,093,116 | $53,365,237 | $15,780,855 | $100,633,051 | Wyoming |
| $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | Pacific Basin |
| $0 | $0 | $0 | $0 | $0 | $0 | $0 | $6,341 | Puerto Rico |
| $72,326,513 | $72,724,558 | $95,169,717 | $117,624,085 | $148,467,633 | $166,382,208 | $144,357,032 | $1,198,710,382 | **Total** |

Figures represent funds for easement acquisitions (i.e., financial assistance) and technical assistance. Historically, technical assistance has represented approximately 3% of funds allocated to the states.

Source: USDA Natural Resources Conservation Service Easement Programs Division

## Farm and Ranch Lands Protection Program

*continued from page 3*

The Farms for the Future Act, adopted as part of the 1990 Farm Bill, set the precedent for federal funding by authorizing the Resources Conservation Demonstration Program. This program provided guaranteed loans and subsidized interest payments to state and local farmland protection programs. A pilot program in Vermont saved the state approximately $10.7 million in interest payments over three years.

The Federal Agriculture Improvement and Reform Act (the 1996 Farm Bill) established a Farmland Protection Program (FPP), which superseded the Farms for the Future Act, to protect farmland from conversion to nonagricultural uses. It authorized up to $35 million in matching funds over six years to state, tribal and local programs for the purchase of agricultural conservation easements and other interests in productive farmland.

The Farm Security and Rural Investment Act of 2002 (the 2002 Farm Bill) renamed and expanded the FPP to include non-governmental organizations as eligible entities, make farm and ranch land containing historical and archeological sites eligible and allow landowner donations to count as part of the entity's match.

The 2008 Farm Bill changed the purpose of the program from protecting topsoil to protecting agricultural use and the conservation values of agricultural land from nonagricultural development. It expanded the types of eligible entities and categories of eligible land and changed the nature of the program from a federal real estate acquisition program to a program that provides financial assistance to entities for easement purchases. Lastly, the 2008 Farm Bill increased funding for the program. Congress authorized the following funding for each fiscal year:

- Fiscal Year 2008 $97,000,000
- Fiscal Year 2009 $121,000,000
- Fiscal Year 2010 $150,000,000
- Fiscal Year 2011 $175,000,000
- Fiscal Year 2012 $200,000,000
- Fiscal Year 2013 $150,000,000

### Functions and Purposes

The FRPP provides financial support to state, local and private farm and ranch land protection efforts. These programs protect agricultural land from residential and commercial development by acquiring agricultural conservation easements on productive farmland. Conservation easements allow farmers to free capital tied up in their land while still maintaining the right to use the land for agriculture. Income from the sale of conservation easements may be used to reinvest in agricultural operations, invest for retirement and/or reduce debt. By removing the speculative value of the land, these programs may also help keep agricultural land affordable for beginning farmers. In addition, the FRPP encourages good stewardship by requiring the implementation of conservation plans on highly erodible cropland.

### Benefits

- Provides much-needed financial assistance to state, local and private farmland protection efforts.
- Encourages the development of new farm and ranch land protection programs.
- Encourages good stewardship by requiring the implementation of conservation plans on highly erodible cropland.
- Makes the protection of farm and ranch land from conversion to other uses an NRCS issue.
- Fosters national awareness about farm and ranch land protection.

### Drawbacks

- In general, the NRCS will not enroll land previously protected by a permanent conservation easement OR land owned by an eligible entity unless ownership is transferred to a private landowner before the NRCS disburses the full FRPP payment. This has complicated and sometimes precluded preacquisitions by public entities and land trusts.
- FRPP participants and immediate family members cannot serve as voting board members for the land trust or public easement acquisition program that holds their easement. This provision has barred further service from valued board members and will prevent landowners with first-hand experience in selling easements from serving land protection organizations.
- The AGI limitation has prevented individuals and corporations who own key agricultural lands from participating.

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# Agricultural Conservation Easements

A conservation easement is a deed restriction landowners voluntarily place on their property to protect resources such as productive agricultural land, ground and surface water, habitat, historic sites or scenic views. They are used by landowners ("grantors") to authorize a qualified conservation organization or public agency ("grantee") to monitor and enforce the restrictions set forth in the agreement. Conservation easements are flexible documents tailored to each property and the needs of individual landowners. They cover either an entire parcel or portions of a property. The landowner usually works with the prospective grantee to decide which activities should be limited to protect specific resources. Agricultural conservation easements are designed to keep land available for farming.

## Restrictions

In general, agricultural conservation easements limit subdivision, non-farm development and other uses that are inconsistent with commercial agriculture. Some easements allow lots to be reserved for family members. Typically, these lots must be small—1 to 2 acres is common—and located on the least productive soils. Agricultural conservation easements often permit commercial development related to the farm operation and the construction of farm buildings. Most do not restrict farming practices, although some grantees ask landowners to implement soil and water conservation plans. Landowners who receive federal funds for farm easements must implement conservation plans developed by the USDA Natural Resources Conservation Service.

## Term of the Restrictions

Most agricultural conservation easements are permanent. Term easements impose restrictions for a specified number of years. Regardless of the duration of the easement, the agreement is legally binding on future landowners for the agreed-upon time period. An agricultural conservation easement can be modified or terminated by a court if the land or the neighborhood changes and the conservation objectives of the easement become impossible to achieve. Easements may also be terminated by eminent domain proceedings.

## Retained Rights

After granting an agricultural conservation easement, landowners retain title to their property and can still restrict public access, farm the land, use it as collateral for a loan or sell their property. Land subject to an easement remains on the local tax rolls. Landowners continue to be eligible for state and federal farm programs.

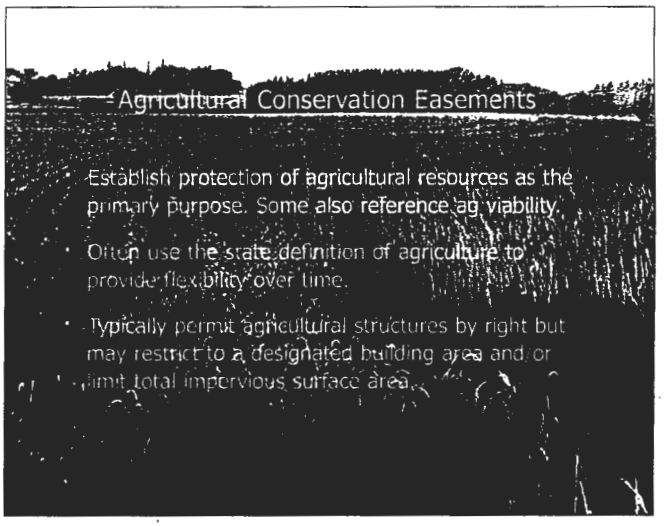
## Valuation

Landowners can sell or donate an agricultural conservation easement to a qualified conservation organization or government body. It is important to determine the value of the easement to establish a price or to calculate tax benefits under federal and state law. The value of an agricultural conservation easement is generally the fair market value of the property minus its restricted value, as determined by a qualified appraiser. In general, more restrictive agreements and intense development pressure result in higher easement values.

## Tax Benefits

Grantors can receive several tax advantages. Donated agricultural conservation easements that meet Internal Revenue Code section 170(h) criteria are treated as charitable gifts. Congress extended through 2013 enhanced tax deductions for donated conservation easements first authorized by the Pension Protection Act of 2006. The extension allows

*continued on page 2*



## Agricultural Conservation Easements

*continued from page 1*

landowners to deduct the value of conservation easements up to 50 percent of their Adjusted Gross Income (AGI) compared to the former limit of 30 percent. The unused portion of the easement value may be carried forward for up to 15 years, as opposed to five. In addition, "qualified farmers and ranchers"—defined as individuals or corporations who earn more than 50 percent of their gross income from the business of farming in the taxable year in which the gift is made—still can deduct the value of the easement up to 100 percent of their AGI with a 15-year carryforward. Corporations were formerly limited to 10 percent of AGI with a five-year carryforward.

In addition to the federal income tax incentives, most state income tax laws provide for charitable deductions of conservation easements. At least 14 states offer income tax credits for easement donations on agricultural land. Florida exempts permanently protected land from up to 100 percent of state property taxes.

Tax codes in some states direct local tax assessors to consider the restrictions imposed by a conservation easement. This provision generally lowers property taxes on restricted parcels if the land is not already enrolled in a differential assessment program. Differential assessment programs direct local tax assessors to assess land at its value for agriculture or forestry, rather than for residential, commercial or industrial development.

The donation or sale of an agricultural conservation easement usually reduces the value of land for estate tax purposes. To the extent that the restricted value is lower than fair market value, the estate will be subject to a lower tax. In some cases, an easement can reduce the value of an estate below the level that is taxable, effectively eliminating any estate tax liability.

The Economic Growth and Tax Relief Reconciliation Act of 2001 expanded an estate tax incentive for landowners to grant conservation easements. Under Section 2031(c) of the tax code, executors can exclude up to 40 percent of the value of land subject to a donated qualified conservation easement from taxable estates. This exclusion is limited to $500,000 but is in addition to any reduction in the value of the estate as a result of protecting the land with a conservation easement. The full benefit is available for easements that reduce the fair market value of a property by at least 30 percent. A smaller exclusion is available for easements that reduce property value by less than 30 percent.

### History

Forty-nine states have a law authorizing conservation easements. The National Conference of Commissioners on Uniform State Laws adopted the Uniform Conservation Easement Act in 1981. The Act served as a model for state legislation allowing qualified public agencies and private conservation organizations (land trusts) to accept, acquire and hold less than fee simple interests in land for the purposes of conservation and preservation. Since the Uniform Conservation Easement Act was approved, 23 states have adopted conservation easement enabling laws based on this model, and 26 states have drafted and enacted their own enabling laws. In addition, 32 states have authorized and/or operate state-level purchase of agricultural conservation easement (PACE) programs. PACE programs compensate landowners for placing restrictions on their land to keep it available for agriculture.

### Benefits

Agricultural conservation easements:

- Permanently protect important farmland while keeping the land in private ownership and on local tax rolls.
- Are flexible documents that can be tailored to meet the needs of individual farmers and ranchers and unique properties.
- Can provide farmers with several tax benefits including income, estate and property tax reductions.
- Can help farmers and ranchers transfer their operations to the next generation.

### Drawbacks

- Agricultural conservation easements do not ensure that the land will continue to be farmed.
- Donating an easement is not always a financially viable option for landowners.
- Monitoring and enforcing conservation easements requires a serious commitment on the part of the easement holder.
- Subsequent landowners are not always interested in upholding easement terms.
- Agricultural conservation easements do not offer protection from eminent domain. If land under easement is taken through eminent domain, both the landowner and the easement holder must be compensated.

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NRCS

The Farmland Information Center (FIC) is a clearinghouse for information about farmland protection and stewardship.
The FIC is a public/private partnership between the USDA Natural Resources Conservation Service and American Farmland Trust.

# Impacts of the Federal Farm and Ranch Lands Protection Program:

## An Assessment Based on Interviews with Participating Landowners

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University of Nebraska-Lincoln

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University of Nebraska Lincoln

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*Executive Summary*

# Impacts of the Farm and Ranch Lands Protection Program: An Assessment Based on Interviews with Participating Landowners

## Chapter 1: Focus of the Study

From mid-February to mid-May 2012, a research team at the University of Nebraska-Lincoln surveyed 506 owners whose agricultural land was protected from development through conservation easements that were funded in part by USDA's Farm and Ranch Lands Protection Program (FRPP). This program "provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners, USDA provides up to 50 percent of the fair market easement value of the conservation easement."[1]

The survey had the purpose of evaluating the FRPP by asking participating owners about what they have done with their land and how satisfied were they with their experiences of protected farm and ranch land. The survey was funded through a contribution agreement between USDA's Natural Resources Conservation Service, the agency that administers the FRPP, and American Farmland Trust (AFT), a private non-profit organization that since its founding in 1980 has promoted protection of working agricultural land through easements and other means.[2] AFT contracted with the University of Nebraska-Lincoln to conduct the survey, analyze the interview data, and write this report. Though welcoming and considering very carefully comments from USDA and AFT on previous drafts of the report, the authors were free to publish this final version on a university website as they saw fit.

## Chapter 2: Administration of the Survey

Trained interviewers of the Bureau of Sociological Research at the University of Nebraska-Lincoln talked with 504 owners of protected agricultural land. Those interviews averaged 37 minutes. Another two participants preferred to fill out questionnaires sent to them by e-mail. The total of 506 surveyed owners represented a response rate of 54%. Their names came from a series of random samples drawn from lists of owners of properties that had "closings" on their conservation easements from the start of fiscal year 2006 in October 2005 to January 2012. The regional breakdowns of the final sample of 506 matched well the distribution of owners by region found in the full lists from which the sample was drawn.

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[1] USDA, Natural Resources Conservation Service, *Farm and Ranch Lands Protection Program* (http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/farmranch/ [accessed February 14, 2013]).

[2] American Farmland Trust: http://www.farmland.org/

## Chapter 3: What Kinds of Agricultural Land Did the FRPP Help to Protect, Fiscal Year 2006 through January 2012?

**a. Was the protected land of the surveyed owners of sufficient size to promote the purposes of the program?** Half of the surveyed owners reported that at the end of 2011 they owned 140 or more acres of protected agricultural land. That is, the median value for all cases was 140 acres. That median exceeds the corresponding values at the national level for all farm and ranch operations covered in the 2007 *Census of Agriculture*. Among those 2.2 million operations, the top 50% farmed or ranched at least 80 acres. The relatively large numbers of acres per owner found in our survey are compatible with the FRPP's eligibility qualification that "the farmland must be . . . large enough to sustain agricultural production."

**b. To what extent was the protected land in active agricultural use**? Forty-eight percent of the surveyed owners reported that all their protected acres were in agricultural use during 2011. Another 22% estimated that from 75% to something less than all acres were farmed or ranched that year. Just 4% said that none was used for agricultural purposes.

**c. To what extent was the protected land surrounded by other agricultural properties or parkland?** Forty-three percent of the respondents reported that nine-tenths or more of the surrounding land within a mile of their protected land was either in agricultural use or was parkland. A total of 62% said that at least three-quarters of the land was used for agriculture or as parks.

**d. In the absence of the conservation easements, to what extent would the subject farm or ranch lands have been developed out of agricultural use?** Thirty-four percent of the 506 surveyed believed that, absent the easement, their land would likely have been developed or sold for development by the time of the 2012 interviews. Another 15% gave the opinion that their land would either eventually be converted out of agricultural land or it would probably be sold to non-farmers.

## Chapter 4: Who Were the Owners of the Protected Properties?

**a. First- or second-generation owners.** Nearly nine in 10 of the interviewed owners—88% --were "first generation" only. That is, they sold easements to at least some of their protected agricultural land but did not also purchase or inherit agricultural land under easement. Those respondents who were exclusively "second generation"—they had acquired protected land either through purchase or inheritance—comprised small groups: 3.2% and 0.4%, respectively. A total of 6.3% were both "first" and "second generation" in the sense that they had sold easements to land they owned *and* had become owners of land already under easement.

**b. Owner-operators or owner-non-operators.** Among the entire group of 506 surveyed owners, 356 (or 70%) were operators of at least some of their protected land in 2011. The gender divide among these operator-owners was 81% men versus 19% women. That 19% value was somewhat higher than the nation-wide measure for women as principal operators that the 2007 Census of Agriculture found—14%.

Very few surveyed owners—just 3%—were as young as 35 or less. The age range of 36 to 55 had 25% of the total, and the 56-to-65 group comprised 30%. Not surprisingly, as age increased,

the percent of owners who were operators decreased. However, even among the 60 surveyed owners who were 76 to 85 years old, 50% said they were operators, which was defined as "someone who, alone or with other persons, makes the day-to-day decisions as to what products to raise, how they are raised, and when and how they are marketed."

**c. Owner-operators' farms and ranches.** By comparison to all farms covered by the 2007 Census of Agriculture, the 356 operations covered in this survey tended to be larger in earnings. In the Census only 10% reported cash receipts of $250,000 or greater, while 32% of the operations we studied had receipts that high. Similarly, although 58% of the census' operations reported receipts of less than $10K, the corresponding value in our FRPP survey was 18%.

**d. "Young farmers" (no more than 35 years old) and "beginning farmers" (having been operators no more than 10 years).** Thirty-five percent of the 506 surveyed owners reported one or more of four ways in which the land conservation programs had either benefited them when they themselves were "young" or "beginning farmers" or would benefit future farmers in those two categories: (1) When they were young or beginning farmers, they sold conservation easements on agricultural land they owned; (2) when they were young or beginning farmers, they purchased or inherited land with easements already in place; (3) they had rented protected land to young or beginning farmers; and/or (4) they reported that their successors as owners would "definitely" or "probably" be young or beginning farmers.

**e. To what extent (if any) did surveyed owners believe that their lives would have been different if they had not sold conservation easements?** Close to half (47%) of the 479 owners who had sold easements said that they would have been worse off (e.g., forced into selling the land, not receiving money from the sales that they needed for the farm business or to meet other financial obligations, and non-monetary losses in quality of life). Forty percent believed that there would have been no difference in their lives. One percent thought they would have been better off, and 12% were either unsure or did not answer.

## Chapter 5: Benefits to the Local Community

**a. Marketing locally produced food directly to local consumers.** We were interested in the extent to which the land under easement contributed to "local food systems." Just over a quarter (26%) of the total surveyed owner-operators (356) directly marketed food to consumers in 2011. Almost all of them—96%—had raised at least some of that food on their protected land. A majority, 59%, reported having produced "all" of it there, while another 13% said "most of it," and 24%, "some of it."

**b. Most of the 479 surveyed owners who sold easements plowed back proceeds from the sale into their agricultural operations or properties.** Of the total owners who sold easements, 70% were also farmers or ranchers, while the other 30% were owner-non-operators. Majorities of both groups (91% and 68%, respectively) spent at least some of the proceeds from the easement sales for agricultural purposes—such as constructing, expanding, or repairing agricultural-use buildings or other structures (e.g., fences) on their land; repaying loans on farmland they already owned; buying additional land; and buying equipment or vehicles to be used on their farm or ranchland. Among all 479, 52% reported that the largest share of their total

expenditures from the sale proceeds went to an agricultural purpose; and for 42% such purposes received the second largest share.

**c. The easement sale money that went to agricultural purposes tended to be spent locally.** The agricultural purposes were divided into four categories, and for three of the four the surveyed owners who made the expenditures said that it was spent locally (i.e., in the county where their protected land was located). That was true of 96% of the cases involving the repayment of loans on farm or ranch land, 89% of the respondents who used the money to buy additional land, and 83% of the cases of constructing or improving agricultural-use structures. However, only 49% of those who bought equipment or vehicles for use in raising, processing, or selling products from their farms or ranches purchased them in the local county.

**d. Conservation benefits.** How owners of agricultural land manage (or neglect) the soils, water resources, trees, wildlife habitat and other natural components of their land may significantly affect the interests of the local community. More than half (57%) of the full sample of 506 owners reported applying practices in 2011 to curb soil erosion, and close to half (45%) said that their land had practices to protect against pollution of surface or ground water. That year just over four in 10 respondents (41%) had used practices for protecting or improving wildlife habitat, and more than a third (35%), measures to prevent overgrazing or other damage to pasture land.

One basis of comparison is to the USDA's 2007 Census of Agriculture. It asked all surveyed operators: "At any time during 2007, did this operation ....[u]se conservation methods such as no-till or limited tilling, filtering runoff to remove chemicals, fencing animals from streams, etc.?" Twenty-three percent of the Census' farm and ranch *operators* answered "yes" to the question. Its content was rather closely matched by that of two of our interview questions: one about using "practices to protect soil from erosion" and the other about "practices to protect surface or ground water from pollution." Among our subsample of 356 owner-operators, 68% reported applying in 2011 practices of one or the other type (or both).

**e. Did the program make a difference in the conservation practices applied, or would the owners have behaved the same ways regardless of the land's protection status?** Interview questions found three ways in which participation in the land protection program likely made differences:

(1) Money from the sale of easements helped in applying practices. Twenty percent of all 506 respondents told us that they had used proceeds from the sale of their easement for "Starting up or expanding the use on your land of conservation practices...."

(2) FRPP rules require management plans for highly erodible land, for the harvesting of timber on protected land, and for other problem situations that may be identified before the easement is finalized. More than two-thirds (69%) of the 506 owners reported having a written plan.

(3) Participation in easement programs encouraged the application of conservation practices that were new to the protected land since it came under an easement. Almost a quarter (24%) of the total surveyed owners said that at least one such practice was used in 2011. A follow-up question asked those respondents (122 in number) if their adoption of new practices had been related to the conservation easement program. Close to half (48%) of them answered

that the program had encouraged them to use the practices, such as because the easement agreement mandated certain types of practices, because they received technical assistance in applying practices, or easement program personnel had connected them to sources for the cost-sharing of practices.

## Chapter 6: Positive Changes in Farm and Ranch Operations Since the Land First Became Protected by Conservation Easements

This chapter focuses on the 247 surveyed owner-operators whose land had been subject to conservation easements for at least a year before 2011. Therefore, for this group we could compare their operations in both 2011 and that first year they farmed/ranched protected land that they owned. Our purpose was to learn if the operations had expanded or otherwise changed in likely positive ways.

**a. Operation's size in acres.** Among the 247 surveyed owners in these comparisons, 22% had by 2011 increased the total acres in their operations, 69% kept them the same, and only 9% decreased them.

**b. Changes in raising crops and the number of separate crops produced that grossed at least $1,000 per year.** Ten percent of the 247 had ceased raising crops altogether between their first year of operating land under easement and 2011, while 3% started up crop production. Another indicator of change was in the number of separate crops raised, each of which grossed at least $1,000. Thirty-eight operators (15% of the 247) reported raising more such crops by 2011 and 34 (14%) had fewer.

**c. Changes in raising livestock and the number of separate kinds of livestock produced that grossed at least $1,000 per year.** Among the 247 respondents, 10 (4%) who raised livestock in the "first year" had ceased doing so by 2011, while 17 (7%) had added livestock production between their first year and 2011. Regarding the number of separate kinds of livestock raised, each of which grossed at least $1,000, 21 operators (9% of 247) reported more kinds, and 12 (5%) raised fewer.

**d. Changes in the kinds and number of marketing outlets grossing at least $1,000 per year.** Forty-seven respondents (19% of the 247) increased their total number of marketing outlets by at least one, while 17 (7%) decreased them by one or more.

**e. Adding management systems.** By 2011, 13% of the 247 had added to their operations one or more management systems such as precision farming, organic farming, Integrated Pest Management, and nutrient management systems. Only two operators (1%) reported having dropped any system.

**f. Adding processing businesses to the operation.** Between their first year of owning and operating protected land and the year 2011, just three operators added at least one such enterprise without dropping as many or more; and no respondent reported a net decrease in the number of his or her processing businesses.

**g. Adding other agriculturally related businesses to the operation.** Examples included bed-and-breakfasts, horseback riding facilities and services to farmers such as selling seeds or repairing equipment. Eight respondents (3%) had increased their number of such businesses, while for no one had there been a net decrease.

**h. Adding cost-saving energy facilities.** Examples include producing electricity from solar panels, wind turbines, geothermal heat pumps, or from a manure digester system. Eight (3%) of the 247 owner-operators under study increased the total number of cost-saving energy facilities they used, while none had a net decrease.

**i. Investing proceeds from the sale of easements in their farm or ranch operation.** In addition to examining the above eight components of operations (sections [a] through [h]), we checked for investments in the farm or ranch business that the 247 operators may have made from proceeds from the sale of easements. Ninety-five percent of the 247 owner-operators on whom this chapter focuses (or 234 respondents) sold easements, and 149 of them (or 64% of 234) reported that they had invested the "largest share of total expenditures" from the sales' proceeds in some agricultural purpose(s). Those 149 owner-operators comprise 60% of the full subsample of 247. Among the "largest" expenditures were: buying or paying down the mortgage on the protected agricultural land (reported by 25% of the 234), purchasing additional agricultural parcels (12%), constructing or improving farm/ranch buildings (11%), and purchasing or repairing equipment or vehicles used on their operations (8%).

**j. Summary.** Overall, 122 (49%) of the 247 owner-operators achieved a net increase in at least one of the eight components of farm/ranch management that we examined. Of course, some operators had an increase in one or more areas but a net decrease in another (or others). Eighty-six (35%) reported only net increases; in none of their eight components had there been a reduction by 2011. Another 13 operators (5%) reported increases in at least two components and a decrease in only one. That brings the total percent with likely overall net positive changes to 40%. Moreover, 60% of the 247 consisted of owner-operators who had sold conservation easements to their land and who, when spending money from proceeds of the sales, directed the "largest share" to an agricultural purpose. Therefore, 75% percent of the 247 either made such investments and/or were in the group of 40%.

## Chapter 7: Transferring Ownership of Protected Land

**a. To what extent did the "second-generation" owners differ from the first-generation?** When our survey took place, only 5% of the full sample had purchased or inherited land already under conservation easements. They comprised the "second" or perhaps later generation of owners. As the number of years increases since easements were placed on farms and ranches, the original owner-applicants are less and less likely to retain control of the land. And the behaviors and plans of subsequent owners become more important to the long-term success of the FRPP. In this study, compared to the first-generation owners, members of the second were more likely to be operators, as likely to have applied at least one kind of conservation practice to their protected land (out of a choice of five types), as likely to be operators who marketed food they produced directly to consumers, and more likely to have expanded their operations in one or more respects.

**b. Did second-generation owners who bought protected land tend to find it more, less, or as expensive as similar land without conservation easements?** Of the 43 respondents who purchased protected land, 39% found it to be "much lower, and another 26%, "somewhat lower," for a total of 65% believing that there were at least some savings when they bought protected land. Only one respondent found it to be "somewhat higher," and one, "much higher."

**c. Did the conservation easements already on the land pose a benefit or problem when "lining up financial resources to purchase the land?"** Among the 43 owners asked this question, 16 (or 37%) found it to be benefit, one believed it to be a problem, two thought it was both a benefit and a problem, while 22 (51%) considered it neither, and two did not know how to answer.

**d. What were the owners' expectations as to who would succeed them?** Forty-seven percent of the entire sample reported having a written agreement as to who the next owner(s) would be, and another 14% had made "an oral agreement or promise" to that effect. Among the subsample of 356 owner-operators, the numbers were very similar—with a total of 208 (or 58%) having made one or the other kind of commitment. Follow-up questions to those 208 found that 156 of them believed that their successors would "definitely" or "probably . . . be a farmer who uses the protected land for agricultural production." Those 156 cases represented 44% of all 356 owner-operators. This percentage is significantly higher than those found in one national and two state-level succession studies and nearly as high as a third state survey's finding.

**e. To what extent will the next generation of owners of protected land consist of "young" or "beginning" farmers at the time of transfer of ownership?** The focus on young and beginning farmers is part of a widespread concern about the aging of American farmers and ranchers and the need to recruit new ones. At of the time of our study's interviews, 22% of the full sample of 506 owners was expecting either young or beginning farmers as their successors.

## Chapter 8: Satisfaction with Owning Protected Agricultural Land

In two sets of questions the surveyed owners were asked to evaluate their experiences with agricultural land under conservation easements. The first set came early in the interview, and the second late.

**a. What were the owners' goals in selling conservation easements for their agricultural land, and to what extent were those goals achieved?** The four most frequently reported types of goals were: To save land for agriculture (a type of goal reported by 68% of the 479 sellers of easements), to obtain money to meet personal or family financial needs (28%), to protect family heritage values represented by the farm's land and buildings (19%), to improve the farm/ranch business (16%), and to preserve a lifestyle for self or family (14%). In a follow-up question, 72% of the 479 said that their goals had been met "to a great extent," and 22% chose the response option "to a moderate extent." Just 4% made up the categories of "to a slight extent" and "to no extent at all."

**b. To what extent were the surveyed owners satisfied with their experiences as owners of protected land?** Nearly six in 10 (58%) respondents said that they were "very satisfied. Thirty-eight percent were "satisfied" and only 2.5% "dissatisfied" or "very dissatisfied."

**c. What were the owners' reasons for their being satisfied with owning land under conservation easements?** Immediately after answering this multiple-choice question, all owners were asked the follow-up question: What were your reasons for giving that overall evaluation of owning protected land?" The five most frequently reported types of reasons were:
-- Satisfaction from having prevented agricultural land from being developed; having preserved it for agriculture (given by 45% of the full sample of 506 owners).
-- No negative effects; the conservation easement programs don't micromanage owners (24%).
-- Easement money was used to buy agricultural land, to pay down the farm's mortgage, or otherwise improve the operation (12%).
-- Saving the land for self or family because of its heritage and/or lifestyle value (11%).
-- Used easement proceeds to meet personal or family needs (other than those of farm/ranch operation), e.g., to cover children's education, health care costs (10%).

# Chapter 1

## The Survey's Focus and Purposes

### 1. Focus

From mid-February to the third week of May 2012, a research team at the University of Nebraska-Lincoln surveyed 506 owners whose agricultural land was protected from development through conservation easements that were funded in part by USDA's Farm and Ranch Lands Protection Program (FRPP). The program:

> provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, USDA partners with State, tribal, or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. USDA provides up to 50 percent of the fair market easement value of the conservation easement.[3]

The Land Trust Alliance defines a "conservation easement" as "a legal agreement between a land trust or government agency that permanently limits uses of land in order to protect its conservation values."[4] The owners may agree to the limits without receiving any direct compensation for the decrease in property rights (such as no longer being able to turn a 20-acre farm parcel into four 5-acre residential parcels). Instead, their actions may qualify as a tax-deductible donation. The FRPP, however, was designed to encourage the protection of agricultural land through the purchase of development rights.[5] Landowners not wishing to donate easements may be persuaded to sell them.[6] The federal Farm Bills that have authorized the FRPP (beginning in 1996) permit USDA to contribute "up to 50 percent of the appraised fair market value of the easement" on the farm or ranch.[7] The preservation programs of land trusts, state agencies, county governments, and other entities provide the other 50% or more of the cost.

Among the eligibility requirements for owners are that their agricultural land in question be privately owned, be worth protecting for agricultural production (i.e., have good soils, be large enough for viable farming or ranching), and have a pending easement-purchase offer from "a

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[3] USDA, Natural Resources Conservation Service, *Farm and Ranch Lands Protection Program* (http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/farmranch/ [accessed February 14, 2013]).

[4] Land Trust Alliance, *Conservation Easements* (https://www.landtrustalliance.org/conservation/landowners/conservation-easements [accessed February 14, 2013]).

[5] Farmland Information Center, *Purchase of Agricultural Conservation Easements:* http://www.farmlandinfo.org/documents/39371/FIC_PACE_09-2012.pdf (accessed May 9, 2013).

[6] Farmland Information Center, *Fact Sheet: Agricultural Conservation Easements:* http://www.farmlandinfo.org/documents/27762/ACE_01-2011_.pdf (accessed May 9, 2013).

[7] USDA Natural Resources Conservation Service, http://www.tx.nrcs.usda.gov/news/releases/09/frpp.html (accessed August 6, 2012); Farmland Information Center, *Farm and Ranch Lands Protection Program:* http://www.farmlandinfo.org/documents/38624/FIC_FRPP_09-2012.pdf (accessed May 9, 2013).

state, tribal, or local government, or a non-governmental organization (NGO) agricultural land protection program".[8] Through fiscal year 2011 the FRPP's funds had helped to enroll over 1.1 million acres in agricultural conservation easement programs.[9]

This survey of agricultural landowners was funded through a contribution agreement between USDA's Natural Resources Conservation Service, the agency that administers the FRPP, and American Farmland Trust (AFT), a private nonprofit organization that since its founding in 1980 has promoted protection of working agricultural land through easements and other means.[10] AFT contracted with the University of Nebraska-Lincoln to conduct the survey, analyze the interview data, and write this report. Though welcoming and considering very carefully comments from USDA and AFT on previous drafts of the report, the authors were free to publish this final version on a university website as they saw fit.

**2. Survey's Purposes**

2a. The 506 interviews focused on the *effects of the easements on the owners' actions and attitudes.* We sought to learn:

--how the protected land was used after the easement was in place—such as how much of that land was in agricultural production,

--how the 95% of interviewed owners *who had sold easements* spent the proceeds from those sales,[11] particularly whether they plowed the money back into their farming and/or livestock operations;

--whether between when the easement took effect and the end of 2011, the farm or ranch operators in the sample expanded or contracted their operations, such as through changes in the operation's numbers of acres, the crops and/or livestock they produced, the wholesale and/or direct marketing outlets used, the management systems (e.g., organic, precision farming) they may have applied, the processing and other agriculturally related businesses (if any) they may

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[8] Here is the list of requirements as of February 2013: "To qualify the farm or ranch must:

- Be privately owned land.
- Contain at least 50 percent of prime, unique, statewide, or locally important soils OR
- Contain historic or archeological sites that are:
  - Consensus determined by the State Historic Preservation Office (SHPO), or the Tribal Historic Preservation Office (THPO), or
  - Formally nominated to the national register AND
- Be part of a pending offer from a state, tribal, or local government, or a non-governmental organization (NGO) agricultural land protection program.
- Have a conservation plan on Highly Erodible Land (HEL) acres.
- Contain sufficient acres to sustain agriculture production.
- Include eligible lands such as cropland, rangeland, grassland, pastureland, and forest land that are part of the agriculture operation.
- Involve land owners who do not exceed the Adjusted Gross Income (AGI) provisions."

USA Natural Resources Conservation Service, *2012 Farm and Ranch Lands Protection Program* (http://www.mt.nrcs.usda.gov/programs/frpp/index.html [accessed February 14, 2013]).

[9] USDA, Natural Resources Conservation Service, *Farm and Ranch Lands Protection Program,* "Program Information by Fiscal Year," (http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/farmranch/ [accessed February 14, 2013]).

[10] American Farmland Trust: http://www.farmland.org/

[11] The other 5% of the respondents had purchased or inherited protected agricultural land.

have operated, their use (if any) on their land of wind turbines or other energy producing facilities;

--what were the surveyed owners' objectives for agreeing to the land conservation easements and their opinions of how well those goals had been achieved by the time of the interviews;

--their overall satisfaction/dissatisfaction with owning preserved agricultural land; and

--their opinions as to "What, if anything, would have happened" to their land and to their own lives if they had not sold the conservation easements.

2b. The survey was designed to understand also *the effects of the preservation easements on the community in which the land was located.* We aimed to learn the extent that:

--the proceeds from the easement sales were spent locally (at least in the same county as where the protected land was),

--the operations with protected land raised food and marketed it directly to local consumers,

--surveyed owners had conservation plans and were applying them to the community's land, water resources, and wildlife habitat;

--"young" or "beginning" farmers[12] benefited from the conservation easement programs—such as by being able to sell development rights, by being buyers of land whose development rights had already been sold and, therefore, might have been more affordable to buy, or by renting land that might have been developed if not for the preservation easements; and

--the surveyed owners had written or oral agreements as to who would succeed them and whether in many or most cases the expected successors were farmers or ranchers, including "young" or "beginning" operators.

2c. A third purpose of the survey was to learn as much as possible about the owners so as to be able ***to understand their actions and attitudes***. Therefore, at various points the interview sought to measure traits that were hypothesized to shape behavior and opinions, including:

--the surveyed owner's path(s) to owning protected land: selling, purchasing, and/or inheriting agland with an easement already on it;

--being an owner-operator in 2011 versus the status of a non-farmer owner;

--having farming or ranching as one's primary occupation rather than being a part-time operator, being retired from farming, or having some other occupation;

--age of the owner either at the time of the interviews or when the respondents first became owners of protected land;

--the surveyed owner's gender and level of formal education achieved,

--the year an owner-operator in the sample started to farm,

--size of his/her total operation in acres and total cash receipts, and

--the percentage of the total operation represented by protected land.

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[12]"USDA defines a beginning farm as one operated by a farmer who has operated a farm for 10 years or less." Mary Ahearn and Doris Newton, 2009, *Beginning Farmers and Ranchers* [USDA, Economic Research Service], p. 3: http://www.ers.usda.gov/media/156049/eib53_1_.pdf [accessed February 15, 2012]). A "young farmer" is defined as being 35 years old or younger. (Farm Credit Council, *Young, Beginning and Small Farmers and Ranchers*: http://fccouncil.com/ybs/ [accessed February 15, 2013]).

Using these and other traits of the respondents as measured by the survey, we applied statistical analysis to identify "models" of positive owner behaviors and attitudes. We sought to learn what traits were associated with (among other likely desirable outcomes) the respondents:

--investing proceeds from the sale of easements in their agricultural land and/or (if they were also operators) in their farm or ranch operations;

--expanding or contracting their operations in the years after their land was protected via conservation easements;

--applying conservation practices to protect soils, water quality, and/or wildlife habitat;

--developing plans for who would own the land after them; and

--being satisfied with owning protected land.

# Chapter 2

## Administration of the Survey

### 1. Developing the Sample

Since our financial resources and desired time-line[13] limited us to about 500 interviews, we needed to draw a sample of owners of protected land, rather than doing a census. Also, since we wished the findings from the sample to be as representative as possible of all owners of land preserved during the six-plus federal fiscal years, October 2005 through January 2012, the sample had to be random. Therefore, the lists of program participants needed to be free of duplicates, triplicates, etc. It was very important that each owner had an equal chance of being included in the sample, not—for example—twice as great a chance as when he/she was listed in two places (such as because he/she owned two farms protected under separate easements). Consequently, when we received from the NRCS the lists of owners who had sold easements or purchased or inherited land with easements already on them, we identified duplicates. After removing multiple listings, we ended up with 1,156 separate owners.

Table 2.1 presents for the period October 2005 through January 2012, by USDA Farm Production Region:
--the total number of separate owners with closings on conservation easements (column 2),
--each region's percentage share of the total of 1,156 such owners (3),
--the number of surveyed participants per region (4), and
--each region's share of the total of 506 participants (5).

The percentage-point differences between columns 3 and 5 are relatively small—ranging from 0.2 points for the Southern Plains, Corn Belt, and Southern Plains to 3.1 points for the Northeast States—and indicating that the sample of surveyed owners was representative of the total number of owners eligible for the survey.

From the 1,156 names in the full list of separate owners, we drew a series of random samples as the survey progressed. By mid-May 2012, when our goal of at least 500 completions was reached, those drawings had totaled 982 names.

[13] We aimed to complete the interviewing before the summer of 2012.

**Table 2.1 Samples were drawn from owners of properties that had "closings"[a] on their conservation easements from October 2005 to January 2012, by US Farm Production Region[b]**

| (1) Region | Separate Owners | | Owners Who Participated in the Survey | |
|---|---|---|---|---|
| | (2) Number | (3) Percentage | (4) Number | (5) Percentage |
| Northeast | 584 | **50.5** | 240 | **47.4** |
| Appalachia | 150 | **13.0** | 67 | **13.2** |
| Southeast | 54 | **4.7** | 20 | **4.0** |
| Lake States | 69 | **6.0** | 30 | **5.9** |
| Corn Belt | 108 | **9.3** | 46 | **9.1** |
| Northern Plains | 18 | **1.6** | 10 | **2.0** |
| Southern Plains | 7 | **0.6** | 2 | **0.4** |
| Mountain States | 99 | **8.6** | 56 | **11.1** |
| Pacific States | 67 | **5.8** | 35 | **6.9** |
| Total cases | 1,156 | **100.0** | 506 | **100.0** |

[a] "The closing date is set during the negotiation phase and is usually several weeks after the offer is formally accepted. On the closing date, the parties consummate the purchase contract, and ownership of the property is transferred to the buyer. In most jurisdictions ownership is officially transferred when a deed from the seller is delivered to the buyer." (Wikipedia: http://en.wikipedia.org/wiki/Closing_%28real_estate%29 [accessed February 16, 2013]).

[b]The Northeast Region consisted of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, and the District of Columbia.
Appalachia=West Virginia, Virginia, Kentucky, Tennessee, and North Carolina.
Southeast=Alabama, Georgia, South Carolina, and Florida.
Delta=Arkansas, Louisiana, and Mississippi. None of the owners whom we interviewed were from one of the three Delta States. Lake States: Minnesota, Wisconsin, and Michigan.
Corn Belt=Iowa, Illinois, Indiana, Missouri, and Ohio.
Northern Plains=North Dakota, South Dakota, Nebraska, and Kansas.
Southern Plains=Oklahoma and Texas.
Mountain States=Montana, Idaho, Wyoming, Utah, Nevada, Colorado, New Mexico, and Arizona.
Pacific States=California, Oregon, Washington, Alaska, and Hawaii.

## 2. Developing the Questionnaire

The survey's questionnaire was developed through input gathered from various sources. AFT staff helped to coordinate and gather the input. The five main sources were:

(1) NRCS professional staff, both current and retired, who had had direct experience with the administration of the FRPP;
(2) Staffers of Congressional committees concerned with the FRPP;
(3) AFT staff members with many years of observing, advising, and writing about farmland conservation programs;
(4) Leaders of public and private land conservation programs; and
(5) Scholars of survey research and of agricultural land policy at the University of Nebraska-Lincoln.

Also very helpful in developing the questionnaire were the questions and findings from previous surveys of the clients of agricultural land conservation programs.[14]

**3. Pretesting the Questionnaire**

By early January 2012 a draft questionnaire was ready to be pre-tested via interviews with members of the random sample chosen in ways discussed above. However, before interviewing any agricultural land owners in the pre-test group, we were required by federal regulations, our own university, and the ethics of our academic disciplines to have the draft questionnaire approved by a university Institutional Review Board (IRB):

> "The Institutional Review Board reviews research projects that involve human subjects to ensure that subjects are not placed at undue risk, that they give informed consent to their participation, and that their rights and welfare are protected throughout the project."[15]

We proposed to the IRB to seek the subjects' informed consent through a 717-word letter that presented the main purposes of the study (discussed above), that promised protection from their names ever being made public or associated with any findings or other material in our reports, and that asserted they were free to decline to participate.[16] After reading the letter and receiving a telephone call in which the letter's contents were summarized, the owners in the sample were to be asked if they were willing to proceed with an interview. If they agreed, it was assumed that we had obtained their "informed consent."

Since the draft letter explained how and why we received the prospective respondents' names from USDA,[17] representatives of USDA read and approved the draft.

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[14] All of the following five reports on relevant surveys were Internet-accessible on February 16, 2012:
Kristen Ferguson and Jeremiah Cosgrove, 2000, *From the Field: What Farmers Have to Say About Vermont's Farmland Conservation Program*:
http://www.farmlandinfo.org/farmland_preservation_literature/index.cfm?function=article_view&articleID=29389
Robin Sherman, Suzanne Milshaw, Robert C. Wagner, and Julia Freedgood, 1998, *Investing in the Future of Agriculture: The Massachusetts Farmland Protection Program and the Permanence Syndrome:*
http://www.farmlandinfo.org/farmland_preservation_literature/index.cfm?function=article_view&articleID=29253
New York State Department of Agriculture & Markets, 2009, *New York Farmland Protection Study:*
http://www.farmlandinfo.org/documents/38167/Farmland_Protection.pdf
Jill Clark, 2010, *Ohio's Agricultural Easement Purchase Program: From Pilot to Permanent Presence—A Survey of AEPP Participants*:
http://www.farmlandinfo.org/farmland_preservation_literature/index.cfm?function=article_view&articleID=38456
J. Dixon Esseks, Jessica M. Nelson and Monica E. Stroe, 2006, *Evaluation of USDA's Farm and Ranch Lands Protection Program (FRPP) through Surveying a Random Sample of Owners of Agricultural Land Whose Development Rights Were Sold in Part through the FRPP:*
http://www.farmlandinfo.org/index.cfm?function=article_view&articleID=30831

[15] University of Nebraska-Lincoln, Office of Research & Economic Development, *The Institutional Review Board at UNL:* (http://research.unl.edu/orr/irbatunl.shtml [accessed July 28, 2012]).

[16] "Your name, address, and/or phone number will never be associated with any of your survey responses. Nor may we share your name and contact information with anyone inside or outside the University. . . . You are free to decide not to participate in this study. You may also withdraw at any time without harming your relationship with the US Department of Agriculture, the particular preservation program that holds the conservation easement on your land, and with anyone at the University of Nebraska or the American Farmland Trust."(Center for Great Plains Studies, University of Nebraska-Lincoln, January 31, 2012).

[17] "Your name was randomly chosen from a list of current owners of farmland enrolled in a preservation program that was financially assisted by USDA's Farm and Ranch Lands Protection Program. USDA gave us this list because they hoped to learn from the survey how to improve their program. Also, they accepted our pledge that we

The IRB at the University of Nebraska-Lincoln approved use of the proposed contact letter and a draft questionnaire on January11, 2012. We then sent out the letters and were able to conduct the first pre-test interview on February 14th. After reviewing the results from the initial 40 interviews, we made changes in the questionnaire; and the IRB approved them on March 7th. Both the interviews in February and those after the March revisions were computer-assisted.[18]

**4. Response Rate**

Using guidelines developed by the American Association for Public Opinion Research,[19] we calculated the overall response rate as 54.1%.[20] Compared to other surveys' rates, this percentage was relatively good. In 414 telephone surveys conducted in the United States during 2004 that, like ours, were based on lists of prospective participants rather than conducted through random digit-dialing, the average response rate was 30.9.percent.[21] A study by the Pew Research Center indicated that response rates for telephone surveys had declined from an average of 36% in 1997 to only 9% for the first part of 2012.[22] Our study had the advantage of reaching out to fairly recent participants in a program that yielded considerable monetary benefit to most of them. However, since the very similar survey of FRPP clients that we did seven years earlier, in 2005, yielded a response rate of 73%,[23] maybe the kind of survey we were conducting shared the more general problem to which the Pew Research Center data pointed.

**5. Lengths of Interviews**

A total of 504 members of the sample were interviewed over the telephone, and two filled out questionnaires via the Internet. The interviews averaged 37 minutes in length. Twenty-five percent of the 504 lasted 44 minutes or more, half took as many as 36 minutes, and three-quarters were at least 27 minutes in length (Table 2.2). An indication of respondents' interest in the survey was their willingness to answer a number of open-ended questions, including one towards the end of the interview that was asked of all respondents[24] and that generated an average of 37 words per person.

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will keep completely confidential what the owners of preserved farmland may tell us." (Center for Great Plains Studies, University of Nebraska-Lincoln, January 31, 2012).

[18]Here is *Wikipedia's* definition of computer-assisted telephone interviewing (CATI): "A computerized questionnaire is administered to respondents over the telephone. The interviewer sits in front of a computer screen. Upon command, the computer dials the telephone number to be called. When contact is made, the interviewer reads the questions posed on the computer screen and records the respondent's answers directly into the computer. . . . The software has built-in branching logic, which will skip questions that are not applicable or will probe for more detail when warranted." (http://en.wikipedia.org/wiki/Computer-assisted_telephone_interviewing: [accessed July 28, 2012]).

[19] American Association for Public Opinion Research, *Response Rate—An Overview* (http://www.aapor.org/Response_Rates_An_Overview1.htm: [accessed July 30, 2012]).

[20] We had a goal of 500 completed interviews and reached it before needing to contact all 1,156 owners in our sample.

[21]Cited in Public Works and Government Services Canada, *Improving Respondent Cooperation For Telephone Surveys:* (http://www.tpsgc-pwgsc.gc.ca/rop-por/rapports-reports/telephone/introduction-eng.html: [accessed August 4, 2012]).

[22] Pew Research Center for the People & the Press, "Surveys Facing Increasing Difficulty Reaching, Persuading Potential Respondents": (http://www.people-press.org/2012/05/15/: assessing-the-representativeness-of-public-opinion-surveys/5-15-12-1/: [accessed August 4, 2012]).

[23]Cited in footnote 14 above, fifth source.

[24] "What were your reasons for giving that overall evaluation of owning protected land?"

| Table 2.2. Length of the survey's telephone interviews in minutes: average time, minimum and maximum, as well as the 25th, 50th, and 75th percentiles, by type of owner | | | | |
|---|---|---|---|---|
| **(1) Time Measure** | **(2) All 504[a] Cases** | **(3) Non-Operator Owners** | **(4) Operator-Owners of Protected Land for Just One Year - 2011** | **(5) Operator-Owners of Protected Land for More than One Year** |
| | | **Minutes** | **Minutes** | **Minutes** |
| Average | **37** | 30 | 37.6 | 41.3 |
| Minimum | **12** | 12 | 18 | 17 |
| 25th percentile | **27** | 22 | 29 | 31 |
| 50th percentile | **36** | 26 | 36.5 | 40.5 |
| 75th percentile | **44** | 35 | 42.3 | 47 |
| Maximum | **89** | 86 | 88 | 89 |
| *Interviews* | ***(504)[a]*** | *153* | *102* | *246* |

[a]In two of the total of 506 cases, the owners filled out a Word-processed questionnaire and returned it by e-mail.
[2]The three sets of cases to the right (153 + 102 + 246) add up to 501 rather than 504 because there were data missing in three cases.

**6. Structure of the Interviews**

The average interview length varied considerably with the type of owner being surveyed:

a) For non-operator owners it was 30 minutes (column 3 of Table 2.2), while for operator-owners who had had conservation easements on their land for just one year (since some time in 2011), the mean was 7.6 minutes higher (37.6—column 4).

b) The difference resulted from the many questions asked of operator-owners that were not asked of non-operators. Farmers and ranchers in the sample were questioned about their 2011 crops and livestock, their marketing outlets, their use of management systems (e.g., organic, Integrated Pest Management), and about any processing of agricultural products, among other potential aspects of their operations.

c) If the easement took effect in 2010 or earlier, the average rose 3.7 more minutes—to 41.3 (column 5). This third group of respondents was asked additional questions—about their farm or ranch operations in the first year they both owned and operated protected land, so that the earlier operations could be compared to 2011 to learn if program participants had expanded or contracted their operations after the easement took effect.

# Chapter 3

## The Protected Properties

### 1. Introduction

Chapter 3 has two main goals: (1) to describe major traits of the protected properties and (2) to use those survey findings to begin to assess the effectiveness of the FRPP as of the time of the interviews. We say "begin" because the evaluative material from the survey is too extensive to analyze in one chapter. Accordingly, in this chapter we discuss the following four traits and related evaluation issues.

**a. Was the protected land of the surveyed owners of sufficient size to promote the purposes of the program?** The regulations for the FRPP that were published in the *Federal Register* in January 2011 provide that the land "contributes to the economic viability of an agricultural operation or serves as a buffer to protect an agricultural operation from development."[25] The same regulations suggested to us a measure for assessing the adequacy of size of the selected properties. The "National Ranking Criteria" include the: "Ratio of the total acres of land in the parcel to be protected to average farm size in the county according to the most recent USDA Census of Agriculture."

We made the comparison instead to the average operation size in the state. We moved up to state comparisons to protect the privacy of our survey respondents. We had promised them to remove from our final data set the owners' names, addresses, and other identifiers that could be used to track down a particular property. Final sets are kept for sharing with other scholars, including if our reported findings are challenged. County names could be troublesome, since in many cases just one or a few new easements per county were agreed to during the period of our study, fiscal year 2006 through January 2012. Since Internet-available newspaper articles and conservation program websites may report the owner's name and number of protected acres in new easements, someone working with just a single case or a few per county could use such sources to identify within our data file a particular property and then mine the entries for that case for details about traits of the land and of the interviewed owner.

**b. To what extent was the protected land in active agricultural use**? Another measure in the National Ranking Criteria is: "Percent of cropland, pastureland, grassland, and rangeland in the parcel to be protected." One of our survey questions yielded essentially the same measure.

**c. To what extent was the protected land surrounded by other agricultural properties or parkland?** Another selection criterion for the FRPP has been that the candidates for protection "have surrounding parcels of land that can support long-term agricultural

[25] Federal Register, Vol. 76, No. 15, Monday, January 24, 2011: 4043.

production." Lacking the capacity to inspect properties on the ground or via aerial or satellite imagery, we relied on the owners' answers to an interview questions that directly addressed this issue. "

**d. In the absence of the conservation easements, to what extent would the subject farm or ranch lands have been developed out of agricultural use?** There was the possibility that, for some or many properties, land conservation easements were not needed. Although the economic downturn that began in 2007 may have very substantially reduced demand for converting agricultural land, maybe some or many of the protected properties in our study were unsuited for development or owned by persons with solid intentions to maintain the status quo despite the lack of financial incentives to do so. Therefore, toward the end of the interview we asked each of the 95% of surveyed owners who had sold easements: "What, if anything, would likely have happened to your farm or ranch land if you had not sold a conservation easement on it?"

**2. Findings about the Protected Properties**

**2a. Relative size of the protected properties:** Table 3.1's first row of data shows that among our total of 506 surveyed owners, half of them (the third and fourth quarters) reported that at the end of 2011 they owned 140 or more acres of protected agricultural land. Another way to put it is that the median value for all cases was 140 acres. That median exceeds the corresponding value at the national level for all farm and ranch operations reported in the 2007 *Census of Agriculture*. Among those 2.2 million operations, the top 50% farmed or ranched at least 80 acres.[26] The relatively large numbers of acres per owner found in our survey are compatible with the FRPP's eligibility qualification that "the farmland must be . . . large enough to sustain agricultural production."[27]

There was considerable variation across the USDA Farm Production Regions, with the average size of protected properties ranging from 163 acres in Appalachia to 1,320.8 in the Mountain States (see Table 3.1's far right-hand column). The beginning point for the top half of the cases per region (third and fourth quarters) varied from 108 acres in the Pacific States to 850 acres in the Plains States.

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[26]USDA Census of Agriculture, *2007 Census*: http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Custom_Summaries/Median_Farm_Size.pdf

[27] USDA, Natural Resources Conservation Service, "Farm and Ranch Lands Protection Program - Ranking Criteria 2013": ftp://ftp-fc.sc.egov.usda.gov/CA/programs/FRPP/2013/2013_FRPP_National_and_State_Ranking_Criteria.pdf (accessed February 28, 2-13).

**Table 3.1. Size of agricultural properties protected by conservation easements funded in part by the FRPP: Sample of 506 owners of land whose easements were closed, FY 2006 through January 2012, by production region[a]**

| | Measurements of Size in Acres | | | | |
|---|---|---|---|---|---|
| | **First Quarter** | **Second Quarter** | **Third Quarter** | **Fourth Quarter** | **Average across All These Cases** |
| **All surveyed owners: n = 506** | 6 to less than 75 | 75 to less than 140 | **140[b]** to less than 246.3 | 246.3 to 12,000 | 352.1 |
| **Farm Production Region[c]** | | | | | |
| Northeast n = 240 | 6 to less than 50 | 50 to < 110 | **110[2]** to < 184.8 | 184.75 to 3,500 | 176.5 |
| Appalachia n = 67 | 20 to less than 70 | 70 to < 122 | **122** to 199 | 199 to 1,000 | 163.0 |
| Southeast n = 20 | 39 to less than 135 | 135 to < 256 | **256[2]** to < 404.5 | 404.5 to 1,800 | 351.1 |
| Lake States n = 30 | 43 to less than 95 | 95 to < 143.5 | **143.5[2]** to < 241 | 241 to 440 | 166.1 |
| Corn Belt n = 46 | 14 to less than 95.5 | 95.5 to < 150 | **150[2]** to < 227.5 | 227.5 to 1,104 | 218.5 |
| Plains (Northern + Southern) n = 12[d] | 80 to less than 181 | 181 to < 850 | **850[2]** to < 1,877.5 | 1,877.5 to 3,200 | 1,083 |
| Mountain States n = 56 | 35 to less than 161.25 | 161.25 to < 410 | **410[2]** to < 1,762.5 | 1,762.5 to 12,000 | 1,320.8 |
| Pacific States n = 35 | 11 to less than 40 | 40 to < 108 | **108[2]** to < 300 | 300 to 7,300 | 452.7 |

[a]None of the owners whom we interviewed was from the Delta States: Arkansas, Louisiana, or Mississippi.

[b]The acres in bold type are the median sizes for the cases in their geographic region.

[c]The Northeast Region consisted of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, and the District of Columbia.
Appalachia=West Virginia, Virginia, Kentucky, Tennessee, and North Carolina.
Southeast=Alabama, Georgia, South Carolina, and Florida.
Delta=Arkansas, Louisiana, and Mississippi.
Lake States=Minnesota, Wisconsin, and Michigan.
Corn Belt=Iowa, Illinois, Indiana, Missouri, and Ohio.
Northern Plains=North Dakota, South Dakota, Nebraska, and Kansas.
Southern Plains=Oklahoma and Texas.
Mountain States=Montana, Idaho, Wyoming, Utah, Nevada, Colorado, New Mexico and Arizona.
Pacific States=California, Oregon, Washington, Alaska, and Hawaii.

[d]Normally, these two regions would be separately reported. However, only two owners were interviewed from the Southern Plains. Therefore, this category consists of almost entirely of Northern Plains cases—10 out of 12.

Table 3.2 addresses the question: How do the sizes of protected properties compare to the average farm sizes in their states? As discussed earlier, the FRPP's National Ranking Criteria included the ratio of the proposed protected property to the average farm size in the *county*. For reasons also presented earlier, we moved the comparison up to the *state* average as reported in the 2007 Census of Agriculture. And since some states had just one or a few cases in our sample, we aggregated the results by Farm Production Region (where the total respondents ranged from 12 in the Plains States to 240 in the Northeast). However, for each subject property the average farm size in its *state* was retained as the standard of comparison for Table 3.2.

The Northeast Production Region has by far the largest number of cases: 240 out of 506 (or 47%). For 45% of the cases in that region, the size in acres of the protected land equaled or exceeded their states' average farm sizes (see the far right-hand column of Table 3.2). In a total of 59% of the Northeast's cases the ration was at least 0.75; and in 76% of the cases, it was 0.50 or higher. If we take this latter category as a rough standard for properties probably being large enough to offer significant agricultural-use opportunities, the percentages ranged from 38% among the 56 Mountain States' cases to 85% for the 20 subject properties in the Southeast states. For all 506 cases, the percentage was 68%. Among the individual states in our sample with at least 20 protected properties, the two highest percentages were those for Pennsylvania, 89%, and Kentucky, 83%.

**Table 3.2. Ratios of size (in acres) of (a) each owner's protected land to (b) the average size of farms and ranches in its state: Percentages of cases where the ratio is at least 50%, 75%, and 100% of the state average farm size, aggregated to the Farm Production Region level**

| Farm Production Region and Number of Cases Per Region | % Cases Where Ratio is at Least .50 of the *State* Average | % Cases Where Ratio is at Least .75 of the *State* Average | % Cases Where Ratio is at Least 1.00 of the *State* Average |
|---|---|---|---|
| Northeast n= 240 | 76% | 59% | 45% |
| Appalachia n= 67 | 72 | 49 | 36 |
| Southeast n= 20 | 85 | 75 | 60 |
| Lake States n= 30 | 70 | 53 | 20 |
| Corn Belt n= 46 | 74 | 50 | 30 |
| Plains (Northern and Southern) n= 12[a] | 58 | 50 | 50 |
| Mountain States n= 56 | 38 | 29 | 23 |
| Pacific States n= 35 | 40 | 26 | 23 |
| | | | |
| Total across all regions | 68% of 506 (345 cases) | 51% of 506 (259 cases) | 38% of 506 (190 cases) |

[a]Normally, these two regions would be separately reported. However, only two owners were interviewed from the Southern Plains. Therefore, this category consists of almost all Northern Plains cases—10 out of 12.

**2b. To what extent were the relatively small protected properties parts of other operations rather than being farmed or ranched by themselves?** Protected properties that are smaller than their state's average farm size may be components of larger farm operations. That is, the owners may operate also other parcels, or they may rent out all or part of the protected

land to a tenant. Table 3.3 reports our findings about these possibilities. Among the 316 total properties where the ratio of the protected land's acres to the average-size farm in the states was less than 1.0, almost a third (33%) consisted of cases where the owners were not operators; and all their protected land in agricultural use was rented out. In about an eighth (13%) the owner-operators rented out land under easement to other farmers or ranchers. And 40% were cases where the protected acres formed a part of the farmer- or rancher-owner's total (larger) operation. Eighty-two percent of the cases fell into one of these three categories.

**Table 3.3. Among the 316 respondents whose protected properties were smaller than their state's average farm size (as found in the 2007 Census of Agriculture), the percentages that were (1) rented out entirely, (2) rented out in part, or (3) components of larger operations run by their owner-operators**

| Three Types of Protected Properties | % Cases Where Ratio of the Protected Property to the Average Farm Size in the State Was Less than 1.0 |
|---|---|
| In 2011 owner was not an operator and rented out his/her protected land that was in agricultural use. | 33% (103 cases) |
| In 2011 owner was an operator but rented out some of the protected land in agricultural use. | 13% (42 cases) |
| In 2011 owner was an operator of agland that included other parcels besides protected ones. | 40% (126 cases) |
| Cases in 2011 that fit into at least one of the above three categories | 82% (258 cases)[a] |
| Total cases | 316 |

[a]The figure here, 258, does not add up to271, the sum of the cases in the previous three rows of data, because of overlaps across categories.

**2c. To what extent were the protected acres in active agricultural production?** All respondents to our survey were asked:

> "In 2011 about how many of your total protected acres [the computer inserts the number gathered from responses to previous questions] were in *active agricultural production*, such as in crops, hayfields, pasture, rangeland, or orchards? Please include in that estimated total any protected acres used for barns and other agricultural buildings and, secondly, any protected land you may have rented out to farmers or ranchers."

Our question did not include timber production because the Ranking Criteria focused on the "cropland, pastureland, grassland, and rangeland in the parcel to be protected." [28]

Table 3.4 presents our findings for the extent of total protected acres being in agricultural use. Four percent of all 506 surveyed owners reported no agricultural use of those acres. On this measure there was little change from a 2005 survey of 422 randomly chosen owners of land with easements funded in part by the FRPP. Just 3% in 2005 reported no farming or ranching of their protected acres.[29] At the other end of the scale, there was some improvement. Among the

[28] Federal Register, Vol. 76, No. 15, Monday, January 24, 2011: 4043.

[29] Esseks et al., 2006, *Evaluation of USDA's Farm and Ranch Lands Protection Program through Surveying a Random Sample of 422 Owners of Agricultural Land Whose Development Rights Were Sold in Part through the FRPP* (Lincoln, NE: Center for Great Plains Studies, University of Nebraska), p.12.

owners surveyed in 2012, 48% said that all their easement protected land was in agricultural production, compared to 37% in the 2005 study.[30]

**Table 3.4. Among all 506 owners, the percent of their total acres under easement that was in agricultural production in 2011, with comparisons to a 2005 survey of FRPP participants**

| Percent | 2012 Survey % | 2005 Survey % |
|---|---|---|
| 0% | 4% | 3% |
| More than 0 to less than 25% | 4 | 3 |
| 25% to less than 50% | 7 | 9 |
| 50% to less than 75% | 15 | 14 |
| 75% to less than 100% | 22 | 33 |
| 100% | 48 | 37 |
| Not clear | -- | 2 |
| Total Respondents | 506 | 422 |

Table 3.5 provides the same percentage-range break down for the 2012 survey, by Farm Production Region. The Mountain States had the highest percentage of cases reporting that all protected land reported was in agricultural production: 71%. Among the other regions with at least 20 cases, there were high values by this measure in the Pacific States (66%), the Corn Belt (57%), and the Southeast (55.%).

**Table 3.5. Among the 506 owners, the percentages of their total protected acres reported to be in agricultural use in 2011,[a] by six ranges and by Farm Production Region**

| Farm Production Region and Number of Cases Per Region | Zero % in Ag Use | More than 0 to less than 25% | 25% to less than 50% | 50% to less than 75% | 75% to less than 100% | 100% |
|---|---|---|---|---|---|---|
| Northeast = 240 | 3 | 6 | 11 | 23 | 18 | 39 |
| Appalachia = 67 | 8 | 0 | 6 | 19 | 24 | 43 |
| Southeast = 20 | 5 | 0 | 5 | 5 | 30 | 55 |
| Lake States = 30 | 0 | 3 | 3 | 10 | 40 | 43 |
| Corn Belt = 46 | 4 | 0 | 4 | 2 | 33 | 57 |
| Plains (Northern and Southern) = 12* | 8 | 8 | 0 | 8 | 17 | 58 |
| Mountain States = 56 | 3 | 2 | 2 | 4 | 18 | 71 |
| Pacific States = 35 | 6 | 0 | 3 | 6 | 20 | 66 |

[a]Text of question: "In 2011 about how many of your total protected acres, [the computer inserts the number gathered from a previous question]' were in *active agricultural production*, such as in crops, hayfields, pasture, rangeland, or orchards? Please include in that estimated total any protected acres used for barns and other agricultural buildings and, secondly, any protected land you may have rented out to farmers or ranchers."

[30] This 11 percentage-point difference (48% versus 37%) was found to be statistically significant at the .000 level in a t-test comparing two independent samples' proportions and assuming unequal variances.

Among the 356 owner-operators, the average percentage of protected acres in agricultural use, 82%, was not statistically significantly higher than mean value reported by the 150 owner-non-operators—77%.

**2d. What were the agricultural uses of the protected land, and how diverse were they?** The 356 owner-operators were asked questions about the different agricultural uses of their protected land. At the national level of this subsample and in all regional groups except the Plains States cases, two-thirds or more (67% to 95%) of the respondents had raised field crops in 2011 (Table 3.6). The second-most frequently reported agricultural use was pasture or rangeland for livestock; 48% to 89% reported it, except for the third-place measure of 32% among the Lake States' cases. Wooded areas used to produce timber, firewood, and other tree products were found in less than a quarter of the cases except in the Lake States' subsample (37%). "Orchards, citrus groves, vineyards, nursery, and/or greenhouse crops" were reported by small minorities, except for the 26% measure from the Pacific States' owner-operators. Energy crops like switchgrass, wheat straw, and maize were raised also by few respondents (0% to 11% across the regions).

Twenty-four percent of the national level sample reported having "cropland that was idle, used for cover crops or for soil improvement." There was considerable variation by region, ranging from 0% in the small Southeastern and Plains States subsamples to 42% among the somewhat larger number of Lake States' cases.

**Table 3.6. Among the 356 owner-operators, their reported types of agricultural land uses, at national level and by Farm Production Regions**

| Sample Segment | Field Crops | Pasture or Rangeland[a] | Wooded Acres for Timber Products[b] | Orchard, Nursery or Greenhouse Crops[c] | Energy Crops[d] | Non-Harvested Cropland[e] |
|---|---|---|---|---|---|---|
| | % of Farm or Ranch Operations Reporting Each Type of Use | | | | | |
| All Owner-operator n=356 | 84 | 64 | 19 | 11 | 5 | 24 |
| **Region** | | | | | | |
| Northeast n=156 | 93 | 58 | 24 | 14 | 6 | 25 |
| Appalachia n=54 | 75 | 80 | 19 | 7 | 6 | 19 |
| Southeast n=15 | 67 | 80 | 20 | 7 | 0 | 0 |
| Lake States n=19 | 95 | 32 | 37 | 11 | 11 | 42 |
| Corn Belt n=30 | 93 | 53 | 10 | 0 | 7 | 33 |
| Plains States n=9 | 44 | 89 | 11 | 11 | 11 | 0 |
| Mountain States n=50 | 82 | 80 | 8 | 8 | 0 | 16 |
| Pacific States n=23 | 61 | 48 | 9 | 26 | 9 | 39 |

[A]The respondents were asked about protected acres being used for "permanent pasture, rangeland, woodland pasture, or cropland that was pasture."
[b]Wooded acres being "used for producing timber, firewood, Christmas trees, and tree products like maple syrup."
[c]The focus of this question was on "orchards, citrus groves, vineyards, nursery and/or greenhouse crops."
[d]The question's text included examples of energy crops: "like switchgrass, wheat straw, or maize."
[e]The question focused on "cropland that was idle, used for cover crops or for soil improvement."

Table 3.7 focuses on the numbers of separate types of agricultural uses and on combinations of uses. Twenty-seven percent of the 356 owner-operators reported just one use. That single use was likely to be either crops (63% of the 95 single-use owner-operators) or pasture/rangeland (28%). Seventy-one percent of the 356 had two or more uses. The four most common combinations were field crops and pasture/rangeland (53% of all surveyed owner-operators), field crops and non-harvested cropland (20%), field crops and timber production (17%), and pasture/rangeland and timber production (13%).

**Table 3.7. Among the 356 owner-operators, the numbers of separate types of uses and the six most frequently reported combinations**

| Number of Separate Uses | Number of Respondents | % of 356 Respondents |
|---|---|---|
| Only one | 95 | 27% |
| Two | 165 | 46% |
| Three | 68 | 19% |
| Four | 18 | 5% |
| Five | 3 | 1% |
| No information | 7 | 2% |
| **Combinations of Uses** | | |
| Field crops and pasture/rangeland | 190 | 53% |
| Field crops and non-harvested cropland | 70 | 20% |
| Field crops and timber production | 60 | 17% |
| Pasture/rangeland and timber production | 48 | 13% |
| Pasture/rangeland and non-harvested cropland | 45 | 13% |
| Field crops, pasture/rangeland, and timber production | 42 | 12% |

**2e. To what extent was the protected land surrounded by other agricultural properties or parkland rather than by developed land?** Table 3.8 addresses the issue of whether the agricultural land under easement tended to be a small pocket of undeveloped space surrounded mostly by developed land. We know from Table 3.1 that most of the protected properties were not insignificant in size. Among the eight regions, the lowest median was 108 acres in the Pacific States subsample. However, those acres could have been isolated and thus risk the problems of complaining neighbors in adjacent or nearby homes or commercial land uses. The complaints could limit when they applied fertilizers or pesticides or whether they could have large livestock operations, among other restrictions.[31] Isolated operations also risked missing economies of scale.

We asked our 506 owners:

> "Some protected land is located in an area where almost all the surrounding land is in farming or ranching or is protected land like a park. Other protected parcels have residential, commercial, or industrial uses next to or fairly close to them. In the case of your only or your biggest protected parcel, about how much of the land within approximately *a mile of its borders* is in agricultural use or consists of protected land like a park?"

[31] K. Jones, et al., 2000, "Neighbors' Perceptions of Animal Agriculture," *The Professional Animal Scientist,* **16:** 105-110; Mary E. Handel, 1998, "Conflicts arise on the urban fringe," *California Agriculture,* 52: 1-16.

We added parkland since it would likely not obstruct agricultural activity as much as would houses, stores, or other commercial properties whose users might complain about farm odors, dust, and other perceived nuisances, as well as compete with farmers for the use of the nearby public roads. Table 3.8 has the six response options.

**Table 3.8. Among the 506 surveyed owners, the reported percentages of land within one mile of the protected property's borders that was either in agricultural use or was a park, by the six response options given in the survey question**

| Farm Production Region and Number of Cases Per Region | Less than 25% | 25% to less than 50% | 50% to less than 75% | 75% to less than 90%[a] | 90% or More[a] | Don't Know |
|---|---|---|---|---|---|---|
| Northeast = 240 | 17 | 12 | 17 | **17** | **35** | 2 |
| Appalachia = 67 | 9 | 12 | 12 | **19** | **46** | 2 |
| Southeast = 20 | 5 | 15 | 10 | **20** | **50** | 0 |
| Lake States = 30 | 10 | 13 | 13 | **17** | **47** | 0 |
| Corn Belt = 46 | 2 | 0 | 7 | **26** | **65** | 0 |
| Plains (Northern and Southern) = 12 | 8 | 8 | 8 | **8** | **67** | 0 |
| Mountain States = 56 | 11 | 4 | 12 | **20** | **53** | 0 |
| Pacific States = 35 | 0 | 8 | 23 | **26** | **37** | 6 |
| | | | | | | |
| All 506 cases | 11 | 10 | 15 | **19** | **43** | 2 |

[a]The combined percentages for these two categories were: Northeast=52%; Appalachia=65%; Southeast=70%; Lake States=64%; Corn Belt=91%; Plains States=75%; Mountain States=73%; and Pacific States=63%.

In all Production Regions, as well as the entire sample of 506 cases, the most commonly selected response option was "90% or more" of the surrounding land (within a mile) being in agricultural use or consisting of other land (like parks) protected from development. Among the regional subsamples with at least 20 cases, the highest percentages in this category were 65% for the Corn Belt and 53% for the Mountain States. Not surprising was the much lower 90%-plus finding for the rather densely populated Northeastern States, 35%. However, when we add together the percentages for the two highest categories (75% to less than 90% and 90% or more), all regions as well as the full sample have more than half of their cases reporting 75% or more of the surrounding land being undeveloped (see note "a " of Table 3.8).

**3. In the absence of the conservation easements, to what extent would the subject farm or ranch lands have been developed out of agricultural use?**

We asked the 479 respondents who had sold conservation easements to their agricultural land: "What, if anything, would likely have happened to your farm or ranch land if you had not sold a conservation easement on it?" This was an open-ended question, and we received answers from all but four of the 479. In analyzing those responses, we grouped them into categories with the same types of predictions (or lack thereof, i.e., "doesn't know").

As Table 3.9 shows, 26% of the respondents to this question believed that their protected land would have been developed or sold for development; another 8% thought it "probably" have had

that fate; and 4% used the qualifying verb form "might." In addition to these three groups with opinions about the period since the easements were sold, there were 7% who expected that, without the easements, development would occur in "the long run," "eventually," etc., such as after the housing market had improved or nearby urbanized areas finally grew out to near the sites of their farms. There was another 7% who believed that, without easements, their land would have been sold, such as because they could not have sustained ownership and/or their heirs would have initiated the sales. Also, 1% thought such a sale would "probably" have happened. The best price offer would likely have come from developers or development-oriented speculators, rather than from farmers.

When we sum the percentages of five groups of owners[32] who believed that without easements their land would have been developed or sold or would have "eventually" or "probably" been developed or sold, the total reaches 49% of all respondents to the question (Table 3.9). The remaining groups included the 11% who "did not know" and the 29% who told us that their land would have stayed in agricultural use despite the absence of easements. The reasons offered for this expectation included the owners' strong personal commitment to agricultural use or open space, the downturn in the housing market, and the land's poor drainage or other obstacles to development.

**Table 3.9. Among the 479 surveyed owners who had sold easements, their expectation as to what would have happened to their properties if they, the owners, had not sold the easements.**

| Expectations | Number of Respondents | % All Cases |
|---|---|---|
| All or part would have been developed or sold for development[a] | 124[b] | 26% |
| "Probably" would have been developed or sold for development[a] | 38 | 8% |
| "Might" or "could have" been developed or sold for development | 18 | 4% |
| In the "long run" or "eventually" it would have been developed; some respondents included words to the effect that currently the market was not favorable to development.[a] | 35 | 7% |
| Would have been sold, or it would have reverted to a bank (no mention of sale to farmers)[a] | 33 | 7% |
| The land "probably" would have been sold.[a] | 7 | 1% |
| Owners would not have improved the farm (buildings, equipment) or have produced as much (such as higher value crops) | 16 | 3% |
| No change; stay in agricultural use; owners would have been farming it, renting it out to farmers, or have sold it to a farmer. | 139 | 29% |
| Other types of answers spread over several categories | 9 | 2% |
| Don't know | 55 | 11% |
| No answer | 4 | 1% |
| Total respondents | (479) | |

[b]In four of these cases the "developer" would have been a public entity exercising, the respondent believed, its right of eminent domain.

[32] The five groups are the ones in Table 3.9 with "a's" at the end of the phrases defining them. The "might-or could-have-been-developed" group is not included in the 49%.

We checked to see if the percent of owners expecting no development (i.e., no change) varied significantly by the number of years since the easement was placed on the land. It did not. Then, when we tested whether region of the country made a difference; it happened only with the Corn Belt cases.[33] Relatively more of the respondents from there expected no development—41% (18 out of a total of 44) versus 28% among owners from all the other production regions.

[33] The Pearson Chi-square value was statistically significant at the .081 level in a two-sided test.

# Chapter 4

## Owners of the Protected Properties

### 1. Introduction

While the preceding chapter focused on traits of the protected land, this chapter presents the survey's findings about major traits of the owners of the land.

**a. Who were the "first-" and "second-generation" FRPP owners**—those who sold easements to land they already owned and those who purchased or inherited land with easements already on it?

**b. Who were the operators of the protected land?** We looked for differences by Farm Production Region, by paths to ownership of protected land, age, and gender.

**c. What types of farm/ranch operations did the owner-operators have?** We used our survey data to classify the operations into six types of operations as defined by USDA's Economic Research Service (ERS).

**d. How many of the surveyed owners were "young" or "beginning" farmers/ranchers?** The six ERS categories are defined by the total cash receipts and the operator's occupational status (retired, farmer/rancher, or other principal occupation). We looked also for two groups defined by age and years of experience: "young" farmers/ranchers, that is, 35 years or younger, and "beginning" farmers or ranchers, i.e., with no more than 10 years of experience as operators. In the survey, we explored four ways in which these two groups of farmers might have benefited from the land conservation programs assisted by the FRPP.

**e. To what extent (if any) did the surveyed owners believe that their lives would have been different if they had not sold conservation easements or had not purchased or inherited land with an easement on it?** Near the end of the interview, there were questions addressing directly this issue.

### 2. Findings: First- and Second-Generation Owners of Protected Land

Nearly nine in 10 of the interviewed owners—88.3%—were "first generation" only. That is, they sold easements to at least some of their protected agricultural land but did not also purchase or inherit agricultural land under easement (Table 4.1). Those respondents who were exclusively "second generation" (i.e., they had acquired protected land either through purchase or inheritance) comprised small groups: 3.2% and 0.4%, respectively. A total of 6.3% were both "first" and "second generation" (groups D, E, and F in Table 4.1) in the sense that they had sold easements to land they owned *and* had become owners of land already under easement. There were nine cases (1.8%) whose path to ownership we did not learn. The percentage breakdowns

for these seven categories of owners did not vary much across the Farm Production Regions except that in the Pacific States all 35 owners in our sample were in just one group—sellers of easements to their land.

**Table 4.1. Paths to ownership of protected agricultural land: Sold the easement and inherited or purchased land already protected or combinations of these paths, percentages by Farm Production Region and path to ownership**

| Production Region[a] | (A) Sold Only | (B) Purchased Only | (C) Inherited Only | (D) Sold and Purchased | (E) Sold and Inherited | (F) Sold, Inherited and Purchased | (G) Path Not Known |
|---|---|---|---|---|---|---|---|
| All Regions n=506 | 88.3 (447) | 3.2 (16) | 0.4 (2) | 4.9 (25) | 1.0 (5) | 0.4 (2) | 1.8 (9) |
| | | | | | | | |
| Northeastern States n=240 | 85.0 (204) | 5.4 (13) | 0.4 (1) | 7.5 (18) | 0.8 (2) | 0.4 (1) | 0.4 (1) |
| Appalachia n=67 | 89.6 (60) | 0.0 (0) | 0.0 (0) | 4.4 (3) | 3.0 (2) | 0.0 (0) | 3.0 (2) |
| Southeastern States n=20 | 95.0 (19) | 5.0 (1) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0.0 (0) |
| Lake States n=30 | 93.3 (28) | 0.0 (0) | 0.0 (0) | 3.3 (1) | 0.0 (0) | 0.0 (0) | 3.4 (1) |
| Corn Belt n=46 | 89.1 (41) | 0.0 (0) | 2.2 (1) | 2.2 (1) | 2.2 (1) | 2.2 (1) | 2.2 (1) |
| Northern and Southern Plains n=12 | 91.7 (11) | 8.3 (1) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0 (0) |
| Mountain States n=56 | 92.9 (52) | 1.8 (1) | 0.0 | 5.4 (3) | 0.0 (0) | 0.0 (0) | 0 (0) |
| Pacific States n=35 | 100.0 (35) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0.0 (0) | 0 (0) |

[a]The Northeast Region consisted of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Maryland, Delaware, and the District of Columbia.
Appalachia=West Virginia, Virginia, Kentucky, Tennessee, and North Carolina.
Southeast=Alabama, Georgia, South Carolina, and Florida.
Delta=Arkansas, Louisiana, and Mississippi. None of the participants in our survey came from a Delta State.
Lake States=Minnesota, Wisconsin, and Michigan.
Corn Belt=Iowa, Illinois, Indiana, Missouri, and Ohio.
Northern Plains=North Dakota, South Dakota, Nebraska, and Kansas.
Southern Plains=Oklahoma and Texas.
Mountain States=Montana, Idaho, Wyoming, Utah, Nevada, Colorado, New Mexico and Arizona.
Pacific States=California, Oregon, Washington, Alaska, and Hawaii.

### 3. Who were the operators of the protected land?

Among the entire group of 506 surveyed owners, 356 (or 70%) were operators of at least some of their protected land in 2011 (Table 4.2).[34] We used the survey data to explore whether being an

[34] Text of question about being an operator: "A farm or ranch 'operator' is someone who, alone or with other persons, makes the day-to-day decisions as to what products to raise, how they are raised, and when and how they are marketed."

owner-operator was more likely in one or more Farm Production Regions, paths to ownership, or age groups, as well as by gender of the owner.

**Table 4.2. Percent of owners who were also operators, by Farm Production Region and paths to ownership[a]**

| Production Region | Number of Owner-Operators | Percentage per Region Who Were Owner-Operators |
|---|---|---|
| All Regions n=506 | 356 | 70% |
| Northeastern States n=240 | 156 | 65% (versus 75)[b] |
| Appalachia n=67 | 54 | 81% (versus 69%)[b] |
| Southeastern States n=20 | 15 | 75% |
| Lake States n=30 | 19 | 63% |
| Corn Belt n=46 | 30 | 65% |
| Northern and Southern Plains n=12 | 9 | 75% |
| Mountain States n=56 | 50 | 89% (versus 68%)[b] |
| Pacific States n=35 | 23 | 66% |
| **Paths to Ownership** | **Number of Owner-Operators** | **Percentage per Path Who Were Owner-Operators** |
| Sold only n=447 | 307 | 69% |
| Purchased only n=16 | 12 | 75% |
| Inherited only n=2 | 1 | 50% |
| Sold and purchased only n=25 | 23 | 92% (versus 70%)[b] |
| Sold and inherited only n=5 | 4 | 80% |
| Sold, inherited, and purchased n=2 | 2 | 100% |
| (Sold and purchased) or (sold and inherited) n=27 | 29 | 93% (versus 69%)[b] |

[a]For five cases, the paths to ownership were not determined: one from the Northeastern States, two from Appalachia, one from the Lake States, and one also from the Corn Belt.
[b]The number in the expression "versus..." is the percentage of owner-operators in all other regions. The Pearson Chi-square values for these five comparisons were significant in two-sided tests at the .013 level or better.

**3a. By Farm Production Regions**: In two regions there were statistically significantly higher percentages of operators compared to other regions. The Appalachia subsample had 81% owner-operators versus 69% in the seven other regions combined, and the corresponding measures in the Mountain States were 89% compared to 68% (Table 4.2). In contrast, the Northeastern States' subsample had relatively fewer owner-operators—65% versus 75% elsewhere.[35] We checked to see if an underlying cause of these differences was variation in the degree of development around the protected farms or ranches. Relatively more land in housing or commercial uses might lead to more nearby farm parcels (including protected ones) being held by developers or other non-farmers. The survey interviews yielded a plausibly relevant indicator—the respondents' perceptions of the percentages of the land in a one-mile radius

[35] The Pearson Chi-square measure was statistically significant in a two-sided test at the .015 level.

around the protected farms or ranches that was "in agricultural use or consists of protected land like a park" (see Chapter 3's Table 3.8). However, statistical analysis did not find that variable to be related to percent of farmland owners who were also operators.

**3b. Paths to ownership.** In Table 4.2, the paths to ownership of protected land that stand out with comparatively high percentages of owner-operators are those where the respondents both sold easements and purchased land already protected. The table's last data line focuses on 27 owners who fit this definition and who were significantly more likely to be operators than non-operators.[36] The percentages were 93% versus 69% for all others. There may be two related explanations. Operators may be more likely to be in the market for agricultural land with its development rights removed than would owner-non-operators. Secondly, owner-operators already with protected land may believe that protected land tends to be cheaper to buy than similar land with its development rights intact. We asked the interviewed owners who reported having bought such land: "Compared to the market price of similar agricultural land *not* protected by a conservation easement, was the price you paid for the land: Much lower than the price of *similar land* not under an easement, somewhat lower than the price of similar unprotected land, about the same price, somewhat higher in price" etc.?"

**Table 4.3. Among the 43 owners and owner-operators who purchased agricultural parcels with conservation easements already on them, the respondents' opinions of the price they paid for the land**

| Response Options | Number of Cases: Owners | % Cases: Owners | Number of Cases: Owner-Operators | % Cases: Owner-Operators |
|---|---|---|---|---|
| Much lower than the price of similar land not under an easement | 17 | 39% | 13 | 35% |
| Somewhat lower than the price of similar unprotected land | 11 | 26% | 11 | 30% |
| About the same price | 8 | 19% | 7 | 19% |
| Somewhat higher in price | 1 | 2% | 0 | 0% |
| Much higher | 0 | 0% | 0 | 0% |
| Not sure or did not answer | 6 | 14% | 6 | 16% |
| Total cases in this group | 43 | 100% | 37 | 100% |

Among the total of 43 respondents for whom this question was designed, 39% believed the protected land's price was "much lower" and another 26% answered "somewhat lower," for a total of 65% finding such land cheaper. Just 2% chose the option, "somewhat higher in price"; and no one said, "much higher" (Table 4.3). Among the 37 owners who were also operators in 2011, the "much lower" and "somewhat lower" percentages were 35% and 30%, respectively; and no one chose "somewhat higher" or "much higher."

**3c. Gender** was an important indicator for understanding who owner-operators were. Male owners outnumbered female owners three-to-one (76% to 24%), and the men were more likely to be operators than were the women. The percentage difference was 75% of the male

[36] The Pearson Chi-square value was statistically significant in a two-sided test at the .005 level.

owners were also operators as opposed to 55% of the females[37] (Table 4.4). As a result the gender divide among all operator-owners was 81% men versus 19% women. However, that 19% value was somewhat higher than the nationwide measure for women as principal operators that the 2007 Census of Agriculture found—14%. [38]

**Table 4.4. Percent of the 506 surveyed owners who were owner-operators, by gender**

| | Number and % of All Owners | % Male and of Female Owners Who Were Operators | % of All Owner-Operators |
|---|---|---|---|
| Male | 384 (76%) | 289 (75% of 384) | 81% |
| Female | 122 (24%) | 67(55% of 122) | 19% |
| Total | 506 | 356 | 100% |

**Table 4.5 Among the 506 surveyed owners, the percent who were owner-operators, by age group (with paths to ownership for each age group)[a]**

| Age Group | Number of Owners per Age Group | Group's % of Total of 506 Owners | % of Each Group Who Were Operators | % of Operators Who Sold Easements | % of Operators Who Purchased Protected Land | % of Operators Who Inherited Protected Land |
|---|---|---|---|---|---|---|
| 27 to 35 | 13 | 3% | 77% | 69% | 23% | 15% |
| 36 to 55 | 125 | 25 | 86 | 90 | 15 | 2 |
| 56 to 65 | 152 | 30 | 76 | 97 | 8 | 1 |
| 66 to 75 | 137 | 27 | 63 | 97 | 2 | 2 |
| 76 to 85 | 60 | 12 | 50 | 98 | 5 | 0 |
| 86 and older | 12 | 2 | 8 | 100 | 8 | 0 |
| Would not answer | 7 | 1 | | | | |
| Total cases | 506 | | | | | |

[a]The Pearson Chi-Square value for the entire cross-tabulation of percent of operators by age group was statistically significant at the .000 level in a two-sided test.

**3d. Age** made statistically significant differences also. Among the only 13 owners who were 35 years old or younger, 77% were operators, as were 86% of the 125 in the range of 36 to 55 years old (Table 4.5). The percentage consistently declined in each of the next four (older) age groups. For example, among the 60 surveyed owners who were 76 to 85 years old, 50% operated farms or ranches.

We were curious about how young persons—those no more than 35 years of age—had become owners of protected land. We found that they were more likely to have inherited or purchased land with easements already on them, compared to the older age groups (Table 4.5). Twenty-

[37] The Pearson Chi-square measure was statistically significant in a two-sided test at the .000 level.
[38]USDA, National Agricultural Statistics Service, *2007 Census of Agriculture:* http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/st99_1_050_050.pdf Table 50 (accessed September 4, 2012).

three percent of the youngest owners had bought such land, and 15% of them inherited.[39] In the next age groups, 36 to 55, the corresponding percentages were 15% and 2%. In the remaining four age brackets, these percentages were either as low or lower.

**3e. Race** was not a useful predictor of whether an owner was also an operator because there were so few non-whites. Among the 505 respondents willing to identify their race, 501 (or 99%) reported being "White or Caucasian," one was "Black or African-American," one "Hispanic or Latino," and two "American Indian or Alaska Native."

**4. Types of Farm/Ranch Operations**

**4a. Six types.** Approximating the farm typology developed by USDA's Economic Research Service (ERS), [40] we distinguish six types of farms/ranches on the basis of economic scale and operator characteristics. Our first four types (Table 4.6, reading from left to right) are small family farms (less than $250,000 in gross sales). The first two of these four are defined as farms operated by individuals for whom farming is not their primary occupation ("residential/lifestyle farms") or retired persons ("retirement farms"). The next two classes are defined for farms operated by individuals for whom farming is their primary occupation: "low sales farms" (less than $100,000 gross sales) and "high sales farms" ($100,000 to $249,999 gross sales). The remaining two types of operations are: "large family farms" ($250,000 to $499,999 gross sales) and "very large family farms" (greater than $500,000 gross sales).

Table 4.6 shows that, among the 356 owner-operations in our survey, their types of operations were spread fairly evenly across the six categories we adapted from the ERS typology. The highest percentage, 21%, was for "residential/lifestyle" farms (the cases where the respondent had a different principal occupation from farming or ranching, and he/she reported gross receipts of less than $250,000). The lowest share was the 9% for the type, "farming occupation/higher sales" (where the receipts ranged from $100,000 to less than $250,000, and the respondents reported their occupations as either farmer or rancher).

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[39] The difference between the percentage of these young owners who had purchased eased land, 23%, and the percentage for all other age groups, 8%, was statistically significant at the .083 level in a two-sided test.

[40] USDA, 2000, *ERS Farm Typology for a Diverse Agricultural Sector*, Agriculture Information Bulletin Number 759: http://www.ers.usda.gov/media/480803/aib759_1_.pdf (accessed September 6, 2012). We could not identify the ERS type called, "Limited Resources Farms," because that designation required information about total operator household income and the total value of farm assets. In our telephone survey, we regarded such questions as representing too great an invasion into the subject's privacy. We did ask about "primary occupation" ("farm or ranch operator, another occupation, or retired") and about "approximate total cash receipts from your farm operation" in 2011, with six response options: "Less than $10,000, "From $10,000 to less than $100,000…."

The ERS typology does differentiate between "family" and "non-family farms." Our survey questionnaire did not include a question about whether the farm or ranch was owned by the operators, operators and relatives, a family partnership, or a family corporation, versus a non-family entity. Since the 2007 Census of Agriculture found only 4.1% of 2.2 million agricultural operations nationwide to be "non-family farms," we decided to forego a question about ownership structure. Therefore, we assumed that all our 506 cases were family farms. See Table 61 of the Census findings at http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/st99_1_061_061.pdf

**Table 4.6. Among all 356 owner-operators, the types of operations, by gross cash receipts and operator's principal occupation in 2011: Each type's percentage of the total for all Farm Production Regions and by region**

| | Small Family Farm (Cash Receipts in 2011 of Less than $250K) | | | | Large Family Farms: $250K to Less than $500K | Very Large Family Farms: $500K and above | Could Not Be Class-ified |
|---|---|---|---|---|---|---|---|
| | Retire-ment: Operator Is Retired.[a] | Residential/ Lifestyle: Principal Occupation Is Not Farming[a] | Farming Occupation/ Lower Sales: Less than $100K | Farming Occupation/ Higher Sales: $100K to less than $250K | | | |
| All 356 cases | 12% (n=42) | 21% (n=74) | 17% (n=60) | 9% (n=32) | 12% (n=42) | 20% (n=72) | 10% (n=34) |
| **Production Regions** | | | | | | | |
| Northeastern States n=156 | 10% | 26% (versus 17%)[b] | 17% | 10% | 12% | 19% | 6% |
| Appalachia n=54 | 13 | 20 | 32 (versus 14)[b] | 9 | 8 | 9 (versus 22)[b] | 9 |
| Southeast n=15 | 20 | 20 | 7 | 7 | 7 | 27 | 13 |
| Lake States n=19 | 21 | 5 | 21 | 0 | 16 | 32 | 5 |
| Corn Belt n=30 | 20 | 20 | 3 (versus 18)[b] | 3 | 13 | 23 | 17 |
| Plains n=9 | 11 | 34 | 11 | 22 | 0 | 22 | 0 |
| Mountains n=50 | 10 | 14 | 14 | 12 | 18 | 20 | 12 |
| Pacific n=23 | 4 | 13 | 9 | 4 | 13 | 35 | 22 |

[a]These two types of operations are defined by their operators' occupational status and cash receipts (i.e., they are less than $250,000).
[b]The number in the expression "versus..." is the percentage of surveyed owners reporting that particular type of farm in all other regions. The Pearson Chi-square values for these four comparisons were statistically significant in two-sided tests at the .049 level or better.

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Included in the second part of Table 4.6 are the percentage distributions by Farm Production Region. The statistical tool of cross tabulation identified four comparisons where the percentages of types of farm per region were statistically significantly different. Percentage-wise more of the surveyed farmers in the Northeast (26%) had "residential/lifestyle" operations than did the farmers in all other regions combined (17%). Also, there were relatively more "farming occupation/lower sales" operations in Appalachia (32% versus 14%) and comparatively fewer in the Corn Belt (3% versus 18%). Lastly, only 9% of the farmers from Appalachia had "very large family farms," compared to 22% in all other regions.

### 4b. Size of operations by type

(1) Average and median sizes for entire operations. Table 4.7 presents the average and median number of acres of the owner-operators' farms or ranches by type of operation. For the four types beginning with "farming occupation/lower sales," both the average

and median measures increase from type to type rather dramatically.[41] For example, the median value starts at 177 acres for the 60 "lower sales" operations and then moves to 363 acres for the next group ("higher sales), to 617 acres for "large family farms," and then to 1,000 acres for the "very large family farms. The same pattern emerges when we focus on the third to sixth data-column entries for the *protected* portion of operations (see the second part of Table 4.7). The median increases steadily from 121 acres ("lower sales) acres to 271 ("very large family farms").

**Table 4.7. Among the 356 owner-operators, the averages and medians for (1) the entire operation, (2) the protected acres only, (3) the percentage of their total acres consisting of protected land, and (4) the owned acres not protected, by type of operation**

| | Small Family Farm (Cash Receipts in 2011 of Less than $250K) | | | | (5) | (6) |
|---|---|---|---|---|---|---|
| **Operation Traits** | **(1) Retirement: Operator Reports He/She Is Retired** | **(2) Residential/ Lifestyle: Operator's Principal Occupation Is Not Farming.** | **(3) Farming Occupation/ Lower Sales: Less than $100K** | **(4) Farming Occupation/ Higher Sales: $100K to Less than $250K** | **Large Family Farms: $250K to Less than $500K** | **Very Large Family Farms: $500K and above** |
| | **n=42** | **n=74** | **n=60** | **n=32** | **n=42** | **n=72** |
| **1. Total acres:** Average | 273 | 405 | 358 | 1,425 | 2,845 | 9,877 |
| Median | 189 | 121 | 177 | 363 | 617 | 1,000 |
| **2. Protected acres:** Average | 153 | 206 | 206 | 427 | 788 | 645 |
| Median | 138 | 91 | 121 | 188 | 218 | 271 |
| **3. Protected acres as % of total:** Average | 71% | 76% | 71% | 59% | 53% | 37% |
| Median | 76% | 100% | 83% | 57% | 49% | 31% |
| **4. % operators with unprotected owned acres** | 57% n=24 | 41% n=30 | 37% n=22 | 53% n=17 | 55% n=23 | 72% n=52 |
| **5. Unprotected owned acres** Av. | 139 | 290 | 263 | 262 | 1,334 | 2,283 |
| Median | 55 | 108 | 104 | 200 | 205 | 350 |

(2) The protected land's shares of the operation's total acres. In our sample's smaller operations by cash receipts (less than $100K—Table 4.7, column 3), the top half of the operations had at least 83% of their total acres consisting of protected land. However, the revenue range of $100K to less than $250K had a considerably smaller median value, 57%; and the median keeps decreasing when we move to the next two higher ranges: 49% for $250K to $500K and 31% for $500K and above. Some of the land not under easements was rented into the operation. But in all six groups, substantial percentages of the surveyed operators per type of operation reported that some to most of their owned land was not protected. The range was from 37% of the "farming occupation/lower sales" group to 72% of the respondents with "very large

[41] The first two types of farms and ranches are defined by occupation rather than by the operation's cash receipts.

farms" (line 4 of Table 4.7). And the numbers of unprotected acres were not trivial—with the median ranging from 55 acres ("retirement" operations) to 350 ("very large farms"). Perhaps some or many of these farmers and ranchers with unprotected land can be persuaded to enter more acres into conservation programs.

(3) Levels of income from farm/ranch operations. How do the income levels of the operations in our FRPP sample (taken from easement closures fiscal year 2006 through January 2012) compare to the nation's farm and ranch operations as a whole? Since (as discussed above) we could not determine if any in our sample of owners had "limited resource farms," and since we assumed that all cases were "family farms," we must limit our analysis to the one variable, gross cash receipts. Our survey and a published table from the 2007 Census of Agriculture have both similar and different measures.[42] Table 4.8 presents the comparisons. Very clear differences are seen at both ends of the scale of revenue. The FRPP sample we interviewed had:

--few operators at the lowest end—receiving less than $10,000 in revenue for the studied year (18% versus 58% in the national census),

--almost the same percentages (27% and 26%) as the national measure in the range of $10K to less than $100K, but

--proportionally more operators in the next three higher ranges: $100K to less than $250K, $250K to less than a half-million, and $500K, including

-- a difference in the topmost range of 20% versus only 6% found in the census.

**Table 4.8. Comparison of (a) the 2007 Census' national-level findings about the cash revenues of operators[a] to (b) the comparable data on 2011 revenues[b] from operators-owners in the 2012 survey of FRPP participants, percentage of operators per category of cash receipts**

| | Less than $10,000 | $10K to Less than $100,000 | $100K to Less than $250,000 | $250K to Less than $500K | $500K and Higher | Did not Know or Would Not Answer |
|---|---|---|---|---|---|---|
| FRPP Sample n=356 | 18% | 27% | 13% | 12% | 20% | 10% |
| 2007 Census n=2,204,792 | 58 | 26 | 7 | 4 | 6 | Not applicable |

[a] "Combined Government Payments and Market Value of Agricultural Products Sold: 2007," Table 60 of "US Summary and State Reports."

[b]Survey question: "In 2011 what were the approximate total cash receipts from your farm operation? That total should include gross sales of farm products (that is before expenses are deducted) and any other cash receipts like rents for farming your land or hunting on it, any income from farm-related businesses conducted on your land, and any government payments."

[42] A possibly important difference is that, unlike our interview questionnaire, the Census table did not include "cash receipts like rents for farming your land or hunting on it [or] any income from farm-related businesses conducted on your land)." See USDA, National Agricultural Statistics Service, *2007 Census of Agriculture:* Volume 1, "U.S. Summary and State Reports," Table 60: http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/st99_1_060_060.pdf (accessed September 8, 2012).

On the other hand, most of our sample's operations (58%) fall within USDA's classification for "small operations"—with a gross cash farm income of less than $250K[43] (Table 4.8).

**4c.Young and beginning farmers.** Two other comparisons that we can make are between our sample's "young" and "beginning farmers" and the corresponding findings from USDA national-level studies for 2007. All participants in our survey were requested (a) to give the year in which they were born; the operators among them were asked (b) the year they first operated protected land that they owned and (c) "In what year did you begin to be a farm or ranch operator in the sense of making the day-to-day decisions for managing a farm or ranch?" With answers to these questions, we could identify the cases where, in the first year respondents both owned and operated protected land, they could be classified as:

--"young farmers," that is, no more than 35 years old that year, and/or

--"beginning farmers," i.e., they had been operators no more than 10 years.

These definitions come from the Farm Credit System and USDA, respectively.[44]

The 2007 Census of Agriculture found that 5% of "principal operators" of United States farms were less than 35 years old that year (Table 4.9). The census data to which we had access did not allow for an estimate of the percent who were 35 years or younger. Among the 356 farm and ranch operators in our survey, 3% were less than 35 years old; and 4% were no more than 35 at the time of the interviews.

Regarding "beginning farmers," the wording in the 2007 Agricultural Resource Management Survey (ARMS) was more compatible with ours. Its question was: "In what year did the operator begin to operate any farm operation?" Ours was: "In what year did you begin to be a farm or ranch operator in the sense of making the day-to-day decisions for managing a farm or ranch?" The ARMS study classified 29% of the surveyed *farms* as having "beginning" farmers[45] while we—using the operator as the unit of analysis—found 10% of our owner-operators as "beginners" at the time of *the interviews* (Table 4.9). However, when we calculated operators' numbers of years as farmers or ranchers at the time they *first operated and owned protected land*, the percentage with no more than ten years of such experience rises to 19%.

Similarly, when we focus on the age of owner-operators when they first owned and farmed/ranched eased land, the percentage of young operators—35 years or less—increases to 7% (rather than 4%--Table 4.9).

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[43]Robert A. Hoppe, James M. MacDonald, and Penni Korb, 2010, *Small Farms in the United States: Persistence under Pressure* (USDA, Economic Research Service): http://www.ers.usda.gov/media/147007/eib63_1_.pdf (accessed March 9, 2013).

[44]Farm Credit Mid-America, *Young, Beginning, and Small Farmers:* (http://www.e-farmcredit.com/Benefits/YoungBeginningandSmallFarmers/tabid/109/Default.aspx (accessed February 23, 2013); Mary Ahearn and Doris Newton, 2009, *Beginning Farmers and Ranchers* (USDA, Economic Research Service): http://www.ers.usda.gov/media/156049/eib53_1_.pdf (accessed February 23, 2013).

[45] Ahearn and Newton, p.5.

| **Table 4.9. Comparisons of (a) the 2007 Census' national-level findings about the age of the "principal operators" and (b) the 2007 Agricultural Resource Management Survey's national findings about the number of years respondents had been operators to (c) comparable findings from the 2012 survey of FRPP participants** | | |
|---|---|---|
| **Young Farmers** | **2007 Census of Agriculture n=2,204,792** | **2012 FRPP Survey n=356 operators** |
| Percent of all operators who were less than 35 years[a] at the time of the survey | 5% of "principal operators" | 3% |
| Percent of all operators who were 35 years[1] or less *at the time of the survey* | Not available | 4% |
| Percent of all operators who were 35 years or less *at the time they first farmed or ranched protected land they owned* | Not applicable | 7% |
| **Beginning Farmers** | **2007 ARMS Survey[b] n=1,916,076** | **2012 FRPP Survey n=356 operators** |
| Percent of all operators who had been farm or ranch operators for no more than 10 years at the *time of the survey* | 29%[c] | 10% |
| Percent of all operators who had been farm or ranch operators for no more than 10 years *at the time they first farmed or ranched land they owned* | Not applicable | 19% |

[a]Our national-level source, the "Full Report" of the 2007 Census of Agriculture, had age ranges of "Under 25 years" and "25 to 34 years." USDA, National Agricultural Statistics Service, *2007 Census Volume 1, Chapter 1: U.S. National Level Data.* Table 49: http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/st99_1_049_049.pdf

[b] Ahearn and Newton, 2009, p.4—see footnote 44 above.

[c]The 2007 Agricultural Resource Management Survey. Its unit of analysis was the farm rather than the farm operator. Ahearn and Newton, 2009, p.5—see footnote 44 above.

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These cases of selling of easements, purchasing eased land, and inheriting such agricultural land may be seen as opportunities provided by the land conservation programs to young and beginning famers. The sellers receive money for their conservation easements, while the purchasers and inheritors become owners of land that might otherwise have been developed or been held by speculators or developers for future conversion out of agricultural use.

Our interviews explored two other kinds of opportunities for young and beginning farmers. One set of questions asked owners of protected land that was rented out in 2011 if either type of farmer had been their tenants that year. The answers were "yes" in 15 cases for young farmers and nine for beginners (Table 4.10). Later in the interviews, among owners who reported that farmers or ranchers would "definitely" or "probably" be their successors, these two follow-up questions were asked:

"Will the next owner likely be a young farmer, that is, no more than 35 years old?"

"Will the next owner likely be a beginning farmer in the sense of not having been a farm operator for more than ten years?"

Seventy-two owners responded "yes" to the first, and 69 said the same to the second. When we aggregated the findings for all types of opportunities (and eliminated cases of the same

respondent receiving or giving more than one type of opportunity), the total number of surveyed owners who took or provided opportunities for young or beginning farmers was 177. That is, 35% of all 506 surveyed owners either received, gave, or would likely give (in the succession cases) one or more of the four types of benefits listed in Table 4.10. In other words, according to our survey, the FRPP had benefited or would benefit relatively a lot of young and/or beginning farmers.

**Table 4.10. Opportunities provided by the FRPP-supported agricultural land conservation programs to young and beginning farmers/ranchers**

| Opportunities | Number of Young Farmers (35 Years or Less) | Number of Beginning Farmers (Operators for 10 Years or Less) |
|---|---|---|
| 1. They were young or beginning farmers when they first operated protected land that they owned (i.e., they sold easements or purchased or inherited land with easements already in place) | 26 | 68 |
| 2. They rented protected land to "young" or "beginning" farmers | 15 | 9 |
| 3. They reported that their successors as owners would "definitely" or "probably" be "young" or "beginning" farmers | 72 | 69 |
| | | |
| 3. Number and percent of total respondents (506) who reported either receiving opportunities as a "young" or "beginning" farmer or who reported providing opportunities (land to rent and successor ownerships) to young or beginning operators. | 178 or 35% of 506 | |

**5. Impacts of the Protected Land on the Owners' Lives**

To gauge the importance of the protected land to the surveyed owners, we asked toward the end of interview—after about on average 25 to 30 minutes of talking with us about their land—a set of six questions. The first was a multiple-choice question about their satisfaction with owning protected land (i.e., "very satisfied," "satisfied," "dissatisfied," etc.) and was followed by two open-ended question, "What were your reasons for giving that overall evaluation of owning protected land?" and "Are there any other reasons for that overall evaluation?" Our analysis of their answers is given in this report's Chapter 8. The fourth question was: "What, if anything, would likely have happened to *your farm or ranch land* if you had not sold a conservation easement on it?" Their responses to that question were discussed in Chapter 3.

Here we present the findings from the set's fifth and sixth questions, which were open-ended:

"What, if anything, would likely have happened in *your own life* if you had not sold the easement?"

"What, if anything, would likely have happened in your own life if you had not bought or inherited that farm or ranch land with a conservation easement on it?"

**Table 4.11. Among the 479 surveyed owners who protected their agricultural land by selling easements, their assessments of "what, if anything, would have happened" in their lives if they had not sold the easements**

| Type of Impact | Number of Respondents | % of the 479 Owners |
|---|---|---|
| They would have been *worse off* if they had not sold easement | 227 | 47% |
| *No difference* in their lives if had not sold | 192 | 40% |
| They would have been *better off* if had not sold easement | 5 | 1% |
| Unsure of the impact | 45 | 10% |
| Did not answer | 10 | 2% |
| Total | 479 | 100% |
| ***Problems If Had Not Sold Easement*** | | **% of 479** |
| Would have been compelled to sell land. | 69 | 14% |
| Have found it financially and otherwise more difficult to farm. | 50 | 10% |
| Have had to work more years before retirement or have found it more difficult to pass farm on to heirs. | 16 | 3% |
| Have had to quit farming or stop earlier than planned. | 7 | 2% |
| Have had to relocate from present home or never have moved there. | 15 | 3% |
| Problems covering debt and other expenses not directly tied to farming or ranching | 57 | 12% |
| Non-monetary losses in quality of life | 28 | 6% |

**5a. Among the 479 surveyed owners who had sold easements**, 47% believed they would be worse off if they had not sold easements, 40% said there would have been no difference in their lives (e.g., "not much different," "nothing new," "not a whole lot"), and 1% believed they have been would be better off if they had never sold (Table 4.11). In this small last group (five owners), four complained about the difficulties of obtaining the easement and/or living by it, while one was disappointed with crop prices.

Among the 47% believing they would have been worse off, the most common problem cited (by 14%) was that, without the easement proceeds, they would have been compelled to sell the land:

--"We probably would have to sell and live somewhere else because of age . . . . With the easement we can afford to hire people to do whatever with the farmland."
--"It probably would have been sold because of the debt on it."
--"I would have to sell off pieces to continue ranching."
--"We probably would have sold the farm because we had a three million dollar offer on it."

Another 10 percent of the sample cited financial difficulties or obstacles considered likely or certain if the easements had not been sold. Presumably, these were people who preferred selling conservation easements on the land rather than having someone buy it at its value for development.

--"The debt on the farm [removed or reduced by the easement payments] would have prevented me from growing my business; so, I would have probably had a smaller business, fewer employees and reduced lifestyle."

--"We wouldn't have bought the neighboring farm and wouldn't have been able to expand to have our son farm with us."
--"She wouldn't have a new tractor; she wouldn't have the shed for her hay."
--"It did give us money to use in our operating expenses for the farm, so we would have had less money [if had not sold the easement]."

Table 4.11's last category of "problems" consisted of non-monetary benefits to be missed if easements were not sold and the land protected:

--"We probably would have changed our way of living. I would not live in a rural community. I would have had to gone back to the city to make a life."
--"I just figured I'd put it in preservation forever. Makes me feel better that it's preserved and not sold in lots."
--"A heartache 'cause I loved it as farming, and I don't know if it would have been sold as farming. My son grew up on it and might not have had the right to farm it. It's emotional, sentimental. Good feeling that I got accepted."
--"I would have had to struggle a whole lot more financially and emotionally. Husband passed away . . . years ago. When this came about, this was a lifesaver."

**Table 4.12 Among the 50 surveyed owners who purchased or inherited agricultural land with an easement already on it, their assessments of the "what, if anything, would have happened" in their lives if they had not bought or inherited such land**

| Type of Impact | Number of Respondents | % of the 50 Owners |
|---|---|---|
| No change in their lives if had not bought or purchased such land | 14 | 28% |
| Would have bought other land. | 7 | 14% |
| Would have leased the same land. | 2 | 4% |
| The protected land was not a major part of his or her operation. | 3 | 6% |
| Made a mistake in purchasing the land. | 3 | 6% |
| Problems with farm or ranch operation if had not purchased land under easement | 5 | 10% |
| Not sure or not clear as to what would have happened | 6 | 12% |
| Other responses | 4 | 8% |
| Did not or would not answer | 6 | 12% |
| Total | 50 | 100% |

**5b. Among the 50 surveyed owners who had purchased or inherited agricultural land with an easement already on it,** 14 or 28% believed that there would have been no change in their businesses or other aspects of their lives if they had not bought or inherited it (Table 4.12). Another 14% said that they would have purchased other land, and 4% thought that they would have leased the same land. Only 10% of this subsample expected problems if they had not been able to purchase the land, including the lost opportunity to add pastureland to his/her operation and, in another case, the chance to produce on the eased land food that would be marketed to local consumers.

# Chapter 5

## Benefits to the Local Community

### 1. Introduction

This chapter examines four types of benefits that a land conservation program may provide to citizens or businesses in local communities:

(1) Owner-operators may produce food on protected farms or ranches that they market directly to local consumers.

(2) Both owner-operators and non-operator owners may plow back money received from selling easements into buying or maintaining local agricultural land and/or into financing farm or ranch operations.

(3) The owners who use proceeds from easement sales for agricultural purposes may spend most of it locally.

(4) Most owners of protected land may apply to it conservation practices designed to protect soil from erosion, water from pollution, wildlife habitat from degradation, and other aspects of the local environment from mismanagement.

### 2. Marketing Locally Produced Food Directly to Local Consumers

**2a. Two types of direct marketing.** Among the total of 356 owner-operators in our survey sample, more than four in 10 (42%) reported having directly marketed in 2011 agricultural goods that they had produced (Table 5.1). This percentage derived from their answers to questions about two kinds of marketing:

**(1) Direct marketing to individual consumers:** "In 2011 did you market any of your agricultural products directly to individual consumers such as at an on-farm stand, at a farmers' market, or through direct delivery to their individual homes?"

**(2) Direct marketing to groups of consumers:** "Did you do any direct marketing in 2011 to *groups of people* such as by delivering your products directly to grocery stores, restaurants, schools, universities, hospitals, military bases, or corporate offices?"

Forty percent said they marketed exclusively to individual customers, 9% just to groups of customers, and 7% to both kinds of customers (Table 5.1).

When breaking down the full sample of operator-owners into regional subsamples, we found in four regions (Southeastern States, Lake States, Corn Belt, and the Plains) not a single case of marketing to *groups of customers*, such as in grocery stores, restaurants, etc. Only 4% (two farmers) reported doing it in the relatively sizable Mountain States' subsample (50 cases). The highest percentages of direct marketers to *individual consumers* were in the Northeast (48%), Mountain States (42%), and Appalachia (41%), and lowest in the Plains (11%), Corn Belt (23%) and the Southeast (27%).

**Table 5.1. Among the 356 surveyed owners who operated at least some of their protected land, the percentages of those owner-operators reporting direct marketing in 2011, and whether it was to individual consumers, to groups of consumers , or to both kinds of customers**

| All Regions | Did Direct Marketing of Some Type in 2011 | To Individual Consumers[a] | To Groups of Consumers[b] | To Both Kinds of Consumers |
|---|---|---|---|---|
| 356 operators | 42% | 40% | 9% | 7% |
| **Farm Production Regions** | | | | |
| Northeastern States States n=156 | 51 | 48 | 14 | 11 |
| Appalachia n=54 | 43 | 41 | 13 | 11 |
| Southeastern n=15 | 27 | 27 | 0 | 0 |
| Lake States n=19 | 32 | 32 | 0 | 0 |
| Corn Belt n=30 | 23 | 23 | 0 | 0 |
| Plains n=9 | 11 | 11 | 0 | 0 |
| Mountain States n=50 | 42 | 42 | 4 | 4 |
| Pacific n=23 | 39 | 30 | 13 | 4 |

[a]Text of question: "In 2011 did you market any of your agricultural products directly to individual consumers such as at an on-farm stand, at a farmers' market, or through direct delivery to their individual homes?"
[b]Text of question: "Did you do any direct marketing in 2011 to *groups of people* such as by delivering your products directly to grocery stores, restaurants, schools, universities, hospitals, military bases, or corporate offices?"

Table (5.2) presents the sample-wide and regional distributions of owner-operators who reported directly marketing "food for humans to eat." A follow-up question, whose findings are also shown in Table 5.2, was: "About how much of that directly marketed food was produced on your protected agland?" We were interested in the extent to which the land under easement contributed to "local food systems." A 2010 study of such systems by USDA's Economic Research Service found "no consensus on a definition in terms of the distance between production and consumption."[46] However, the study discovered that across the nation there were increasing numbers of farmers markets, community-supported agriculture organizations, and farm-to-school programs. Another finding was, "Production of locally marketed food is more likely to occur on small farms located in or near metropolitan counties."[47] Since most (58%) of our surveyed owners had small operations (with less than $250,000 in gross receipts),[48] and presumably many or most were located in or near metro areas, we wished to learn what percentage of them shared in the expanding sector of directly marketed food products.

[46]Steve Martinez, Michael Hand, Michelle Da Pra, Susan Pollack, Katherine Ralston, Travis Smith, Stephen Vogel, Shellye Clark, Luanne Lohr, Sarah Low, and Constance Newman, 2010, Local Food Systems: Concepts, Impacts, and Issues (USDA Economic Research Service): http://www.ers.usda.gov/media/122868/err97_1_.pdf, p. iii (accessed March 4, 2013).
[47] See footnote 46 above, p. iv.
[48] See Table 4.8.

**2b. To what extent did direct-marketers of food produce it on their protected land?** Just over a quarter (26%) of the total surveyed owner-operators (356) directly marketed food (Table 5.2).[49] Almost all of them—96%--had raised at least some of that food on their protected land (see the first data line of Table 5.2). The breakdown was 59% having produced "All" of it on that land; 13%, "Most of it"; and 24%, "Some of it." Among the 57 operators in the Northeastern region who directly marketed food, 63% reported producing all of it on their protected land. In the Appalachian group the corresponding measure was 54%.

**Table 5.2. Among the surveyed 356 owner-operators, the percentages who reported directly marketing "food for humans to eat" in 2011 and the extent to which that food was produced on protected land, by Farm Production Region**

| | Some Direct Marketing of Food in 2011 | How Much of the Directly Marketed Food Was Produced on the Respondent's Protected Land? | | | | |
|---|---|---|---|---|---|---|
| **Owner-Operators** | **% of All Owner-operators** | **All of It** | **Most of It** | **Some of It** | **None of It** | **Not Sure or No Reply** |
| **All Regions** n = 356 | 26% of 356= 92 | 59% of 92 | 13% | 24% | 3% | 1% |
| **Production Regions** | | | | | | |
| Northeastern States n=156 | 37% of 156= 57 | 63% of 57 | 7% | 28% | 0 | 2% |
| Appalachia n=54 | 24% of 54 = 13 | 54% of 13 | 23% | 15% | 8% | 0 |
| Southeast n=15 | 13% of 15= 2 | 100% of 2 | 0 | 0 | 0 | 0 |
| Lake States n=19 | 11% of 19= 2 | 50% of 2 | 0 | 50% | 0 | 0 |
| Corn Belt n=30 | 10% of 30=3 | 0% | 67% of 3 | 0 | 33% | 0 |
| Plains n=9 | 0 | 0% | 0 | 0 | 0 | |
| Mountains n=50 | 18% of 50 =9 | 45% of 9 | 22% | 22% | 11% | 0 |
| Pacific n=23 | 26% of 23 = 6 | 67% of 7 | 17% | 17% | 0 | 0 |

**2c. How do the percentages of surveyed operators doing direct marketing of food compare to Census of Agriculture findings for the same phenomenon?** According to the 2007 Census, nationwide 6% of all farm operations "sold agricultural products directly to individuals for human consumption."[50] Since many or most of the members of our sample may have farmed land within or near urban areas, a better comparison for our survey sample's findings would be to states that have high percentages of their total land classified as urban. The

[49] Directly marketed either to individual consumers or to groups of customers.
[50] USDA, National Agricultural Statistics Service, *2007 Census of Agriculture,* http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/st99_1_002_002.pdf (accessed September 24, 2012)

six highest-ranking states by that criterion in 2010 were all in the Northeast: New Jersey (40%), Rhode Island (39%), Massachusetts (38%), Connecticut (38%), Delaware (21%), and Maryland (21%).[51] The percentages of their farms that, according to the 2007 Census of Agriculture, directly marketed food to consumers ranged from 8% in Delaware to 22% in Connecticut[52]. The average was 17%. By comparison, among the 66 owner-operators in our sample from those six states, 38 % reported direct marketing of food.

**2d. The comparatively small sizes of the operations of direct-marketers of food.** Among all 92 owner-operators in our sample who directly marketed food in 2011, the median number of acres in their operations was 212, while among the other 263 farmers/ranchers not doing that kind of marketing the median was 314 acres. Another measure for testing the hypothesis of operations directly marketing food tending to be small is to compare the gross cash receipts for the two groups. Grossing $250,000 per year is USDA's dividing line between "large" and "small" farms (see Chapter 3). As Table 5.3 shows, relatively more (31%) of the owner-operators reporting less than $250K for 2011 were direct marketers of food, compared to those earning $250K and above (18%).[53]

**Table 5.3. Among the 356 owner-operators who were surveyed, a comparison of the gross receipts in 2011 and whether they directly marketed food for human consumption**

| Whether Directly Marketed Food for Human Consumption | Gross Cash Receipts of Less than $250K | Gross Cash Receipts of $250K and More | Did Not Report Cash Receipts |
|---|---|---|---|
| Did direct marketing in 2011 (n=93) | 31% | 18% | 24% |
| Did not (n=263) | 69% | 82% | 76% |
| Total Cases | 209 | 114 | 33 |

**3. Owners who sold easements tended to plow back proceeds from the sale into their agricultural operations or properties**

**3a. All owners who sold easements.** Table 5.4 focuses on all 479 surveyed owners who had sold easements on their agricultural land. More than two-thirds (69%) reported having spent some of the proceeds from the sale on meeting personal or household needs or purposes such as saving for the future (stocks, bonds, a retirement account); paying for children's education; or building, buying, or fixing up their homes. On the other hand, 84% (403 owners) used easement money for various purposes associated with their farming operations or, if they were non-operators, for the agricultural land they owned, farm buildings on that land, or other agriculturally related improvements. The most frequently mentioned of these use—by 48% of the subsample of 479—was the constructing, expanding, or repairing of agricultural buildings or other structures—like barns, silos, greenhouses, storage sheds, fences, an on-farm store, or an agricultural product processing facility. Next in frequency was the 37% of the group that reported having used sale proceeds to repay loans on agricultural land they already owned. Almost three-quarters of this large subgroup (179 owners) told us that the land in question

[51] US Census Bureau: http://www2.census.gov/geo/ua/PctUrbanRural_State.XLS (accessed September 24, 2012).
[52] USDA, *2007 Census of Agriculture*, tables 2 and 58: http://www.agcensus.usda.gov/Publications/2007/Full_Report/usv1.pdf, (accessed September 24, 2012)
[53] According to the Pearson Chi-square test, these percentages are statistically significantly different at the .008 level.

consisted of parcels being protected by the easement. The proceeds helped them to pay off or reduce the mortgage.

**Table 5.4: Among the 479 surveyed owners who sold conservation easements on their agricultural land, the uses to which they reported spending the proceeds of those sales[a]**

| Expenditure Use Categories | Number of Respondents per Type of Expenditure | % of Respondents Who Sold Easements (479) Reporting This Use |
|---|---|---|
| Meeting personal or house-hold needs or purposes[b] | 330 | 69% |
| The surveyed owner who reported spending at least some of the proceeds for agricultural purposes | 403 | 84 |
| ***Agricultural Use Categories*** | | |
| Constructing, expanding, or repairing agricultural-use buildings and other structures (like fences) on their land [c] | 231 | 48 |
| Repaying loans on agricultural land they already owned | 179 | 37 |
| Buying "equipment or vehicles for use in farming or ranching your land or in processing or marketing products from your land" | 134 | 28 |
| Starting up or expanding the use of conservation practices on their land [d] | 97 | 20 |
| Buying additional agricultural land | 84 | 18 |
| Starting up or expanding the use of a management system[e] | 49 | 10 |
| Other expenditures on agricultural operations[f] | 24 | 5 |

[a]Text of introduction to the questions about uses of the proceeds: "Another aspect of our research is to understand how the proceeds from selling the easements are used. We're not interested in the dollar amounts, but only in the types of uses."

[b]"Such as saving for the future (stocks, bonds, a retirement account); paying for children's education; or building, buying, or fixing up the house."

[c]"Such as constructing barns, silos, greenhouses, storage sheds, fences, an on-farm store, or an ag product processing facility? Any money spent on such buildings."

[d]Such as "practices to protect soil from erosion, water from pollution, or wildlife habitat from damage, or to produce your own electricity from wind or the sun." For this table we excluded practices related to the management of wildlife habitat unless the surveyed owner said it was for his/her farming or ranching operation, such as when preventing deer intrusions.

[e]"Such as for starting up or expanding the use of precision farming, organic farming, Integrated Pest Management, and nutrient management systems."

[f]Such as paying back loans for operating expenses; purchasing seeds, chemicals, or livestock; repairing equipment; or improving pasture.

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**3b. Non-owner operators who sold easements** Of the 403 owners who plowed back at least some of their easement proceeds into agriculture, 76% were owner-operators; and 24% were non-farmer owners. Not surprisingly, proportionally more of the operators invested proceeds in the agricultural operations on their land compared to the non-operators. The difference was 91% versus 68% (Table 5.5). However, it was impressive that more than two-thirds of the non-operators did plow back. Moreover, for five of the seven kinds of agricultural purposes listed in Table 5.6, there were no statistically significant differences in the percentages

of both types of owners investing at least some of their proceeds. The two exceptions were agricultural equipment and management systems.[54]

**Table 5.5. Among the 479 surveyed owners who sold conservation easements to their land, the percentages who spent at least some of their sales' proceeds for agricultural purposes, by whether or not the owner was an operator**

| Spending Behavior | Owner-Operators % | Non-Operator Owners % |
|---|---|---|
| Yes, spent proceeds for agricultural purposes | 91% | 68% |
| No, did not make such expenditures | 9% | 32% |
| Number per Group | 336 | 143 |

**Table 5.6. Among the 306 owner-operators and the 97 owner-non-operators who spent at least some of their easement sales' proceeds on agricultural purposes, the percentages reporting each of seven types of such purposes**

| Agricultural Purposes | Owner-Operators % of 306 | Non-Operator Owners % of 97 |
|---|---|---|
| Constructing, expanding, or repairing agricultural-use buildings and other structures on their land (like fences) | 58% | 57% |
| Repaying loans on agricultural land they already owned | 45 | 41 |
| Buying "equipment or vehicles for use in farming or ranching your land or in processing or marketing products from your land" | 38[a] | 20[a] |
| Starting up or expanding the use of conservation practices on their land | 25 | 22 |
| Buying additional agricultural land | 22 | 17 |
| Starting up or expanding the use of a management system | 14[a] | 5[a] |
| Other expenditures on agricultural operations | 6 | 6 |

[a]The Pearson Chi-square values were statistically significant at the .001 and .015 levels, respectively, in two-sided tests.

**3c. Agricultural-use expenditures tended to comprise major portions of the respondents' total spending of proceeds from the sales of easements.** Readers justifiably may be concerned that, although as many as 84% of the sellers of easements reported spending at least some of their sales' proceeds on agricultural purposes (Table 5.4), those portions could have been very small compared to their total payments received. Therefore, we asked them: "Among all the purposes on which you spent proceeds from the easement sale, which purpose received the largest share of total expenditures?" Also requested was to name the second and third largest.

Table 5.7 summarizes the answers to those questions. The most frequently mentioned "largest"-share purpose—reported by 25% of all easement sellers—was putting money into savings, stocks, bonds, properties, or other non-farm or ranch investments. Second (mentioned by 22%)

[54]According to Pearson Chi-square tests, these percentages were statistically significantly different at the .001 and .051 levels, respectively.

was buying the protected agricultural land or paying down the mortgage on it. When we added together all the owners who ranked an agricultural purpose as receiving the largest share (e.g., purchasing land, building or improving farm facilities, buying farm equipment, paying operating expenses), the sum was 52% of the 479 respondents who sold easements. Among the second-most important purposes, agricultural was reported by 42% of the subsample of 479 (Table 5.7). Close to two-thirds of all sellers of easements (65%) ranked an agricultural purpose either first or second largest.

**Table 5.7. Among the 479 owners who sold easements to their land, the expenditure purposes they ranked first, second, and third "largest" when responding to open-ended questions about how they spent the proceeds from the easement sales, by percent of total sellers reporting each purpose**

| Purpose | Received the Largest Share % | Second Largest Share % | Third Largest % |
|---|---|---|---|
| 1. Putting money into savings, stocks, bonds, retirement funds, or other non-farm or ranch investments | 25 | 9 | 5 |
| 2. Meeting personal or family needs other than for savings and investment[a] | 10 | 10 | 8 |
| 3. Other (nonagricultural) purposes | 3 | -- | -- |
| ***Sum of Non-Agricultural Purpose (lines 1 to 3)*** | *(38%)* | *(19%)* | *(13%)* |
| 4. Buying or paying down mortgage on the protected agricultural land | 22 | 3 | 1 |
| 5. Buying agland other than the protected parcels | 11 | 3 | 1 |
| 6. Constructing or improving farm buildings, and other facilities[b] | 7 | 13 | 8 |
| 7. Purchasing or repairing equipment or vehicles for the farm or ranch | 5 | 10 | 6 |
| 8.Other expenditures for the farm or ranch[c] | 7 | 13 | 12 |
| ***Sum of Agriculturally Related Purposes (lines 4 to 8)*** | *(52%)* | *(42%)* | *(28%)* |
| 9. No expenditure[d] | 1 | 39 | 59 |
| 10. Did not know or would not answer | 9 | -- | -- |
| Number of respondents | *(479)* | *(479)* | *(479)* |

[a]Such needs as children's education, buying a residence or improving the existing one, retirement money for parents, medical expenses, and divorce settlements.

[b]"Other facilities"--such as irrigation, draining, and energy-generating facilities,

[c]Such as meeting operating expenses, paying off loans on farm vehicles, and starting up a farm-related business like a machinery shop.

[d]For the "largest share" column this content category consists of cases where the respondents reported not yet having received payments from the easement sale. For the "second" and "third largest" columns, the "no expenditure" category means that the respondent reported there was no second most important spending purpose because he/she put all the money into one category, or there was no third-ranking purpose because the first and second consumed all the proceeds.

**3d. Compared to owners who did not farm or ranch, owner-operators were more likely to report spending the largest share of easement payments on an agricultural purpose.** The percentages were 61% of the operators versus 32% of the owner non-operators.[55] Still, almost a third of the latter considered investment in agriculture important enough to spend more money in that direction than in any other.

**3e. Owners who spent proportionally more money on an agricultural purpose than on any other use tended to have received as much money for their easements as did the other owners in our sample.** Our finding regarding the high rankings of agricultural-purpose spending would be less significant if the expenditures in question were small in dollar terms and/or were less than those by owners who spent the most on nonagricultural purposes. Therefore, we asked the sellers of easements, "About how much total money did your receive for the easement or easements?" They were to pick from various ranges,[56] beginning with "less than $50,000" and ending with "$2.5 million or more." In analyzing their responses, we converted the ranges into estimated dollar amounts by using the midpoints for each range. Those midpoints yielded average amounts of proceeds received for (1) owners who spent the largest share for an agricultural purpose (mean=$535,287) and (2) those owners for whom the top expenditure purpose was nonagricultural (mean=$517,810). These averages are too close for us to conclude that easement sellers with an agricultural purpose ranking first had the advantage.[57]

**3f. The easement sale money that went to agricultural purposes tended to benefit local resources of production (land, labor, and businesses).** For four types of agriculturally related expenditures of easement money, we asked follow-up questions to get indications of the geographic impact of the money being spent. For example, we asked, "Did any of the easement proceeds go to paying back loans on any agricultural land you already owned?" If the response was "yes," this was the follow-up: "Was that agricultural land already owned: (1) The land protected by the easement? (2) Was it other agland in the same county as the protected land? (3) Was it other agland not in the same county but in the same state as the protected land? (4) Was it other agland outside the state?" The follow-up to the question about spending easement money on equipment or vehicles for agricultural use was: "Where did you buy that equipment or vehicle? From sources: (1) In the same county as where the protected land is located? (2) From the same state but not in the same county? (3) From a different state?" The follow-up regarding construction was very similar.

As Table 5.8 shows, for three of the four categories (the exception being equipment and vehicles), more than 80% of the relevant owners reported expenditures with likely positive local impacts. Among the respondents who paid down loans for land they already owned, 96% of the cases involved either the protected agricultural land or other land in the same county. Perhaps the bank that received a payment was not in that same county, but the land with reduced or eliminated debt was. Where the surveyed owners used proceeds from the easement sales to buy

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[55] According to the Pearson Chi-square test, these percentages are statistically significantly different at the .000 level.

[56] In the interviews, the respondents were first asked if the total proceeds were less than $750K versus $750K or more. According to how they answered that question, the follow-up gave them choices among five ranges (i.e., starting either at "less than $50,000" or at "$750,000 to less than one million dollars."

[57] In a *t-test* of two independent samples, the difference in means was not statistically significant.

additional agricultural land, 89% of those cases concerned land in the same county as their land under conservation easements. And, among the respondents who reported expenditures on building, expanding, or repairing agricultural-use structures, for 83% of them the work was done by "a company or individuals from . . . the same county as where the protected land is located." The comparable percentage for cases of spending easement money on equipment or vehicles for the farm or ranch was 49% (Table 5.8).

**Table 5.8 Geographic impact of the spending of the proceeds from sale of easements: Location of the land involved or of the sources of the goods or services purchased**

| Type of Expenditure and Number of Owners Reporting Such Expenditure | Among Owners Making Each Type of Expenditure, the Percentage Reporting the Indicated Location of the Relevant Land or of the Provider of the Goods or Services that Was Obtained by the Spending[a] |
|---|---|
| Repaying loans on agricultural land they already owned: **n = 179** | Loans were for:<br>(1) The land protected by a conservation Easement = **75%**<br>(2) Other agland in the same county as the protected land = **37%**<br>(3) Other agland not in the same county but in the same state as the protected land = **2%**<br>(4) Other agland outside the state = **2%**<br>**(land was in the same county = 96%, that is either option 1 or 2 or both)** |
| Buying additional agricultural land: **n= 84** | (1) In the same county as the protected land? = **89%**<br>(2) In the same state but not the same county? =**11%**<br>(3) In a different state? =**2%** |
| Constructing, expanding, or repairing agricultural-use buildings or other structures (like fences) : **n=231** | Who did the work of constructing, expanding, or repairing agricultural buildings or other ag structures? A company or individuals from:<br>(1) The same county as where the protected land is located = **83%**<br>(2) From the same state but not in the same County = **19%**<br>(3) From a different state = **5%** |
| Equipment or vehicles for use in producing, processing or selling products from their farm or ranch: **n=134** | Where did you buy that equipment or vehicle? From sources in:<br>--The same county as where the protected land is located = **49%**<br>--From the same state but not in the same County = **43%**<br>--From a different state = **26%** |

[a]When added together, the percentages per category exceed 100% because some surveyed owners used proceeds from the easement sales to pay down loans on more than one parcel of agricultural land; to buy more than a single new parcel of land; to hire construction help from more than one source; and to purchase equipment or vehicles from more than just one dealer or store.

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**4. Conservation Benefits**

How owners of agricultural land manage (or neglect) the soils, water resources, trees, wildlife habitat and other natural components of their land may significantly affect the interests of the local community. Current and future farmers and ranchers have an interest in minimizing soil erosion so that crops may do well and/or livestock find abundant forage. Local seed companies, feed dealers, farm machinery repair shops, and other suppliers of services to production agricultural have stakes in those crops and animals, as do local consumers who patronize farmers' markets, stores, or restaurant supplied by local producers.

Surface and groundwater with reduced pollutants should benefit livestock and/or irrigated crops on the land as well as animal, plant, and human users downstream. Healthy trees provide potential income when harvested, as well as shade and scenic vistas. Good wildlife habitat may benefit hunters, hikers, birdwatchers, and other animal lovers, as well as the wildlife. Practices that reduce the amount of water consumed by agricultural irrigation may mean more supply for public water systems, private wells, rivers, lakes, wetlands, and other resources valued by the local community.[58]

**Table 5.9. Among all 506 surveyed owners, the kinds of conservation practices they reported having applied to their protected agricultural land in 2011[a]**

| Practices | Numbers of Respondents | % of Total Respondents |
|---|---|---|
| Practices to protect soil from erosion | 289 | 57% |
| Practices to protect surface or ground water from pollution | 229 | 45 |
| Practices to protect or improve wildlife habitat | 206 | 41 |
| Practices to prevent overgrazing or other damage to pasture land | 176 | 35 |
| Practices to minimize water used for irrigation | 93 | 18 |
| Other conservation practices | 55 | 11 |
| No conservation practice reported | 121 | 24 |
| Respondent did not know or refused to answer | 7 | 1 |
| | | |
| Applied at least one kind of practice | 378 | 75 |
| Applied at least two kinds | 290 | 57 |
| Applied at least three kinds | 198 | 39 |
| Total cases | *(506)* | -- |

[a]Text of question: "I need to ask a few additional questions about conservation practices that you might have applied to your protected land in 2011. That year did you apply any practices to protect soil from erosion, practices to protect surface or ground water…:"

**4a. Conservation practices used in 2011.** Consequently, we asked all the surveyed owners about "conservation practices that you might have applied to your protected land in 2011." This line of questioning focused on five specific types of practices and "others" not covered by the five:

--"practices to protect soil from erosion
--practices to protect surface or ground water from pollution
--practices to protect or improve wildlife habitat
--practices to prevent overgrazing or other damage to pasture land
--practices to minimize water used for irrigation, or
--other conservation practices."

[58]National Association of Conservation Districts, 2010, *Conservation Benefits: Putting Value Where It Belongs:* http://www.nacdnet.org/resources/Conservation_Benefits_Report.pdf

Table 5.9 summarizes the responses. More than half (57%) of the full sample of 506 owners reported applying practices to curb soil erosion, and close to half (45%) said that in 2011 their land had practices to protect against pollution of surface or ground water. Just over four in 10 respondents (41%) had applied practices for protecting or improving wildlife habitat, and more than a third (35%), practices to avoid damage to pasture land.

Three-quarters (75%) of the sample reported the application of at least one conservation practice in 2011; over half (57%), two or more; and 39%, at least three (Table 5.9). We asked a similar set of questions in a 2005 national survey of 422 owners of land protected in part by funds from the FRPP, and the findings were largely the same. In the earlier study 83% reported using at least one kind of conservation practice in 2004, and 58%, at least two.[59]

Another source for comparison is USDA's 2007 Census of Agriculture It asked all surveyed operators: "At any time during 2007, did this operation ....[u]se conservation methods such as no-till or limited tilling, filtering runoff to remove chemicals, fencing animals from streams, etc.?" [60] Twenty-three percent of the Census' farm and ranch *operators* answered "yes" to the question.[61] It seemed to us that its content was matched by the first two choices in our interview questions about using "practices to protect soil from erosion" and "practices to protect surface or ground water from pollution." Among our subsample of 356 owner-operators, 68% reported applying in 2011 practices of one or the other type (or both).

Table 5.10 presents the frequencies of surveyed owners reporting the use of pairs of conservation practices on their protected land. The three most common pairs were: those to reduce soil erosion and those to protect against pollution of surface or groundwater (found in the interviews with 40% of the full sample), those to curb erosion and those to protect or improve wildlife habitat (32%), and the pair of guarding against water pollution and promoting the health of wildlife habitat (29%).

**4b. Who tended to be the appliers of conservation practices versus those surveyed owners who reported no measures used in 2011?** Using logistic regression to answer this question, we found three statistically significant predictors of surveyed owners applying at least one conservation practice that year. However, their combined predictive power was small.[62] The more acres in crops (including orchards, vineyards, citrus groves, and nursery crops, as well as field crops), the more likely at least one kind of conservation practice was reported. The same relationship was found for age of the owner: the older, the greater the likelihood of one or more

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[59] J. Dixon Esseks, Jessica M. Nelson, and Monica E. Stroe, 2006. *Evaluation of USDA's Farm and Ranch Lands Protection Program (FRPP) through Surveying a Random Sample of Owners of Agricultural Land Whose Development Rights Were Sold in Part through the FRPP* (Lincoln, NE: Center for Great Plains Studies, University of Nebraska-Lincoln), p. 33.

[60] USDA, *United States 2007 Census of Agriculture,* Form Number: 07-A0200, Section 332: Practices: http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/usappxb.pdf (accessed March 9, 2013).

[61] USDA, *2007 Census of Agriculture: U.S. National Level Data*, Table 44: http://www.agcensus.usda.gov/Publications/2007/Full_Report/Volume_1,_Chapter_1_US/ (accessed March 3, 2013)

[62] The Nagelkerke R Square was only .117.

types having been applied. Also, owners raising livestock in 2011 were more likely to have used at least one kind.

**Table 5.10. Among all 506 surveyed owners, the pairs of practices they applied in 2011**

| Pairs of Practices | Numbers of Respondents | % of Total Respondents |
|---|---|---|
| Practices to protect soil from erosion AND practices to protect surface or ground water from pollution | 203 | 40% |
| Practices to protect soil from erosion AND to protect or improve wildlife habitat | 161 | 32 |
| Practices to protect soil from erosion AND to prevent overgrazing or other damage to pasture land | 134 | 26 |
| Practices to protect soil from erosion AND practices to minimize water used for irrigation | 76 | 15 |
| Practices to protect surface or ground water from pollution AND to practices to protect or improve wildlife habitat | 145 | 29 |
| Practices to protect surface or ground water from pollution AND practices to prevent overgrazing or other damage to pasture land | 126 | 25 |
| Practices to protect surface or groundwater from pollution AND practices to minimize water used for irrigation | 68 | 13 |
| Practices to protect or improve wildlife habitat AND practices to prevent overgrazing or other damage to pasture land | 112 | 22 |
| Practices to protect or improve wildlife habitat AND practices to minimize water used for irrigation | 65 | 13 |
| Practices to prevent overgrazing or other damage pasture land AND practices to minimize water used for irrigation | 58 | 11 |
| Total cases | *(506)* | -- |

It makes intuitive sense that being a livestock-producer increased the likelihood of applying at least one practice. The fourth of the survey's six categories of conservation practices that respondents might have used was about pasture land. Similarly, it seems likely that the more acres in crop production, the greater the likelihood of needing practices to curb soil erosion. A causal relationship between applying practices and the owner's age is harder to explain. Perhaps with greater age comes more understanding of the need for conservation, as well as the technical knowledge and money needed to apply them.

Operator status made a difference in the number of separate types of practices applied. The 356 owner-operators averaged 2.3 types of practices (out of the six kinds presented in the survey—see Table 5.9), compared to a mean of 1.5 among the 154 non-operator owners.[63] The findings in the 2005 survey citied above were almost identical—2.1 types versus 1.5.

**4c. Did the easement program make a difference in the conservation practices applied, or would the owners have behaved the same ways regardless of the land's protection status?** Interview questions found three ways in which participation in the land protection program likely made differences.

[63] This difference was statistically significant at the .000 level in a *t-test* of difference of two independent means.

(1) Money from the sale of easements helped in applying practices. An earlier part of this chapter reported that 97 out of the total of 506 respondents (or 19%) told us that they had used proceeds from the sale of their easement for "Starting up or expanding the use on your land of conservation practices..." (Table 5.4).

(2) Conservation plans were required of some owners. All participants in the survey were asked: "Do you have a *written* conservation plan for your protected land, such as for minimizing soil erosion, reducing water pollution, or improving wildlife habitat?" FRPP rules require management plans for highly erodible land, for the harvesting of timber on protected land, and for other problem situations that may be identified before the easement is finalized.[64] More than two-thirds (69%) of the 506 owners reported having a written plan (Table 5.11). We assume that many or most of the plans were developed or revised as part of the easement agreement. We chose not to ask the respondents to validate this assumption because of our interest in a follow-up question about the degree of applying the plan. Frankness about reporting no or little progress might have been discouraged if the answers were explicitly about a component of the deed of easement.

**Table 5.11. Among all 506 owners of protected land, the percent that had written conservation plans as of the time of the interviews and the percent reporting different degrees of applying those plans**

| Had a Plan | Numbers of Respondents | % of Total Respondents |
|---|---|---|
| Yes, have a plan | 349 | 69% |
| No plan | 143 | 28 |
| Not sure | 14 | 3 |
| Total respondents | 506 | |
| **Status of Plan**[a] | | |
| Not at all applied | 9 | 2% |
| Somewhat applied | 49 | 14 |
| Mostly applied | 97 | 28 |
| Completely applied | 174 | 50 |
| Not sure or no answer | 20 | 6 |
| Total | 349 | -- |

[a]Text of question: "Some owners apply such plans while other owners have reasons not to apply them at all or only partially. To what extent have you applied your plan?"

In the follow-up question, only 2% of the 349 owners with plans chose the response option, "not at all applied" (Table 5.11). Fourteen percent selected, "somewhat applied"; 28% "mostly applied," and 50%, "completely applied." The extent of application varied somewhat with the years since the respondent first owned agricultural land with a conservation easement on it. Among those with one or two years of such ownership, 49% reported full implementation, while among those with five or six years the percentage was 61%.[65]

[64] US Department of Agriculture, Title 440 – Conservation Programs Manual: Part 519 – Farm and Ranch Lands Protection Program, Subpart G – Conservation Easements, September 2010, pp. 9, 11.
[65] In a Pearson Chi-square test, these percentages were not statistically significantly different.

| Table 5.12. New Practices: Among all 506 surveyed owners, their reports as to whether any of the conservation practices they applied to their protected land was new to that land since a conservation easement was placed on it[a] | | |
|---|---|---|
| **Practices New to the Protected Land** | **Numbers of Respondents** | **% of 506 Surveyed Owners** |
| Practices to protect soil from erosion | 48 | 9% |
| Practices to protect surface or ground water from pollution | 51 | 10 |
| Practices to protect or improve wildlife habitat | 30 | 6 |
| Practices to prevent overgrazing or other damage to pasture land | 26 | 5 |
| Practices to minimize water used for irrigation, or | 18 | 4 |
| Other conservation practices | 4 | 1 |
| | | |
| Applied at least one new practice | 122 | 24% |
| Applied at least two new kinds | 37 | 7 |
| Applied at least three kinds | 15 | 3 |
| Total | 506 | -- |

[a]Text of question: "What, if any, of these conservation practices were new to the protected agricultural land since a conservation easement was placed on it?"

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(3) Participation in easement programs encouraged the application of conservation practices that were new to the protected land. In a follow-up to the question about conservation measures used in 2011, the owners who reported at least one type of practice were asked: "What, if any of these conservation practices applied in 2011 were new to your protected land since a conservation easement was placed on it?"

As shown in Table 5.12, almost a quarter (24%) of the total surveyed owners said that new practices were used in 2011, with most of them being either measures to prevent soil erosion or those to protect against pollution of surface or ground water. A follow-up question was asked to learn about how many of those 122 cases of adopting new practices were related to the conservation easement program:

> "Sometimes an agricultural land preservation program encourages land owners to use conservation practices. Sometimes there is no such encouragement. Was there anything about the preservation program in which you participated that encouraged the application of those conservation practices that were new?"

Close to half (48%) of those 122 respondents answered "yes" to the question and then were asked: "What aspect of the program encouraged you?" Table 5.13 gives the number of respondents who talked about one or more of five such aspects. The most frequently mentioned type (by 41%) was technical assistance—developing conservation plans or providing advice for applying particular practices. Second in importance (19%) were the cases where practices were mandated in required plans for managing highly erodible soils or forested land. In these cases, there is duplication with the second way discussed above of how participation in easement programs encouraged use of conservation practices.

| Table 5.13. Among the 122 surveyed owners who reported applying to their protected land conservation practices that were new to those parcels since conservation easements had been placed on them, the percent indicating that their applications were "encouraged" by the preservation program and the types of encouragement those respondents reported | | |
|---|---|---|
| **Program Effects on the Application of New Conservation Practices** | **Numbers of Respondents** | **% of Respondents n=122** |
| Encouragement received[a] | 58 | 48% |
| Number of owners answering this question | 122 | |
| **Types of Encouragement[b]** | **Number of Respondents** | **% of Respondents n=58** |
| Technical assistance—developing conservation plans or providing advice for applying particular practices | 24 | 41% |
| Practices were mandated in required plans for managing highly erodible soils or forested land. | 11 | 19 |
| Program personnel put owners in touch with other agencies that helped with conservation. | 2 | 4 |
| Program personnel or program printed information increased owners' awareness of the need for conservation practices. | 10 | 17 |
| Program personnel or program printed information connected owners to sources of cost-sharing of practices or other financial help. | 10 | 17 |
| Did not answer the question | 1 | 2 |
| Number of owners answering this question | 58 | |

[a]Text of question: "Sometimes an agricultural land preservation program encourages land owners to use conservation practices. Sometimes there is no such encouragement. Was there anything about the preservation program in which you participated that encouraged the application of those conservation practices that were new?"
[b]Text of question: "What aspect of the program encouraged you?"

Tied for third place in Table 5.13 (17% citing them) were situations of owners talking with program personnel or reading program information that either (a) increased their awareness of the need for conservation practices, or (b) connected owners to sources of cost-sharing of practices or other financial help.

There may have been other causal connections between program participation and conservation measures being newly applied, but at least in 56 of these 58 cases, there are the oral descriptions of such linkages. And in the full 122 cases causation is suggested by the time-sequence (i.e., owner joins program and then one or more new practices are applied).

**4d. Other assistance programs helped owners of protected land to apply conservation practices to their land.** We asked the 378 owners who reported applying at least one practice in 2011[66] if they had received assistance in the form of grants or technical assistance

[66] See Table 5.9.

from federal, state, or non-profit programs *other than* their preservation programs to help with "the initial or continued application in 2011 of conservation practices to your protected land."

**Table 5.14. Among 378 surveyed owners who reported applying conservation practices (new or continuing) to their protected land in 2011, the percentages who received assistance in the form of grants or technical assistance from programs other than the preservation programs,[a]**

| Sources of Grants or Technical Assistance | Numbers of Respondents | % of Respondents |
|---|---|---|
| Conservation Stewardship Program | 36 | 10% |
| Environmental Quality Incentives Program | 46 | 12 |
| Wildlife Habitat Incentives Program | 26 | 7 |
| **Other Sources** | | |
| USDA's Natural Resources Conservation Service | 28 | 7 |
| Aid from other USDA agencies | 16 | 4 |
| Private non-profit organizations (land trusts, wildlife protection entities like Pheasants Forever) | 11 | 3 |
| Other aid sources | 82 | 22 |
| | | |
| Received grants or technical assistance either from at least one of the three listed or from one of the "other" programs | 139 | 37 |
| Total owners asked this question | 378 | |

[a]This question was added after the first 40 interviews had been completed: "Was the initial or continued application in 2011 of conservation practices to your protected agland encouraged by grants or technical assistance from any another federal, state, or non-profit conservation program? Such as: the conservation Stewardship Program, Environmental Quality Program…?"

Three such programs were listed in the question, and there was an "other" option, with a follow-up question asking for that program's name.

--10% of the 378 reported receiving help from the first-listed program—the Conservation Stewardship Program[67] (Table 5.14);

--12%, from the Environmental Quality Incentives Program (listed);[68] and

--7 %, from the Wildlife Habitat Incentives Program (listed).[69]

[67] USDA's Conservation Stewardship Program. "Annual payment for installing and adopting additional activities, and improving, maintaining, and managing existing activities" and "Supplemental payment for the adoption of resource-conserving crop rotations." USDA, Natural Resources Conservation Service, *Conservation Stewardship Program*: http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/ (accessed March 9, 2013).

[68] "The Environmental Quality Incentives Program (EQIP) is a voluntary program that provides financial and technical assistance to agricultural producers through contracts up to a maximum term of ten years in length. These contracts provide financial assistance to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland." USDA, Natural Resources Conservation Service, *The Environmental Quality Incentives Program:* http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/ (accessed March 9, 2013).

[69] "The Natural Resources Conservation Service administers WHIP to provide both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat." USDA, Natural Resources

The most frequently mentioned "other" sources of assistance were USDA's Natural Resources Conservation Service (NRCS), cited by 7%; various other USDA agencies, reported by a total of 4%; and a variety of non-profit conservation organizations such as land trusts, Nature Conservancy, and Pheasants Forever—by 3%. Here are four examples of respondent reports about "other" agencies that helped them with their conservation practices in 2011:

--"A grant from NRCS to buy equipment."

--"The Soil and Water Conservation District for the county helped me come up with the plan."

--"The state has a program that's related to conserving some water run-off that I did. I used a 30,000 gallon reservoir instead of fresh water."

--"Trout Unlimited wrote all the grants on the stream restoration. From US Fish and Wildlife Partner's program we've gotten small grants from them to do individual things."

When we add together the cases of assistance from the listed three programs plus those from "other" programs or agencies, the total is 37% of the 378 owners who applied conservation practices that year (Table 5.14).

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Conservation Service, *Wildlife Habitat Incentives Program:* http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/whip/ (accessed March 9, 2013).

# Chapter 6

## Positive Changes in Farm and Ranch Operations Since the Land First Became Protected by Conservation Easements

### 1. Introduction

Howard Conklin, William Lockeretz and others have discussed the "impermanence syndrome," a set of attitudes found among farmers who expect development of agricultural land close to them, if not of their own farms, and who consequently decide not to make investments in the long-run productivity of their land.[70] However, when conservation easements or other policies to slow or block conversion are implemented, attitudes may change. Phyllis Faber, a farmland preservation leader in Marin County, California, wrote about how, after the passage of policy initiatives designed to stop development of agricultural land there, "the ranchers' confidence and trust in the future [of agriculture] began to return…."[71]

The FRPP's chief purpose is "to keep productive farm and ranchland in agricultural uses."[72] Accordingly, we asked questions in the survey to learn whether, in the years since the land became protected by conservation easements, operations including eased land showed evidence of a continued "impermanence syndrome" or, instead, of changes indicating expansion, diversification, and/or other likely improvements. To this end, we chose nine indicators of positive change—whether the owner-operators of protected land had:

(1) increased their operations' sizes in acres,

(2) grew a larger number of separate crops, each of which grossed at least $1,000 in the two production years being compared,

(3) raised a larger number of different kinds of livestock, each of which earned $1,000 or more in those two years,

(4) began to use new-to-them marketing outlets,

(5) applied new-to-them types of management systems,

(6) started up new agricultural-product processing enterprises,

(7) began other agriculturally related businesses like a bed-and-breakfast, horse-back riding facility, or services to farmers such as selling seeds or repairing equipment,

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[70] Howard E. Conklin and William G. Lesher, 1977,"Farm-value assessment as a means of reducing premature and excessive agricultural disinvestment in urban fringes," *American Journal of Agricultural Economics,* 59: 755-759; William Lockeretz, 1989. "Secondary Effects on Midwest Agriculture of Metropolitan Development and Decreases in Farmland," *Land Economics,* 65 (3): 215-216; Robin H. Liffmann, Lynn Huntsinger, and Larry C. Forero, "To ranch or not to ranch: Home on the Urban Range?" *Journal of Range Management*, 53(July 2000): 362-370.

[71] Phyllis M. Faber, 1999, "MALT: The Land Trust Experience in Marin County," in *California Farmland and Urban Pressures,* edited by Albert G. Medvitz, Alvin D. Sokolow, and Cathy Lemp (Davis, CA: University of California Agricultural Issues Center): 125-140.

[72] USDA, Natural Resources Conservation Service, *Farm and Ranch Lands Protection Program:* http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/farmranch/ (accessed March 9, 2013).

(8) added an energy-producing facility for reducing costs of agricultural production, such as solar panels, geothermal heat pumps, or a manure digester system, and/or

(9) invested significant amounts of money in the farm or ranch operation.

We cannot argue that the land's protected status alone caused any changes we measure. To hope to prove that point, we would need access to more kinds of data about management decisions and market conditions than obtainable in an interview averaging 37 minutes and focusing on many other subjects besides these nine areas of possible change. However, we can show where changes occurred and make the obvious points that (a) they would not have been possible if the land had been developed or, (b) if conversion out of agricultural use was unlikely, they were not blocked by the presence of the land conservation easements.

**Table 6.1 Calendar year in which the surveyed owner-operators first farmed or ranched protected land that they owned and the number of years elapsed between that year and 2011[a]**

| First Year that Both Owned and Operated Protected Land | Number of Owner-Operators | % of Total in This Subsample | Years That Had Elapsed between the "First Year" and 2011 |
|---|---|---|---|
| 1984 or earlier | 2 | 0.6% | 27 |
| 1986 | 2 | 0.6 | 25 |
| 1990 | 3 | 0.8 | 21 |
| 1992 | 1 | 0.3 | 19 |
| 1995 | 2 | 0.6 | 16 |
| 1998 | 4 | 1.1 | 13 |
| 1999 | 2 | 0.6 | 12 |
| 2000 | 6 | 1.7 | 11 |
| 2001 | 2 | 0.6 | 10 |
| 2002 | 4 | 1.1 | 9 |
| 2003 | 4 | 1.1 | 8 |
| 2004 | 5 | 1.4 | 7 |
| 2005 | 9 | 2.5 | 6 |
| 2006 | 14 | 3.9 | 5 |
| 2007 | 19 | 5.3 | 4 |
| 2008 | 40 | 11.2 | 3 |
| 2009 | 54 | 15.2 | 2 |
| 2010 | 74 | 20.8 | 1 |
| 2011 | 106 | 29.8 | 0 |
| Does not know[1] | 3 | 0.8 | -- |
| Total Owner-Operators | 356 | Total % = 100 | |

[a]All but three of the 356 respondents answered with a particular year (e.g., 2008) when asked the question: "What was the year in which you both owned protected agricultural land and you also were the operator of at least some of that protected land?" The three exceptions said they could not recall what their first year was.

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**2. Measurements Over Time**

To measure the possible impact of permanent land preservation on eight of these nine kinds of management decisions by owner-operators, we asked questions to permit comparisons between the full production year closest to our interviews, 2011, and "the first year in which you both

owned protected land and you also were the operator of at least some of that protected land." Throughout this chapter we focus on the 247 owner-operators whose "first years" were 2010 or earlier. Therefore, we could measure whether the farm or ranch had changed in number of acres, separate kinds of crops of livestock raised, number of different marketing outlets used, etc.

For the ninth kind of management decision—regarding financial investment in the farm or ranch operation—we asked about "how the proceeds from selling the easements ... [were] used." The money becomes available for the owner to spend typically after the closing on the land conservation easement agreement. Therefore, since our interviews began in February 2012 and we limited this line of questioning to owner-operators whose "first years" were 2010 or earlier, there should have been at least one year in which decisions on expenditures could have been made.

Table 6.1 shows the reported "first years" and the number of years elapsed between them and 2011. For 29.8% of the surveyed owners who were also operators, the first year that they owned land under conservation easements was 2011. Therefore, no comparisons across time were possible. For the other approximately 70%, or 247 respondents, the time elapsed ranged from just one year to 27 or more years. As discussed in Chapter 1, our survey's sample was drawn from owners who closed on conservation easements between October 2005 and January 2012. However, the sample included 37 cases where the surveyed owners-reported their "first year" being before 2005. Evidently, they had agreed to conservation easements on at least two separate occasions—before 2005 and during the time period that made them eligible for our study. Alternatively, they had purchased or inherited eased land beginning prior to 2005 and then sold easements on other land in 2005 or afterwards.

**3. Changes in the Operations' Sizes by Acres**

Among the 247 surveyed owners who owned and operated protected land for at least a year before 2011,[73] 22% had by then increased the total acres in their operations, 69% kept them the same, and only 9% decreased them (Table 6.2). Not surprisingly, making a difference was the number of years elapsed between when the respondent first owned eased land and 2011. In the group of 46 who initially became owners between 1984[74] and 2005, 57% had by 2011 added to the acres they farmed or ranched. In the group of 33 defined by the years 2006 and 2007 the nine "adders" comprised 27%, while among the 168 in the 2008-to-2010 group that percentage dropped to 11%.[75] The trend in the likelihood of reducing acres went in the opposite direction, with just 4 % of the 1984-to-2005 group reporting fewer acres, compared to 10% in the 2008-to-2010 group.[76]

The differences in acres added or subtracted were not small in comparison to the first year's size. Among the 53 who increased their operations' total acres, the top two quarters (third and fourth) in ascending numbers of added acres ranged from increases of 98% to over 1,000% (Table 6.2).

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[73] And for whom we have appropriate data on acres in both 2011 and the "first year."

[74] 1984 or earlier.

[75] The Pearson chi-square value for this cross-tabulation indicated that the changes over time were statistically significantly different at the .000 level in a two-sided test.

[76] But the chi-squared test did not find the differences to be statistically significant.

| Table 6.2. Among the 247 surveyed owners who operated at least some of their protected land for one or more years prior to calendar 2011,[a] the percent who increased the acres in their operations since their first year of ownership-operation, the percent who kept the acres constant, and the percent who decreased them; AND the sizes of the increases and decreases | | |
|---|---|---|
| **Total Acres in Operation** | **Percent of Owner-Operators per Category** | **Number of Owner-Operators per Category** |
| Increased | 22% | 53 |
| Remained constant | 69% | 171 |
| Decreased | 9% | 23 |
| Total | 100. | 247 |
| **Relative Size of Increases and Decreases** | **Ranges per Quarter of the Group** [1] | **Number of Cases** |
| **Increases:** First quarter[b] of cases | 5% to less than 25% | 13 |
| Second quarter | 25% to less than 98% | 13 |
| Third quarter | 98 % to less than 204% | 14 |
| Fourth quarter | 204% to over 1,000% | 13 |
| Total | -- | *53* |
| **Decreases:** First quarter of cases[c] | - 87% to less than - 57% | 5 |
| Second quarter | -57% to less than -33% | 6 |
| Third quarter | -33% to less than -18% | 5 |
| Fourth quarter | -18% to – 3% | 6 |
| Total | | *23* |

[a]These respondents answered with a particular year (e.g., 2008) when asked this question: "What was the year in which you both owned protected agricultural land and you also were the operator of at least some of that protected land?"

[b]The values for this group of cases were arrayed in ascending order and then divided into four equal groups or quarters, with each group defined by the first, second, third, or fourth "quartile." A quartile is the value below which that particular one-quarter of all the values thus arrayed falls. For example, 5% is the first quartile for the increases in the size of operations in acres.

[c]In ascending value, from the greatest *negative* value to the smallest *negative* value.

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### 4. Changes in the Number of Producers Raising Crops

Among the 247 respondents whose "first year" was before 2011 (and thus their 2011 operations may be compared to a previous year's), 208 of them (or 84%) raised crops in their "first year" (Table 6.3). A total of 184 of this group reported raising crops also in 2011. In other words, 24 who grew crops in the "first year" had ceased doing so by 2011. On the other hand, of the 39 who did not grow crops in their first year, seven (3% of 247) added crop production by 2011.

**Table 6.3. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more years prior to 2011, the percentages who raised crops the prior year, in both years, in the first year but not in 2011, and in 2011 but not the first year**

| Groups of Owner-Operators | Number per Group | % of the 247 Respondents |
|---|---|---|
| Raised crops in their "first year" of operating protected land that they owned | 208 | 84% |
| Dropped crop production between the first year and 2011 | 24 | 10% |
| Raised crops both in the first year and 2011 | 184 | 74% |
| Added crop production by 2011 | 7 | 3% |
| All who raised crops in 2011 | 191[a] | 77% |

[a]This total results from (a) subtracting from the number of owner-operators who raised crops in their "first year"(208) the number of owners who had dropped production of crops by 2011 (24), which gives us 184; and then (b) we add the 7 owners who had added crop production by 2011, which results in the new total of 191.

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**Table 6.4. Among the 209[a] owner-operators who farmed or ranched protected land for at least one year prior to calendar 2011 *and* who raised crops either in that first year or in 2011, the percent who by 2011 had increased the number of *separate* crops worth at least $1,000 if marketed, the percent who reported the same number of such crops for both years, and the percent whose number had decreased**

| Number of Separate Crops in the Operation in 2011 Compared to "First Year" | Number of Owner-Operators per Category n=209[a] | % of the 209[a] Owner-Operators per Category |
|---|---|---|
| Increased the number[b] | 38 | 18% |
| Remained same | 137 | 66% |
| Decreased | 34 | 16% |
| Total | 209 | 100% |
| **Extent of Increases** | **Number of Cases n=38** | **% of Total Cases, by Group** |
| **Increased by:** One crop | 33 | 86% |
| Two | 3 | 8% |
| Three | 1 | 3% |
| Four | 0 | 0% |
| Five | 1 | 3% |
| Total | 38 | 100% |
| **Extent of Decreases** | **Number of Cases n=34** | **% of Total Cases, by Group** |
| **Decreased by:** One crop | 24 | 70% |
| Two | 8 | 24% |
| Three | 0 | 0% |
| Four | 2 | 6% |
| Total | 34 | 100% |

[a] Six cases had to be removed from this particular analysis because, although it was clear they had raised crops in 2011, they were not asked the question about which crops, if any, had earned them at least $1,000 each in sales.

[b]Included are cases where no crops were planted in the first year the respondent both owned and operated protected land, but at least one was raised in 2011. Also included was the opposite situation, that is, with no crops in 2011 but at least one in the first year.

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**5. Changes in the Number of Separate Crops Produced Per Operation**

Between their first year of farming/ranching protected land they owned and the year 2011, to what extent did operators increase or decrease *the number of separate crops* grown that were worth at least $1,000 if marketed? A total of 209[77] of the 215 surveyed owners who raised crops in either 2011 or the "first year" were asked to list the separate kinds of crops (if any) that earned them "at least $1,000 if marketed" each year. Most of those respondents—66%—reported the same number of crops for both years (Table 6.4). Thirty-eight operators (18% of the 209 and 15% of the entire subsample of 247) reported more crops in 2011 compared to the first year, while 34 operators (16% of the 209 and 14% of the 247) became less diversified by this measure. Relatively more of those 34 negative cases—30% of them—involved decreases of two or more crops, while among the 38 who reported having increased the numbers of crops, just 14% did so by two or more (Table 6.4). Some or most of the cases of both increased and decreased numbers of crops were operations that either added the production of crops between the two years or stopped it altogether (Table 6.3).

***Adding specialty crops?*** Table 6.5 focuses on the owner-operators who between their first years of farming/ranching protected land they owned and 2011 either (a) raised crops they did not grow that first year and/or (b) dropped crops. Here, in contrast with Table 6.4, we are not concerned with net changes in the total kinds of crops raised. Among the subsample of 209 owner-operators who raised crops either that first year or in 2011, 44 (or 21%) had added one or more new crops that grossed at least $1,000 (Table 6.5). Forty-two of the 209 (20%) either stopped raising one or more crops and/or the crops that they had grown in the first year did not gross at least $1,000 in 2011. In the "added" category, "specialty crops" ranked second, just below corn (11 versus 12) cases) and ahead of soybeans. USDA has defined "specialty crops" as "intensively cultivated plants including fruits and vegetables, tree nuts, dried fruits and horticulture, and floriculture and nursery crops...."[78] These crops can yield high revenue per acre.[79] The 2008 Farm Bill contained a number of provisions to promote the production and consumption of such crops, including government assistance in research and marketing, cost-sharing to help producers achieve organic certification, establishing "a federal/state pest and disease detection and control program," and increasing the "availability of fresh fruits and vegetables in the school lunch and other domestic nutrition assistance programs."[80]

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[77]Six cases had to be removed from this particular analysis because, although it was clear they had raised crops in 2011, they were not asked the question about which crops, if any, had earned them at least $1,000 each in sales.

[78] USDA, Natural Resources Conservation Service, *Specialty Crop Producers:* http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_006951.pdf (accessed August 30, 2012).

[79] Clemson University, August 2009, *High Value Specialty Crops* (http://www.clemson.edu/extension/aes/budgets/files/asparagus.pdf); Minnesota Department of Agriculture, 2012, *Minnesota Specialty Crops: An Analysis of Profitability and Performance, 2008-2011* (http://www.mda.state.mn.us/~/media/Files/food/organicgrowing/specialtycrop2012.ashx [accessed November 3, 2012).

[80] Renee Johnson, January 2009, *Specialty Crops: 2008 Farm Bill Issues* (Congressional Research Service: 7-5700), p. 1.

| Table 6.5. Among the 209[a] owner-operators who farmed protected land for at least one year prior to calendar 2011 (as well as in 2011) *and* who raised crops either in that first year or in 2011, the most common types of crops added and dropped by 2011 | | |
|---|---|---|
| **The Most Common Crops that Were Added** | **Number of Owner-Operators per Category** | **% of Owner-Operators Who Added Crops n=44** |
| Corn | 12 | 27% |
| Specialty crops[b] | 11 | 25% |
| Soybeans | 9 | 20% |
| Hay | 7 | 16% |
| Other crops | 6 | 12% |
| Total Respondents Who Added Crops | (44[c]) | -- |
| **The Most Common Crops that Were Dropped** | **Number of Owner-Operators per Category** | **% of Owner-Operators Who Dropped Crops n=42** |
| Hay | 16 | 38% |
| Corn | 10 | 24% |
| Soybeans | 6 | 14% |
| Wheat | 5 | 12% |
| Specialty crops[b] | 3 | 7% |
| Other crops | 2 | 5% |
| Total Respondents Who Dropped Crops | 42 | -- |

[a]Included are cases where no crops were raised in the first year the respondent both owned and operated protected land, but at least one type of crop with total sales of at least $1,000 was raised in 2011. Also included was the opposite situation, that is, with no crops in 2011 but at least one kind in the first year.

[b] Various fruits, vegetables, and flower crops that meet the USDA definition of specialty crops (....intensively cultivated plants including fruits and vegetables, tree nuts, dried fruits and horticulture, and floriculture and nursery crops; wild plants are not considered specialty crops." (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs143_006951.pdf [accessed August 30, 2012]).

[c]The sum of this column of numbers exceeds the 44 shown here because one respondent reported adding crops that fell into two of the categories.

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### 6. Changes in the Number of Livestock Producers

To what extent did owner-operators who raised livestock the first year in which they operated land with an easement on it continue to do so in 2011, and did those without livestock in their "first-year" operations start to raise one or more kinds by 2011? Among the 247 respondents whose "first year" was before 2011 (and thus their 2011 operations may be compared to a previous year's), 159 or 64% reported raising livestock in their "first year" (Table 6.6). A total of 149 of this group produced livestock also in 2011. In other words, ten who raised livestock in the "first year" had ceased doing so by 2011. On the other hand, 17 of the 247 respondents (or 7%) added livestock production between their first year and 2011.

**Table 6.6. Among the 247 surveyed owners who operated at least some of their protected land both in 2011 and one or more years prior to that year, the percentages who raised livestock the prior year, in both years, in the first year but not in 2011, and in 2011 but not the first year**

| Groups of Owner-Operators | Number per Group | Percent of 247 |
|---|---|---|
| Raised livestock in the first year of operating protected land that they owned | 159 | 64% |
| Dropped the raising of livestock between the first year and 2011 | 10 | 4% |
| Raised livestock both in the first year and in 2011 | 149 | 60% |
| Added livestock production by 2011 | 17 | 7% |
| All who raised livestock in 2011 | 166 | 67% |

**Table 6.7. Among the 176 owner-operators[a] who farmed or ranched protected land for at least one year prior to calendar 2011 *and* who raised livestock either in that first year or in 2011, the percent who by 2011 had increased the number of *separate kinds* of livestock worth at least $1,000 if marketed, the percent who reported the same number of such types for both years, and the percent whose numbers had decreased[a]**

| Number of Separate Types of Livestock in the Operation in 2011 Compared to "First Year" | Number of Owner-Operators per Category | % of the 176 Owner-Operators per Category |
|---|---|---|
| Increased the number | 21 | 12% |
| The number held constant | 143 | 81% |
| Decreased | 12 | 7% |
| Total | 176 | 100% |
| **Extent of Increases** | **Number of Cases** | **% of the 21 Owner-Operators Who Increased Their Livestock Products** |
| **Increased by:** One type | 17 | 81% |
| Two | 2 | 9% |
| Three | 1 | 5% |
| Four | 0 | 0% |
| Five | 1 | 5% |
| Total | 21 | 100% |
| **Extent of Increases** | **Number of Cases** | **% of the 12 Owner-Operators Who Decreased Their Livestock Products** |
| **Decreased by:** One type | 11 | 92% |
| Two | 1 | 8% |
| Total | 12 | 100% |

[a]Included are cases where no livestock was raised in the first year the respondent both owned and operated protected land, but at least one kind of livestock with total sales of at least $1,000 was raised in 2011. Also included was the opposite situation, that is, with no livestock in 2011 but at least one kind in the first year.

**7. Changes in Numbers of Separate Types of Livestock Produced per Operation**
Did surveyed owner-operators increase or decrease the number of separate types of livestock they produced that were worth at least $1,000 if marketed? The 176 owner-operators who raised livestock in either 2011 or the "first year" were asked to report the separate kinds of livestock that earned them "at least $1,000 if marketed" those years. Most of these respondents—81%—reported for both years the same total number of types of livestock (Table 6.7). Another 21 (12% of the 176 and 9% of the full subsample of 247) reported more types in 2011 compared to the first year, while 12 (7% of 176 and 5% of 247) became less diversified by this measure. Relatively somewhat more of the 21 positive cases—4 or 19% of them—involved increases of two or more types of livestock, while among the 12 who reported having decreased the types they raised, just 8% did so by more than one (Table 6.7).

Among the cases of both added and dropped kinds of livestock raised, half or more of the reported changes consisted of types of cattle (e.g., cows, calves, steer—Table 6.8). Among the additions were three cases of adding a "specialty livestock product." [81] Goats yielded those three farmers at least $1,000 in 2011. There were no discernible "specialty" cases among the "decreases."

**Table 6.8. Among the 176 owner-operators[1] who farmed or ranched protected land for at least one year prior to calendar 2011 *and* who raised livestock either in that first year or in 2011, the most common types of livestock that these respondents reported to have added and dropped by 2011**

| Most Common Livestock Types that Were Added | Number of Owner-Operators per Category | Percent of the 21 Owner-Operators Who Added |
|---|---|---|
| Cattle of all types (including dairy) | 16 | 76% |
| Poultry | 5 | 24% |
| Goats | 3 | 14% |
| Sheep | 3 | 14% |
| Total Respondents Who Added Livestock Types | *(21)*[1] | -- |
| **Most Common Livestock Types that Were Dropped** | **Number of Owner-Operators per Category** | **Percent of the 14 Owner-Operators Who Dropped** |
| Cattle of all types (including dairy) | 7 | 50% |
| Hogs and pigs | 2 | 14% |
| Sheep | 2 | 14% |
| Total Respondents Who Dropped Livestock Types | *(14)*[2] | -- |

[1]This number represents all the surveyed owner-operators (21) who added types of livestock to their operations. Since some respondents added more than one type, the total number of cases given in this series (e.g., 16, 5, 3, 3) exceeds 21.
[2]This number represents all the respondents (14) who dropped at least one type of livestock.

[81] University of Nebraska-Lincoln, *Specialty Livestock* (http://lancaster.unl.edu/ag/livespec.shtml: accessed November 12, 2012); Fauquier County, Virginia, *2012 Fauquier County Farm Product Directory; Specialty Livestock Products* (http://www.fauquiercounty.gov/government/departments/agdev/index.cfm?action=farmlist&sub=specialtylivestock accessed November 12, 2012).

**Table 6.9. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the percentage who marketed their agricultural products through each of four *categories* of outlets**

| Groups of Owner-Operators by Category of Outlets | Number per Group | Percent of 247 |
|---|---|---|
| **Wholesale Outlets** | | |
| Marketed via wholesale outlets in first year that owned and farmed/ranched protected land | 115 | 47% of 247 |
| Dropped all wholesale outlets by 2011 | 7 | *6% of 115* |
| Used wholesale outlets both in first year and in 2011 | 108 | *94% of 115* |
| Started up use of wholesale outlets by 2011 | 15 | *12% of 115* |
| All respondents who used wholesale outlets in 2011 | 123 | 50% of 247 |
| **Direct to Individual Consumers** | | |
| Marketed in first year via one or more outlets providing direct contact with individual consumers | 99 | 40% of 247 |
| Dropped all direct-to-individual-customer outlets by 2011 | 15 | *15% of 99* |
| Marketed directly to individual-consumers both in first year and in 2011 | 84 | *85% of 99* |
| Started up the use of direct-to-individual-consumer outlets by 2011 | 15 | *15% of 99* |
| All respondents who used direct-to-individual-customer outlets in 2011 | 99 | 40% of 247 |
| **Direct to Groups of Consumers** | | |
| Marketed in first year via outlets providing direct contact with groups of customers | 10 | 4% of 247 |
| Dropped all direct-to-groups-of-consumer outlets by 2011 | 1 | *10% of 10* |
| Marketed directly to groups of consumers both in first year and in 2011 | 9 | *90% of 10* |
| Started up use of direct-to-groups-of-consumer outlets by 2011 | 11 | *110% of 10* |
| All respondents who used direct-to-groups-of-consumer outlets in 2011 | 20 | 8% of 247 |
| **Other Kinds of Outlets (e.g., production contracts, custom feeding)** | | |
| Marketed via "other" kinds of outlets in first year | 8 | 3% of 247 |
| Dropped all "other' kinds of outlets by 2011 | 0 | *0% of 8* |
| Marketed "other" kinds of outlets both in first year and in 2011 | 8 | *100% of 8* |
| Started up use of "other" outlets by 2011 | 5 | *50% of 8* |
| All respondents who used "other" outlets in 2011 | 13 | 5% of 247 |
| **Total Number of Separate Categories of Marketing Outlets Used** | **n=247** | **% of 247** |
| By 2011 had increased by one or more the separate categories of marketing outlets used | 36 | 14% |
| Between "first year" and 2011 no change in the number of separate categories of outlets used | 145 | 59% |
| By 2011 had decreased the number of separate categories of outlets used | 19 | 8% |
| Respondents who could not or would not answer questions about marketing outlets used in the "first year" and/or 2011[a] | 47 | 19% |

[a]Of these 47 respondents, 12 reported that in neither year had they raised any kind of crops or livestock "worth at least $1,000 if marketed." Another seven reported less than $10,000 for the "approximate total cash receipts from your farm operation" in 2011." Perhaps they either consumed all their production or shared it with family members and friends, rather than marketing it. Seven more either did not know their 2011 cash receipts or refused to answer the question. We are left with 21 cases whose total cash receipts from farming/ranching were at least $10,000. Maybe they used kinds of outlets other than those in our four categories of outlets, even though the fourth category was meant to accept all types of "others."

**8. Changes in Marketing Outlets**

To what extent did the surveyed owner-operators increase or decrease the number of separate kinds of marketing outlets that yielded them at least $1,000 per type annually? The 247 owners who operated at least some of their protected land in 2011, as well as in at least one prior year, were asked about the marketing outlets they used. This line of questioning focused on both 2011 and the "first year" they farmed/ranched such land, and the questions covered about four categories of outlets:

- "wholesale . . . like producers' cooperatives, brokers, or grain elevators";
- direct marketing "to individual consumers such as at an on-farm stand, at a farmers' market, or through direct delivery to their individual homes";
- direct marketing "to groups of people such as by delivering your products directly to grocery stores, restaurants, schools, universities, military bases, or corporate offices"; and
- "through outlets other than wholesale or direct . . . [such as] production contracts and custom feeding."

The most common *category of outlet* was wholesale, with 47% of the 247 respondents reporting use of that kind in their "first year" (Table 6.9). Its share rose to 50% in 2011. Second was direct marketing to individual consumers, with a share of 40% in both the "first year" and 2011. Ranking third was the category, "direct marketing to groups of customers," whose share rose by 10 percentage points to 20% in 2011. Last was "other kinds of outlets," with its share climbing two points to 5%. Among the 247 owner-operators who farmed or ranched both years, a total of 15% (or 36 respondents) increased the number of marketing-outlet categories used and 8% (18) dropped one or more.

Table 6.10 presents our findings about changes in the *numbers* of separate kinds of outlets per broad marketing category that earned the surveyed owner-operators at least $1,000 each, rather than whether they used a category at all (Table 6.9). Across all four categories, the highest percentage of users—48% to 77%--reported the same total numbers of outlets per category for both their first year of operating protected land they owned and the year 2011. More respondents per group—16% to 43%--increased the total per category than decreased it--zero to 10%. Among the 247 owner-operators on which this chapter focuses, 47 respondents (or 19%) increased their total number of marketing outlets (across all categories) by at least one, while 19 (8%) decreased them by one or more (Table 6.9).

**Table 6.10. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and a prior year and who--between those two years--used the listed category of marketing outlets, the percentages who increased, held the same, or decreased the total numbers of *separate types* of outlets within the category that each (a type) earned at least $1,000 per annum**

| Groups of Owner-Operators by Categories of Outlets | Number per Group | Percentages |
|---|---|---|
| **Wholesale Outlets** | **n=130[a]** | **% of 130** |
| Increased the total number of separate types of wholesale outlets | 21 | 16% |
| Held that number the same | 100 | 77% |
| Decreased that number | 9 | 7% |
| **Direct to Individual Consumers** | **n=114[a]** | **% of 114** |
| Increased the total number of separate types of direct-to-individual-consumer outlets | 22 | 19% |
| Held that number the same | 81 | 71% |
| Decreased the number | 11 | 10% |
| **Direct to Groups of Consumers** | **n=21[a]** | **% of 21** |
| Increased the total number of separate types of direct-to-groups-of-consumer outlets | 9 | 43% |
| Held that number the same | 10 | 48% |
| Decreased that number | 2 | 9% |
| **Other Kinds of Outlets (e.g., production contracts, custom feeding)** | **n=13[a]** | **% of 13** |
| Increased the total number of separate types of "other" outlets | 4 | 31% |
| Held that number the same | 9 | 69% |
| Decreased that number | 0 | 0% |
| **Summary** | **n=247[b]** | **% of 247** |
| Respondents who increased their total number of outlets by at least one between their "first year" of operating protected land they owned and 2011. | 47 | 19% |
| Respondents whose total number of marketing outlets remained the same. | 136 | 57% |
| Their total number of marketing outlets decreased by at least one. | 17 | 7% |

[a]The "n's" in these parts of the table refer to the total number of respondents who reported one or more outlets falling in that particular category—in 2011 and/or the first year that they owned and operated land protected by a conservation easement.

[b]All respondents who operated protected land that they owned in 2011 and one or more prior years.

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***What particular types of marketing outlets were added to and subtracted from the respondents' operations?*** Moving from the four *categories* of marketing outlets to *individual types* of outlets, we see in Table 6.11 that nine respondents added grain elevators as buyers between their "first years" and 2011. Six had as new outlets the selling of farm goods directly to individual consumers at the latter's homes or farms/ranches. Six also reported adding groups of consumers at schools, universities, or churches. And four each told us that new outlets for them were groups of consumers at restaurants and production contracts. In the other cases of adding or dropping kinds of outlets, there were fewer than four cases per type.

| Table 6.11. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the most common *individual types of outlets* that were added and that were dropped—between the first year they owned and farmed/ranched such land and 2011 | | |
|---|---|---|
| **Separate Types of Added Outlets[a]** | **Number per Type** | **Percent of 247** |
| Grain elevators | 9 | 4% |
| Direct sales to individuals at their homes or farms/ranches | 6 | 2% |
| Sales to groups of consumers—at schools, universities or churches | 6 | 2% |
| Sales to groups of consumers—at restaurants | 4 | 1.6% |
| Production contracts and custom feeding | 4 | 1.6% |
| **Separate Types of Dropped Outlets[1]** | | |
| Direct sales from farm stands or stores | 4 | 1.6% |

[a]Listed only are types of outlets with at least four cases of being added or dropped.

| Table 6.12. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the numbers who reported using the indicated types of management systems the first year they owned/operated such land, who added systems after the first year, and who dropped systems | | | | |
|---|---|---|---|---|
| **Type of Management System** | **Used First year** | **Added After First Year** | **Dropped by 2011** | **Used in 2011 (% of 247)** |
| Nutrient management | 45 | 10 | 0 | 55 (22%) |
| Pest management (including Integrated Pest Management) | 28 | 5 | 1 | 32 (13%) |
| Precision farming | 14 | 13 | 0 | 27 (11%) |
| Organic Farming | 18 | 5 | 1 | 24 (10%) |
| Organic (but not certified) or sustainable systems | 4 | 1 | 0 | 5 (2%) |
| Grazing systems | 5 | 2 | 1 | 6 (2%) |
| Timber or forest management | 1 | 0 | 0 | 1 (0.4%) |
| Irrigation systems | 1 | 0 | 0 | 1 (0.4%) |
| **Summary** | | | | **n=247** |
| Respondents who reported using at least one management system in 2011 | | | | 99 (40%) |
| Respondents whose use of management systems increased by at least one between their "first year" of operating land that was protected and the year 2011. | | | | 31 (13%) |
| Respondents whose total number of management systems remained the same | | | | 69 (28%) |
| Those whose total number of management systems decreased | | | | 2 (1%) |
| Those who reported no management system used in either year | | | | 145 (59%) |

**9. Adding Management Systems**

To what extent did the surveyed owner-operators increase or decrease the number of separate kinds of management systems they applied? All surveyed owner-operators were asked:

> "In 2011 did you apply any management system when making decisions about your farm or ranch operation that included protected land? Examples of management systems include precision farming, organic farming, Integrated Pest Management, and nutrient management systems."

For the 247 owner-operators who farmed protected land they owned before 2011 (and thus their use of management systems could be compared across time), follow-up questions inquired about what systems they used in both years. Table 6.12 presents their responses. The most frequently reported types used in 2011 were: nutrient management (practiced by 55 owner-operators), pest management (32), precision farming (27), and organic farming (24). Thirty-one surveyed owner-operators (13% of the 247) reported net increases in the number of such systems between the first year in which they owned/operated protected land and 2011, while only two had net decreases (Table 6.12). The largest number of additions (13) was in precision farming.[82]

**10. Adding Processing Businesses to the Operation**

The surveyed operators were asked also if, on their protected land or other land they owned near it, they had "an agricultural processing business, such as wine-making, fruit-juice processing, or cheese or ice-cream making?" Just 10 (or 4%) of the 247operators being discussed in this chapter reported such enterprises for 2011.[83] Four made apple cider or other fruit juices, and two processed cattle products (ice cream and cow pots). Each of the other four produced a different kind of farm good (e.g., pickles). Between their first year of owning and operating protected land and the year 2011, a total of only three added at least one such enterprise without dropping another; and no respondent reported decreasing the number of his or her processing businesses.

**11. Adding Other Agriculturally Related Businesses to the Operation**

A similar line of questioning focused on "other agriculturally related businesses like a bed-and-breakfast, horse-back riding facility, or services to farmers such as selling seeds or repairing equipment." Twenty-seven (or 11%) of the 247 farmers/ranchers reported having at least one such enterprise in 2011, with agricultural tourism businesses being conducted by six operators, and seven operators who outfitted hunters and/or leased the rights to hunt (Table 6.13). Between their first years of owning and operating protected land and 2011, eight respondents had increased their net number of such businesses, and for no one had there been a net decrease.

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[82] "In P[recision] F[arming], the farm field is broken into 'management zones' based on soil pH, yield rates, pest infestation, and other factors that affect crop production. Management decisions are based on the requirements of each zone and PF tools (e.g. GPS/GIS) are used to control zone inputs" (Virginia Cooperative Extension, *Precision Farming: A Comprehensive Approach:* http://pubs.ext.vt.edu/442/442-500/442-500.html [accessed December 14, 2012]).

[83] The total number of respondents reporting such enterprises seemed too small to justify a separate table.

**Table 6.13. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the numbers who reported operating the listed agriculturally related businesses (other than processing) the first year they owned/operated such land, who added systems after the first year, and who dropped systems**

| Type of Other Agriculturally Related Business | Operated First Year | Added After First Year | Dropped by 2011 | Used in 2011 (% of 247) |
|---|---|---|---|---|
| Agricultural tourism: using farmhouse, barn and other aspects of farm settings "for the enjoyment and education of visitors"[a] | 5 | 1 | 0 | 6 (2%) |
| Custom farming (baling, forage chopping) | 2 | 1 | 0 | 3 (1%) |
| Horse-back riding, lessons, or boarding of horses | 5 | 1 | 2 | 4 (2%) |
| Hunting—leasing the rights to hunt or outfitting hunters | 5 | 2 | 0 | 7 (3%) |
| Repairing farm equipment and vehicles | 1 | 2 | 1 | 2 (1%) |
| Selling feed or seeds | 3 | 1 | 3 | 1 (0.4%) |
| Other | 2 | 0 | 1 | 1 (0.4%) |
| **Summary** | | | | **n=247** |
| Number of respondents who reported having agriculturally related businesses in 2011 | | | | 27 (11%) |
| Respondents whose total such businesses increased by at least one between their "first year" of operating protected land they owned and 2011. | | | | 8 (3%) |
| Respondents whose total number remained the same | | | | 19 (8%) |
| Those whose total number of such businesses decreased by at least one | | | | 0 (0%) |
| Those who reported no such businesses in either year | | | | 220 (89%) |

[a]A publication of the University of California Cooperative Extension defined "agritourism" as a "commercial enterprise at a working farm, ranch or agricultural plant conducted for the enjoyment of visitors, and that generates supplemental income for the owner." Included in their list of such enterprises were: "tours, on-farm classes, fairs, festivals, pumpkin patches, Christmas tree farms, winery weddings, orchard dinners, youth camps…" (University of California Cooperative Extension, *UC Small Farm Program: Agritourism*: http:sfb.ucdavis.edu/agritourism (accessed December 14, 2012).

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### 12. Adding Cost-Saving Energy Facilities

The final set of questions in the survey's section on the components of respondents' operations asked about the presence—on their protected land or on any other land they owned near it—of "facilities to reduce the costs of agricultural production such as by producing electricity from solar panels, wind turbines, geothermal heat pumps, or from a manure digester system."

Twenty-nine (or 12%) of the 247 relevant respondents reported having such facilities in 2011, with the most common type being the 14 cases of solar panels (Table 6.14). Five of these 14 had added the panels since their first year of owning and operating protected land. Eight increased the total number of cost-saving energy facilities they used, and none said they stopped using any such facility.

**Table 6.14. Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the numbers who reported the listed energy-producing facilities functioning on or near their protected land during the first year they owned/operated such land, the numbers who added facilities after the first year, and those who dropped them by 2011**

| Type of Cost-Reducing Energy Facility | Operated First Year | Added After First year | Dropped by 2011 | Used in 2011 (% of 247) |
|---|---|---|---|---|
| Geothermal heating system | 3 | 1 | 0 | 4 (2%) |
| Manure digesting system | 0 | 2 | 0 | 2 (1%) |
| Solar panel electricity | 9 | 5 | 0 | 14 (6%) |
| Water turbine | 2 | 0 | 0 | 2 (1%) |
| Wood boiling furnaces | 2 | 0 | 0 | 2 (1%) |
| Other | 3 | 1 | 0 | 4 (2%) |
| **Summary** | | | | **n=247** |
| Number of respondents who reported having energy-saving facilities in 2011 | | | | 29 (12%) |
| The respondents who by 2011 had increased the number of such facilities | | | | 8 (3%) |
| The respondents whose number of such facilities did not change. | | | | 19 (8%) |
| The respondents who by 2011 had decreased the number of such facilities | | | | 0 (0%) |
| Those who reported no such facilities in either year | | | | 220(89%) |

**Table 6.15. Among the 234 surveyed owners who operated at least some of their protected land for one or more years prior to calendar 2011 *and* who sold conservation easements on their land, the purposes for which they spent the "largest shares" of the proceeds from those sales**

| Expenditure Purposes | Owner-Operators per Purpose | Percent of 234 |
|---|---|---|
| Putting money into savings, stocks, bonds, properties, or other non-farm or non-ranch investments | 47 | 20% |
| Meeting personal or family needs other than for savings and investment[b] | 13 | 6% |
| Other nonagricultural purposes | 5 | 2% |
| **Sum for Non-agricultural Purposes (first three data rows)** | **n=65** | **28%** |
| Buying or paying down the mortgage on the protected agricultural land | 59 | 25% |
| Buying other farm or ranch land in the same county or state | 29 | 12% |
| Constructing or improving their farm buildings, and other facilities[c] | 25 | 11% |
| Purchasing or repairing equipment or vehicles for the farm or ranch | 18 | 8% |
| Other expenditures for the farm or ranch[d] | 16 | 7% |
| **Sum for Agricultural Purposes (4th through 8th rows)** | **n=149** | **64% of of 234** |
| No funds spent because owner did not sell an easements; he or she had purchased or inherited land with easements already in place | 7 | 3% |
| No funds yet spent or respondent either did not wish to answer the question or was not sure how to answer | 13 | 6% |
| Total | 234 | 100% |

[a]This table is similar to Chapter 5's Table 5.7 that focuses on all 479 respondents who had sold easements to land they owned.
[b]Such needs as children's education, buying a residence or improving the existing one, retirement money for parents, medical expenses, and divorce settlements.
[c]Such as irrigation, draining, and energy-generating facilities.
[d]Such as meeting operating expenses, paying off loans on farm vehicles, and starting up a farm-related business like a machinery shop.

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**13. Owner-Operators' Investments in Their Farms and Ranches**

Our indicator for investment was how the owner-operators spent proceeds from the sale of conservation easements on their land. Ninety-five percent of the 247 owner-operators on whom this chapter has been focusing (or 234 respondents) sold easements, and 149 of them (or 64% of 234) reported that they had invested the "largest share of total expenditures" from the sales' proceeds in some agricultural purpose(s). Those 149 owner-operators comprise 60% of the full subsample of 247.

Among the "largest" expenditures were: buying or paying down the mortgage on the protected agricultural land (reported by 25% of the 234), purchasing additional agricultural land (12%), constructing or improving farm/ranch buildings (11%), and purchasing or repairing equipment or vehicles used on their operations (8%—Table 6.15). The sums involved were not trivial. In answering a multiple-choice question about the proceeds from their sales, the 149 respondents who spent their "largest share" on an agricultural purpose reported the following about what they had received:

--88% said they were paid at least $50,000;
--81%, at least $100,000;
--57%, $250,000 or more;
--38%, $500,000 or more;
--31% at least $750,000.
--20% at least $1 million.

**14. Summary of Findings about Adding Components to the Farm or Ranch Operations and Investing in Those Farms and Ranches**

How many of the 247 owner-operators on whom this chapter focuses reported net increases by 2011 in one or more of the eight components of their operations that we covered: numbers of acres, separate types of crops, types of livestock, marketing outlets, management systems, processing enterprises, other agriculturally related businesses, and energy-producing facilities?

A "net gain" was in acres farmed or ranched, numbers of separate kinds of crops grown, livestock raised, marketing outlets used, etc. Where, for example, the number of separate crops added was offset by an equal number of crops having been dropped, there would be no increase. With this definition of net gain we are making the risky, but for us necessary, assumption that each acre of land, each type of crop, marketing outlet, etc., has an equal weight. We lack sufficient information about the individual operations and market conditions facing them to try differential weights. However, it is likely that in many, if not most, cases the increases were good for the operations.

Table 6.16 summarizes our findings about changes in the eight components of farm/ranch management. Among the 247 owner-operators whose operations were compared between the first year they farmed/ranched protected land and the year 2011, the component for which the most respondents reported increases was their operation's total acres. Fifty-three respondents (or 21% of the 247) added more acres than any they had subtracted. By comparison, only 23 (or 9%) reported net decreases. Second in frequency of increases was the number of separate marketing outlets used. Net additions were reported by 47 (19%) owner-operators versus 17 (7%) who had fewer outlets in 2011 compared to their "first years." The percentages in these two sets of findings (21% versus 9% and 19% versus 7%), as well as Table 6.16's other pairs presented in bold type, are statistically significantly different from one another.[84]

**Table 6.16. Summary: Among the 247 surveyed owners who operated at least some of their protected land in both 2011 and one or more prior years, the percents with net additions or decreases in eight possible components of their operations**

| Changes by Individual Components | Net Additions to the Component's Units | | Net Decreases in the Component's Units | |
|---|---|---|---|---|
| *Net Increases* | Number | Percent of 247 | Number | Percent of 247 |
| Total acres in the operation | 53 | **21%**[a] | 23 | **9%**[a] |
| Number of separate crops raised | 38 | 15% | 40 | 16% |
| Number of separate kinds of livestock raised | 21 | 9% | 12 | 5% |
| Number of separate marketing outlets | 47 | **19%**[a] | 17 | **7%**[a] |
| Number of separate management systems applied | 31 | **13%**[a] | 2 | **1%**[a] |
| Number of processing businesses | 3 | 2% | 0 | 0% |
| Number of other agriculturally related businesses | 8 | 3% | 6 | 2% |
| Number of energy-producing facilities intended to decrease ag production costs | 8 | 3% | 0 | 0% |
| **Summaries of Net Changes** | | | | |
| Number of owner-operators with a net increase or decrease in at least one of these eight components | 122 | **49%**[a] | 70 | **28%**[a] |
| Net increases or decreases in at least two components | 57 | **23%**[a] | 20 | **8%**[a] |
| Net increases or decrease in at least three | 24 | 10% | 0 | 0 |
| Net increase in at least four | 6 | 2% | 0 | 0 |
| **Net Increases versus Net Decreases** | | | | |
| Net increase in at least one component *and* no net decrease in any other | 86 | 35% | | |
| Net increases in at least two components *and* a net decrease in no more than one other | 13 | 5% | | |
| **Among the 99 Operators in the Previous Two Groups, the Net Increases Were Most Frequently in:** | | | | |
| Total acres in the operation | 48 | 19% | | |
| Number of separate marketing outlets used | 42 | 17% | | |
| Number of separate crops raised | 31 | 13% | | |
| Number of different management systems used | 27 | 11% | | |

[84] They are statistically significantly different in the sense that the 95% confidence interval around each member of the pair does not overlap with the other interval.

[a]The pairs of percentages presented in bold type are statistically significantly different from one another. See the explanation in footnote #19.

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Overall, 122 (49% of full subsample of 247 owner-operators) achieved a net increase in at least one of the eight components of farm/ranch management that we examined. Fifty-seven had such increases in two or more components, and 30 in three or four. By comparison a total of 70 respondents (28%) reported one or more decreases.

Of course, some operators had a net increase in one or more component, but a net decrease in another (or others). However, 86 (35%) reported one or more net increases and no net decreases in any of the other seven or fewer components. Another 13 operators reported increases in at least two components and a decrease in only one. For these two groups combined—99 operators—their increases occurred most frequently in total acres farmed or ranched (48 cases), number of different marketing outlets (42), separate crops (31), and management systems (27—Table 6.16).

Here are four examples from the 13 respondents (among the 99) who had at least two areas of increase and just one of decrease:

(1) One owner reported having added to his operation between 2005 and 2011 both 500 acres and the raising of soybeans as a crop that grossed at least $1,000 (in 2011), while dropping Integrated Pest Management as a tool to guide production.

(2) A second respondent increased his total area farmed by 210 acres (since 2006), stopped producing hay, but added custom farming (baling other people's hay).

(3) For a third respondent, the changes consisted of no longer earning as much as $1,000 from beef calves, but having started to sell other livestock and hay directly to consumers and, also, having begun to apply a nutrient management system to his/her land.

(4) A fourth reported having added 184 acres since (2000), ceasing to raise apples (or at least not earning as much as $1,000 from them in 2011), and adding solar panels to reduce production costs.

***In final summary***, this chapter's discussions suggest that as many as three-quarters of the surveyed owner-operators were not held back by some "impermanence syndrome" or other factors that prevented investing in, expanding, or otherwise improving their operations. Among the 247 respondents who farmed/ranched their protected land for at least a full year before the start of our interviews, 40% percent reported either (a) net increases in at least one component of their operations without a decrease in any other or (b) gains in at least two components and losses in just one other. Moreover, 60% of the 247 were owner-operators who had sold conservation easements to their land and who, when spending money from proceeds of the sales, directed the "largest share" to an agricultural purpose. Therefore, 75 percent of the 247 made such investments and/or were in the group of 40% noted above that expanded their operations.

# Chapter 7

## The Transfer of Ownership of Protected Land

### 1. Introduction

This chapter addresses five questions about ownership of the protected land:

a. Building on the discussion in Chapter 4 about paths to ownership (Table 4.1) we look at the "second generation" of owners of protected land and ask the question: How, if at all, did our sample's owners who purchased or inherited protected land differ from the "first generation, that is, the owners who sold conservation easements to land they owned? As the number of years increases since easements were placed on farm and ranches, the original owner-applicants are less and less likely to retain control of the land. And the behaviors and plans of subsequent owners become more important to the long-term success of the FRPP.

b. What were the experiences of surveyed owners who had purchased land already under conservation easements? Did they find such land more affordable? Had they rented any of it before buying it? Was the protected status of the land a benefit or problem when lining up financial resources to purchase it?

c. To what extent have members of our entire sample (506 owners of protected land) planned for the transfer of ownership from themselves?

d. Who were expected to be the next generation of owners: operators or non-operators, relatives or non-relatives?

e. What policy implications, if any, might the answers to the first four questions have?

### 2. To What Extent Did the Second-Generation Owners Differ from the First?

As Chapter 4's second section discusses, almost all the surveyed owners—479 (or 95% of the total sample)--had sold easements to their land. However, 32 of the 479 had also purchased and/or inherited land that was already protected. In addition, there were 16 respondents who had only purchased eased land and two who had only inherited. Therefore, just 18 respondents (4%) were exclusively second-generation owners, and 447 (88%) were first-generation only. If we include also sellers-purchasers and sellers-inheritors, we have a total of 50 who were second-generation for at least some of their protected land.

**2a. Being a farm or ranch operator?** If we use the definition of second generation that is limited to the 18 owners who purchased or inherited protected land but did not also sell easements on other land, the difference in the percentages who were operators (72% of the 18 versus 70% of the other 479 respondents in the analysis)[85] is not statistically significant (Table 7.1). This small difference could be explained by sampling error alone. However, if we use the more inclusive definition, the difference widens to 84% of 50 second-generation owner cases

[85] The numbers of cases, 479 + 18, do not add up to 506 but to 497. Nine of the 506 cases had to be eliminated from the analysis because their paths to ownership of protected land were not known.

compared to 69% of the 447[86] owners who were first generation only; and that difference is statistically significant (Table 7.1).

**Table 7.1. Cross-tabulations: Whether "second-generation" owners[a] were more or less likely to report four land-management traits compared to "first-generation" owners[b]**

| Outcomes | Generation of Owner | |
|---|---|---|
| **1a. Were owner-operators?** | **First[b]** | **Second (exclusively defined)[a]** |
| Yes | 70% | 72% |
| No | 30% | 28% |
| *Number of Respondents* [c] | 479 | 18 |
| **1b. Were owner-operators?** | **First Only[b]** | **Second (inclusively defined)[a]** |
| Yes | 69%[d] | 84%[d] |
| No | 31% | 16% |
| *Number of Respondents* [c] | 447 | 50 |
| **2. Applying to their agland in 2011 at least one conservation practice out of a choice of five?[e]** | **First Only[b]** | **Second (inclusively defined)** |
| Yes | 74% | 80% |
| No | 26% | 20% |
| *Number of Respondents* [c] | 447 | 50 |
| **3. Directly marketed food they produced on their protected land in 2011?** | **First Only[b]** | **Second (inclusively defined)[a]** |
| Yes | 25% | 33% |
| No | 75% | 67% |
| *Number of Respondents* [g] | 307 | 42 |
| **4. Between the first year that they farmed/ranched protected land and 2011, did they achieve "positive changes" in their operations including that land?[f]** | **First Only[b]** | **Second (inclusively defined)[a]** |
| Yes | 37%[d] | 59%[d] |
| No | 63% | 41% |
| *Number of Respondents* [g] | 209 | 32 |

[a]The "second generation" consisted of surveyed owners who had purchased or inherited land with conservation easements already on it. The "exclusively defined" group of second-generation owners comprised only those purchasers and inheritors who did *not* also own protected land whose easement they had sold. The "inclusively defined" group of second-generation owners includes both those owners whose protected land had an easement on it before they acquired it *and* any respondents who owned such land a well as other parcels whose easements they had sold.

[b]These respondents had sold the conservation easements that protected their land. The "First Only" category consisted of respondents who sold easements but had not also purchased or inherited land that was already protected.

[c]Nine cases had to be eliminated from the analysis because their paths to ownership of protected land were not known.

[d]The Pearson Chi-square values for these cross-tabulations were statistically significant at the .03 level or better in two-sided tests.

[e]The choice included practices to prevent or reduce soil erosion, water pollution, damage to pasture or wildlife habitat, and methods to economize on use of water for irrigation.

[f]In this context "positive change" refers to comparisons of respondents' operations in (a) the first year they operated protected agricultural land that they owned and (b) the year 2011. The particular comparison across time that we looked for was whether the owner-operator had increased the number of units (e.g., acres, separate crops or livestock

[86] Same comment as in footnote #85.

raised, number of different marketing outlets used, etc.) in at least one of eight components of his/her operation without having a net decrease in any other, or whether he/she had achieved net increases in at least two components and had had a decrease in no more than one. For more information on these comparisons, see Chapter 6's section 3 through 9.

[g] Six cases had to be eliminated from the analysis because their paths to ownership of protected land were not known.

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**2b. Applying to their land at least one conservation practice (for soil, water, or wildlife habitat) in 2011?** Regardless of the definition, the differences in conservation behavior are not statistically significant. For example, the percentage for the inclusively defined second-generation owners who applied at least one practice is only six points greater than that for the first generation—-80% versus 74% (Table 7.1).

**2c. Directly marketing food that they produced on their protected land in 2011?** Again there was no significant difference between the two generations of owners in our sample, although among the 42 respondents who were both operators and second-generation owners (inclusively defined), the percentage doing this kind of marketing is eight points higher than among the first-generation owner-operators—33% compared to 25% (Table 7.1).

**2d. Carrying out positive changes in their operations since they first farmed or ranched protected land that they owned**? As discussed in Chapter 6, our survey had a retrospective element. The owner-operators whose first year of farming or ranching their protected land occurred before 2011 were asked questions about both their 2011 operations and how they farmed or ranched the land in their "first years." Therefore, we could compare the two years to learn whether their operations had grown and/or contracted in one or more respects. Such expansion or growth we considered a "positive change."

In Chapter 6, we identified 99 owner-operators who reported that kind of change. Between the first year they owned and operated protected land and 2011, they had either (a) added units to one component of their operation without decreasing units in any of the seven other components being measured, or they had (b) expanded two components and reduced no more than one. The second-generation owner-operators in our sample were more likely to belong to this group of "positive changers" than were the exclusively first-generation owner-operators. The difference was 59% of the former versus 37% of the latter; and it was statistically significant (Table 7.1).

In summary, at least in these four arguably important traits ("2a" through "2d" above), the second-generation owners tended to have scores that were either close to, or better than, those of exclusively first-generation owners.

**3. Experiences of Surveyed Owners Who Had Purchased Land that Was Already Protected by Conservation Easements**

**3a. Did these owners find it less expensive to buy such land compared to similar properties not under an easement?** Although we addressed this issue in Chapter 4, we are returning to it here because of its importance to our discussion of second-generation owners.

We hypothesized that the market price of eased land would tend to be less because the protected land's development rights had been removed or restricted (such as to one new home for every 40 acres of land). The 43 surveyed owners who had purchased eased land were asked this question:

> "Compared to the market price of similar agricultural land not protected by a conservation easement, was the price you paid for the land—much lower than the price of similar land not under and easement? Somewhat lower…? About the same price? Somewhat higher in price? Much Higher? Not sure?"

Thirty-nine percent of these 43 respondents selected "much lower, and another 26%, "somewhat lower," for a total of 65% believing that there were at least some savings when they bought protected land (Table 7.2).

**Table 7.2: Among the 43 surveyed owners who had purchased protected agricultural land, their opinions of the price they paid compared to similar land not under easements**

| Opinion Options | Number of Respondents | % of the 43 Respondents |
|---|---|---|
| Much lower than the price of similar land not under an easement | 17 | 39% |
| Somewhat lower than the price of similar unprotected land | 11 | 26% |
| About the same price | 8 | 19% |
| Somewhat higher in price | 1 | 2% |
| Much higher | 1 | 2% |
| Not sure | 0 | 0% |
| Did not answer[a] | 5 | 12% |
| Total | 43 | 100% |

[a]Since this question was added after the first 40 interviews, these five respondents who belonged to that first group were not asked the question.

**Table 7.3: Among the 43 surveyed owners who had purchased protected agricultural land, their "reasons for buying land already protected by an easement"**

| Types of Reasons | Number of Respondents | % of the 43 Respondents |
|---|---|---|
| Land was affordable | 13 | 30% |
| Land was adjacent or close to the respondent's farm | 13 | 30% |
| Land was already in the family (e.g., the "home farm") | 6 | 14% |
| Needed the land for pasture or other aspects of the farm business | 7 | 16% |
| Good land (nearly all farmable, had irrigation, etc.) | 4 | 9% |
| Other reasons to buy | 9 | 21% |
| Total | (43)[a] | (100%) |

[a]The numbers of respondents per type of reason adds up to more than 43 because some surveyed owners gave more than one reason.

Another indication of second-generation owners' assessments of affordability came when they were asked for their "reasons for buying land already protected by an easement." Thirty percent

of the 43 respondents in this subsample reported that they were motivated by the lower prices for protected land (Table 7.3):

--"It was more affordable to purchase. Already our farm mortgage is pretty high for what we can afford so we wouldn't have been able to afford the land if it wasn't in APR [Agricultural Preservation Restriction Program]. We don't want to develop it; we want to just farm it; so, it works for us."

--"Because it lowered the purchase price dramatically; it makes it possible to purchase land and use it for agriculture."

**3b. Did the 43 purchasers of protected land rent any of it before they bought it, and if so, how did they find the cost of renting?** Seventeen (or 40%) of the 43 had rented such land. Buying land that one has already farmed on a rental basis should have the advantage of knowing better what one is getting, and the finding of 40% of the subsample going this route to ownership suggests that advantage has applied to protected land. Tenants may also learn early when land they rent is up for sale. Of course, these small numbers can only "suggest" rather than "demonstrate."

In a follow-up question we asked the 17 who had rented eased land whether they had found it more affordable, as affordable or less so compared to similar land not under easements. Twelve percent (i.e., two owners) found the costs "much lower," 6%, "somewhat lower," 47% "about the same amount of rent," and the remaining 35% either did not know or did not answer the question (no table). Again, this small number of cases can only suggest that protected status may not provide an advantage in rental rates.

**3c. Did the conservation easements already on the land pose a benefit or problem when "lining up financial resources to purchase the land?"** Among the 43 owners asked this question, 16 (or 37%) found it to be a benefit, one believed it to be a problem, two thought it was both a benefit and a problem, while 22 (51%) considered it neither, and two did not know how to answer (Table 7.4).

**Table 7.4: Among the 43 surveyed owners who had purchased protected agricultural land, their opinions about the effect, if any, of the easement status on "lining up financial resources to purchase the land"**

| Opinion Category | Number of Respondents | % of the 43 Respondents |
|---|---|---|
| Was a benefit | 16 | 37% |
| Was a problem | 1 | 2% |
| Both a benefit and a problem | 2 | 5% |
| Neither | 22 | 51% |
| Not sure | 2 | 5% |
| Did not answer | 0 | 0% |
| Total | 43 | 100% |

From a follow-up question as to what were the benefits and problem, we learned from six owners that it was easier to arrange for financing because the easement status had reduced the sale price of the land. Two other respondents reported the advantage that certain sources of loans were particularly motivated to help preserve land:

--"We were able to glean funders who were not only interested in charitable food, but were also interested in land conservation."
--"The groups that we approached that were funding it were of the same goal-type, all land preservation people. Having it preserved was part of what everyone wanted to encourage."

Among the three owners reporting problems, two gave short answers about the lenders not liking the property or the price of sale, while the third wanted to "square off the piece of ground" and sell the irregular pieces. However, since it was already under an easement, such adjustments were not permitted.

**Table 7.5. Among all 506 surveyed owners and the 356 who were owner-operators, the percentages who had ownership succession plans**

| (1) Questions | (2) Number of Respondents=All Owners | (3) % of All Owners | (4) Number of Owner-Operators | (5) % of Owner-Operators |
|---|---|---|---|---|
| **Any written plan for transferring ownership?** | | | | |
| Yes | 236 | 47% | 154 | 43% |
| One is under consideration | 93 | 18% | 76 | 22% |
| No | 174 | 34% | 125 | 35% |
| Don't know or refuse to answer | 3 | 1% | 1 | (0.3%) |
| *Total respondents asked the question* | 506 | 100% | 356 | 100% |
| **[If no written plan] "Has there been an oral agreement or promise as to who will be the next owner or owners?"** | | | | |
| Yes | 74 | 14% | 54 | 15% |
| No | 190 | 37% | 144 | 40% |
| Not asked this question because had written plans | 236 | 47% | 154 | 43% |
| Don't know or refuse to answer | 6 | 2% | 4 | 2% |
| *Total respondents asked this question as well as the preceding one* | 506 | 100% | 356 | 100% |
| **Summary** | | | | |
| Had a written plan or an oral agreement | 236 + 74=310 | 310/506= 61% | 154 + 54=208 | 208/356= 58% |
| Had neither a plan nor an oral agreement | 196 | 39% | 148 | 42% |

**4. In 2011 did the surveyed owners have succession plans for their protected land?**
One of the FRPP's published "National Ranking Criteria" for selecting properties to protect has been the "Existence of a farm or ranch succession plan or similar plan established to encourage farm viability for future generations."[87] Therefore, each of the 506 surveyed owners was asked "about any plans you might have for the future of your protected agricultural land." The first in

[87] Federal Register, Vol. 76, No. 15, Monday, January 24, 2011: 4027.

this series of four to nine questions[88] was: "For any of that land, have you developed a written farm succession plan or will, that is, a document that arranges for the transfer of ownership to a relative or other person?" If the answer was "no," a follow-up question asked: "Has there been any oral agreement or promise as to who will be the next owner or owners"?

Forty-seven percent of the entire sample answered "yes" to the first question (Table 7.5, Column 3), and another 14% reported that they had made "an oral agreement or promise" Column 3). Therefore, 61% had written or oral agreements about the transfer of ownership. The numbers for the subsample of 356 owner-operators look very similar—with a total of 58% having made one or the other kind of commitment (Column 5).

Table 7.6 presents the findings about succession from the 208 owner-operators in our survey who reported having written or oral plans about the next owners of any of their protected land. Table 7.7 has the same findings for the group of 310 respondents that includes owner-*non*-operators as well as owner-operators.

**Table 7.6. Among the 208 *owner-operators* with a written or oral succession agreement, their reports as to (a) who the next owner of farm/ranch will be and (b) the likelihood that he/she will "be a farmer who uses the protected land for agricultural production"**

| | ***Read Percent Down*** | ***Read Percentages Across from Left to Right*** | | | | |
|---|---|---|---|---|---|---|
| **(1) Next Owner** | **(2) Number (and Percent)** | **(3) Definitely "Yes," Will Be Such a Farmer[a]** | **(4) Probably "Yes"** | **(5) Probably "No"** | **(6) Definitely "No"** | **(7) Don't Know or Refuse to Answer** |
| One or more of your children | 157 (75%) | *87 (56% of 157)* | *35 (22%)* | *13 (8%)* | *5 (3%)* | *17 (11%)* |
| Other relatives | 31 (15%) | *12 (39%)* | *11 (35%)* | *5 (16%)* | *3 (10%)* | *0 (0%)* |
| Non-relatives | 10 (5%) | *7 (70%)* | *2 (20%)* | *0 (0%)* | *0 (0%)* | *1 (10%)* |
| Refused to answer | 2 (1%) | *1 (50%)* | *1 (50%)* | *0 (0%)* | *0 (0%)* | *9 (0%)* |
| Don't know | 8 (4%) | *1 (13%)* | *1 (12%)* | *(0%)* | *0 (0%)* | *6 (75%)* |
| *Total respondents asked this question* | 208 | *108* | *50* | *18* | *8* | *34* |
| Total cases of "definitely" will be such a farmer (excluding "don't know cases) | | 107=51% of 208 | | | | |
| Total cases of "definitely" or "probably" will be such a farmer (excluding the "don't know" cases) and their percentage of all 208 owner-operators with *written or oral succession agreements* | | | 156=75% of 208 | | | |
| The 156 cases as a percentage of all 356 *surveyed owner-operators* | | | 156=44% of 356 | | | |

[a]A farmer "who uses the protected land for agricultural production."

[88] The questionnaire was programmed to skip one or more questions in this set of nine when the respondent said "no" to preceding ones.

Two follow-up questions aimed to identify the kinds of successors likely to result from the written or oral commitments:

"For your protected land, who will be the next owner or owners based on your farm succession plan or oral agreement? One or more of your children? Other relatives? Non-relatives?"

"Will the next owner likely be a farmer who uses the protected land for agricultural production?" Definitely yes, probably yes, probably no, definitely no?"

Columns 1 and 2 in both tables show the kinds of successors who were expected. In Table 7.6, seventy-five percent of the *owner-operators* chose the response option, "One or more of your children"; another 15% selected "other relatives"; just 5% said, "non-relatives"; 2% refused to answer and 4% said they didn't know (Table 7.6, column 2). Column 3 of Table 7.6 shows that, among the 157 respondents who identified "one or more of [their]... children" as the next owners, 87 (or 56%) said, "definitely, yes," those sons and/or daughters would be farmers "who used the protected land for agricultural production." Among the 31 who reported "other relatives" would be the successor, 12 (39%) selected "definitely, yes," they would be production-oriented operators in regard to the protected land.

Adding those cases and all others in column 3 of "definitely-yes" answers, we get a sum of 108 (Table 7.6). However, one "definitely-yes" case was in the "don't know" category, suggesting that the respondent did not have a particular person or type of person[89] in mind. Therefore, we deduct one case from 108, arriving at 107, which is 51% of the 208 owners reporting a written or oral agreement about succession. If we add also column 4's cases of "probably, yes" (50 minus one in the "don't know" row), the combined total is 156 or 44% of all 356 owner-operators (Table 7.6). How do these findings compare to those of other studies?

A Michigan State University survey in 2011 found that 45% of their 1,500 farmer respondents had "identified one or more successors who will eventually take over management of your farm."[90] A national-level study by USDA's Economic Research Service (ERS) using 2001 survey data found that "27 percent of farm operators indicated that they had a succession plan. Of those, 87 percent [or 23% of the full group] reported that they had identified a successor."[91] Among 418 farmers surveyed by Iowa State University in 2000, 29% "had identified a potential successor to their operations."[92] The corresponding finding in a similar study of 972 Iowa farm families conducted in 2006 was 27%.[93]

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[89] An example of "type of person" would be a non-relative farmer who was currently renting the land.

[90] Steve Miller and Susan Cocciarelli, 2012, *The Michigan Farm Succession Study: Findings and Implications*, pp. 10, 19: http://foodsystems.msu.edu/uploads/file/CRFS_Farm_Succession_report.pdf

[91] Ashok K. Mishra, James D. Johnson, and Mitchell J. Moreheart, 2003, *Retirement and Succession Planning of Farm Households: Results from a National Survey*, p. 14: http://www.farmfoundation.org/news/articlefiles/85-Mishrapaper10-1-03_Version3.pdf. By comparison 43% of our 506 surveyed owners reported having a written succession plan.

[92] Michael D. Duffy and John Baker, no date, *Farm Succession in Iowa*, p. 11: http://www2.econ.iastate.edu/faculty/duffy/Pages/farmsuccession.pdf

[93] Iowa State University, no date, *Iowa Farmers Business and Transfer Plans*, p. 4: http://www.extension.iastate.edu/bfc/sites/www.extension.iastate.edu/files/bfc/Farm%20Business%20Transfer%20Plan.pdf

If, in determining who among our 2012 study's owner-operators had farmer successors lined up, we add together the cases of "definitely yes" and "probably yes," the resulting combined percentage of 44% (Table 7.6) is significantly better than the ERS and Iowa findings (both years)[94] and almost as good as those from the Michigan survey. If, on the other hand, we omit the "probably yes" cases, our resulting lower percentage of 30% (107 cases out of 356) is considerably lower than the Michigan finding, about the same as the earlier Iowa study's, but somewhat better than the 27% found in both the ERS national study and the 2006 Iowa survey.[95]

**Table 7.7. Among the 310 owners with a written or oral succession agreement, their reports as to (a) who the next owner of farm/ranch will be and (b) the likelihood that he/she will "be a farmer who uses the protected land for agricultural production"**

| | ***Read Percent Down*** | ***Read Percentages Across from Left to Right*** | | | | |
|---|---|---|---|---|---|---|
| **Next Owner** | **(1) Number (and Percent)** | **(2) Definitely "Yes," Will Be Such a Farmer[a]** | **(3) Probably "Yes"** | **(4) Probably "No"** | **(5) Definitely "No"** | **(6) Don't Know or Refuse to Answer** |
| One or more of your children | 242 (78%) | *120 (50% of 242)* | *49 (20%)* | *29 (12%)* | *18 (7%)* | *26 (11%)* |
| Other relatives | 36 (12%) | *13 (36%)* | *13 (36%)* | *7 (20%)* | *3 (8%)* | *0 (0%)* |
| Non-relatives | 18 (6%) | *12 (67%)* | *4 (22%)* | *0 (0%)* | *0 (0%)* | *2 (11%)* |
| Refused to answer | 2 (1%) | *1 (50%)* | *1 (50%)* | *0 (0%)* | *0 (0%)* | *0 (0%)* |
| Don't know | 12 (3%) | *2 (17%)* | *2 (17%)* | *0 (0%)* | *0 (0%)* | *8 (66%)* |
| *Total respondents asked this question* | 310 | *148* | *69* | *36* | *21* | *36* |
| Total cases of "definitely" will be such a farmer (excluding the "don't know cases) | | 146=47% of 310 | | | | |
| Total cases of "definitely" or "probably" will be such a farmer (excluding the "don't know" cases) and their percentage of all 310 owners with *written or oral succession agreements* | | | 213=69% of 310 | | | |
| The 213 cases as a percentage of all 506 *surveyed owners* | | | 213=42% of 506 | | | |

[a]A farmer "who uses the protected land for agricultural production."

### 5. Who had lined up successors?

In our 2012 study 42 percent of all surveyed owners (506) expected that their successor would "definitely" or "probably" be a farmer "who uses the protected land for agricultural production."

[94] Statistically significant in two-sided *t-tests* at the .000 level that compared two independent samples' proportions.
[95] In a 2010 report that included a review of the literature on farm succession, the FarmLast Project found, "Studies show that over two-thirds of retiring farmers do not have identified successors and nearly 90% of farm owners neither had an exit strategy nor knew know how to develop one." (The FarmLasts Project, Farm Land Access, Succession, Tenure, Stewardship, 2010, *Research Report and Recommendations from the FarmLASTS Project,* p. ii: http://www.uvm.edu/farmlasts/FarmLASTSResearchReport.pdf [accessed March 21, 2013]).

Whichever percentage we use from our survey findings (44% in Table 7.6 or 42% in Table 7.7), less than half of the interviewed owners (or owner-operators) had lined up successor operators; and problems may result from the absence of an identified successor.

***--Insufficient time for preparing the ultimate successor*:** Donald Schreiber (2010) argues, "The farm operator, the one who grows the crops and raises the livestock, needs to nurture, grow and raise up a successor farm operator from the children (if there are any) currently involved in the farming operation. This means allowing them to take on more and more responsibility and decision- making over time, ultimately turning the farm over to them when the farmer retires."[96]

***--Selection comes too late for the best choice of successor to accept the responsibility:*** Owner-operators may hold onto the managerial responsibilities so long that "some possible successors [are prevented] from returning to the farm because they don't want to wait their entire lives before they are allowed the risks and rewards of farm ownership."[97]

***--The absence of an agreed-upon successor may delay planning such that the sustainability of the operation is jeopardized:*** "If an exiting farm or ranch family has not adequately planned for succession, [the farm or ranch] is more likely to go out of business, be absorbed into ever-larger farming neighbors, or be converted to non-farm uses. In these scenarios, impacts of farm entry and exit on rural communities, the environment, and the national economy can be significant."[98]

**Table 7.8. Percentages of surveyed owner-operators and owner-non-operators reporting as their successor someone who would "definitely" or "probably" "be a farmer who uses the protected land for agricultural production," by age group and by whether the respondent was an owner-operators or an owner-non-operator**

| | Among Owner-operators | | Among Owner-*non*-operators | |
|---|---|---|---|---|
| **Age Group** | **Number** | **% who Reported such Successors** | **Number** | **% who Reported such Successors** |
| 27 to 35 | 11 | 9% | 3 | 0% |
| 36 to 50 | 68 | 32% | 13 | 8% |
| 51 to 60 | 107 | 43% | 26 | 27% |
| 61 to 70 | 90 | 49% | 38 | 41% |
| 71 and over | 75 | 56% | 68 | 49% |
| Total | 351[1] | | 149[2] | |

[a]For five respondents we lacked data on their year of birth.
[b]For one respondent we lacked the year of birth.

***Older Owners.*** In our survey as in others,[99] the older the owners, the more likely they had identified as successor "a farmer who uses the protected land for agricultural production." Table 7.8 shows increases in the percentage of such respondents by age group—from only 9% among

[96] Donald G. Schreiber, 2011, *Farm Transition Planning and Retirement Planning:* http://www.thewealthchannel.com/wealth-accumulation/articles/farm-transition-planning-and-retirement-planning
[97] *Iowa Farmers Business and Transfer Plans* [see above], p. 29.
[98] USDA, CSREES, 2008, *Family Farm Forum: Farm Transition—Exit, Entry and Planning:* http://www.csrees.usda.gov/nea/ag_systems/pdfs/farm_transitions_update.pdf
[99] See these two previously referenced sources: *The Michigan Farm Succession Study* and *Iowa Farmers Business and Transfer Plans.*

the owner-operators 27 to 35 years old to 56% among those 71 and older.[100] The same pattern was found among the surveyed owners who were not also operators.[101] However, in both groups of owners, even among the older-than-70 respondents, the proportion with such farmer or rancher successors was less than half or not much above it.

**Table 7.9. Percentages of surveyed owner-operators reporting as their successor someone who would *"definitely"* or *"probably"* "be a farmer who uses the protected land for agricultural production," by the respondent's type of operation[a]**

| Reported Such a Successor | Small Family Farm (Cash Receipts in 2011 of Less than $250K) | | | | Large Family Farms: $250K to Less than $500K | Very Large Family Farms: $500K and Above |
|---|---|---|---|---|---|---|
| | Retirement: Operator Reports He/She Is Retired | Residential/ Lifestyle: Operator's Principal Occupation Is Not Farming. | Farming Occupation/ Lower Sales: Less than $100K | Farming Occupation/ Higher Sales: $100K to Less than $250K | | |
| Yes, "definitely" or "probably" | 55% | 34% | 33% | 50% | 48% | 50% |
| No, a lower probability, not sure, or did not answer | 45% | 66% | 67% | 50% | 52% | 50% |
| Number of cases | 42 | 74 | 60 | 32 | 42 | 72 |

[a]This typology was developed by USDA's Economic Research Service: USDA, 2000, *ERS Farm Typology for a Diverse Agricultural Sector*, Agriculture Information Bulletin Number 759: http://www.ers.usda.gov/media/480803/aib759_1_.pdf (accessed September 6, 2012).

**Table 7.10. Percentages of surveyed owner-operators reporting as their successor someone who would *"definitely"* "be a farmer who uses the protected land for agricultural production," by type of operation[a]**

| Reported Such a Successor | Small Family Farm (Cash Receipts in 2011 of Less than $250K) | | | | Large Family Farms: $250K to Less than $500K | Very Large Family Farms: $500K and Above |
|---|---|---|---|---|---|---|
| | Retirement: Operator Reports He/She Is Retired | Residential/ Lifestyle: Operator's Principal Occupation Is Not Farming. | Farming Occupation/ Lower Sales: Less than $100K | Farming Occupation/ Higher Sales: $100K to Less than $250K | | |
| Yes, "definitely" | 38% | 19% | 17% | 41% | 33% | 39% |
| A lower probability, not sure, no reply | 62% | 81% | 83% | 59% | 67% | 61% |
| Total cases | 42 | 74 | 60 | 32 | 42 | 72 |

[100] The Pearson Chi-square value was statistically significant at the .006 level in a two-sided test.
[101] The Pearson Chi-square value was statistically significant at the .021 level in a two-sided test.

[a]This typology was developed by USDA's Economic Research Service: USDA, 2000, *ERS Farm Typology for a Diverse Agricultural Sector*, Agriculture Information Bulletin Number 759: http://www.ers.usda.gov/media/480803/aib759_1_.pdf (accessed September 6, 2012).

***Status as owner-operators.*** We hypothesized that owner-operators were more likely to report production-oriented farmers as their successors than were owner-non-operators. However, whether we defined successors as farmers who would "definitely" or "probably" use the land for agricultural production, or we limited the definition to "definitely," the difference was a statistically insignificant four or six percentage points.

***Type of farming operation.*** A better predictor of who expected production farmers as successors was the type of farming operation the respondent had. In Table 7.9 we use a typology developed by USDA's Economic Research Service (and discussed in Chapter 4).

Not surprisingly, among owner-operators who told us that they were already retired (a "retirement" operation), a relatively high percentage—55%—expected the next owner to be "definitely" or "probably" a farmer who would use "the protected land for agricultural production." In contrast, among owners classified as having "residential/lifestyle" operations (i.e., whose principal occupation was not farming and whose gross cash receipts in 2011 were less than $250K), the percentage drops 21 points to 34%. Those with farming as their main occupation and earning less than $100K also had a low value—33%. Only in the groups whose members' principal occupation was farming and who grossed at least $100K does the percentage with production farmers as successors climb to be as high as 48% to 50%.[102]

When we defined the outcome more strictly, that is, where the respondent was "definite" about having a production-oriented farmer as successor, the percentages are understandably less; but the overall pattern is mostly the same (Table 7.10). The "retirement" operations have a relatively high percentage of cases with such a successor lined up—38%. So do respondents classified in the higher-sales farming occupation groups—33% to 41%. And, again, the "residential/lifestyle" and "lower sales" farming occupation groups have the lowest percentages—19% and 17%, respectively.

***Larger or more diverse operations.*** We explored the possibility that the larger the operation, the more likely there would be a farmer-operator successor already identified. To us one plausible reason was that, with a larger farm or ranch, the current owner-operator and family have a greater financial stake in the long-run health of the operation. Another was that bigger operations in acres or gross receipts tended to require such high management skills that the current owner and family feel pushed to line up a competent successor. The skill-requirements argument supported also our decision to test for a greater likelihood of a successor being selected if the operation was relatively diverse.

[102] For two of these six types of operations, their percentages of respondents with agricultural-production-oriented successors were statistically significantly lower than the percentages for the surveyed operators of all other types: residential life-style farmers and the respondents who had farming or ranching as their principal occupation while earning $100K to less than $250K in gross cash receipts. The Pearson Chi-square tests found those differences to be significant at the .09 or better level in two-sided tests.

As Table 7.11 shows, statistically significant differences were found when we measured *size of operation* in acres, more specifically, if the farm or ranch fell in the upper quarter of all 356 surveyed operations in total acres (800 acres and higher).[103] Among those in the highest quarter, 62% had farmer successors lined up versus 37% of the respondents in the first to third quarters. Diversity was also a significant predictor for respondents reporting a production-oriented successor when it was measured as the respondent having an operation with both one or more crops that grossed at least $1,000 in 2011 and one or more livestock products earning $1,000 plus. Fifty-three percent of the operations meeting this definition of diversity had operator-successors lined up compared to 37% of the cases not having that degree of diversity (Table 7.11).

**Table 7.11. Percentages of surveyed owner-operators reporting as their successor someone who would "definitely" or "probably" "be a farmer who uses the protected land for agricultural production," by size and diversity of operation and operator's years of making day-to-day decisions for managing a farm or ranch**

| **Size of Total Operation in Acres (Including Protected and Non-protected Land, as well as Any Land He/she Rented into the Operation)** | | |
|---|---|---|
| **Whether Had Lined Up a Successor Owner-operator** | **Upper Quarter (800 Acres and Above)** | **First to Third Quarters (Fewer than 800 Acres)** |
| Yes | 62%[a] | 37%[a] |
| No | 38% | 63% |
| Number of Respondents | 95 | 261 |
| **Diversity of the Surveyed Owner-Operators' Farm or Ranch, with "Diversity" Defined as Having in 2011 Both One of More Crops Grossing at Least $1,000 and One or More Livestock Products Earning as Much** | | |
| **Whether Had Lined Up a Successor Operator-Owner** | **Diverse Operations by This Definition** | **Operations Not Diverse by This Definition** |
| Yes | 53%[a] | 37%[a] |
| No | 47% | 63% |
| Number of Respondents | 150 | 206 |
| **Years of "Making Day-to-Day Decisions for Managing a Farm or Ranch"** | | |
| **Whether Had Lined Up a Successor Operator-Owner** | **Average Years of Making Such Decisions** | |
| Yes, had such a successor | 35 years (Respondents=152)[b] | |
| No, had not | 27 years (Respondents=191)[b] | |
| **Application of Conservation Practices to the Protected Land** | | |
| **Whether Had Lined Up a Successor Operator-Owner** | **Average Number of Separate Conservation Practices Applied in 2011** | |
| Yes | 2.60 practices (Respondents=156)[b] | |
| No | 2.06 practices (Respondents=200)[b] | |

[a]The Pearson Chi-square values for these cross-tabulations were statistically significant at the .00 level in two-sided tests.

[b] Significant at the .003 level or better in t-tests for equality of means with equal variances not assumed.

[103] The upper quarter consist of the highest 25% of cases when all cases are arranged from lowest to highest in value.

***More years as an operator.*** We tested the hypothesis that owner-operators with comparatively many years in farming or ranching would be more likely to have lined up a successor. Two possible reasons for such behavior could be that the more experienced farmers tended to have greater identification with that occupation and, also, to have a clearer understanding of what they needed as competent successors. Our measure for the test was the respondent's years of "making the day-to-day decisions for managing a farm or ranch." The respondents reporting that their successor would be a farmer had an average of 35 years of making such decisions, while among those not having a successor the mean was significantly lower at 27 years (Table 7.11).

We looked also at the relationship between respondents with farming as their primary occupation in 2011compared to other owner-operators in the survey. The interview question defined "primary" as "the occupation on which you spend 50 percent or more of your work time in 2011." The comparison was in the expected "direction," i.e., with more primary-occupation operators reporting farmer successors, but the difference was only 6 percentage points (46% versus 40% among those with a different primary occupation) and not statistically significant.

***Applying conservation practices to their protected land.*** As discussed in Chapter 5, our survey interviews included "questions about conservation practices that you might have applied to your protected land in 2011. That year did you apply any practices:

--to protect soil from erosion;
--to protect surface or ground water from pollution;
--to protect or improve wildlife habitat;
--to prevent overgrazing or other damage to pasture land;
--to minimize water used for irrigation, or
--other conservation practices."

**Table 7.12. Number of conservation practices applied in 2011, by whether or not the owner-operator had lined up a successor who will "definitely" or "probably" use "the protected land for agricultural production"**

| Number of Separate Practices Applied | Did Have Such Successors Identified | Did Not Have Them Identified |
|---|---|---|
| Zero | 17% | 22% |
| 1 | 13% | 22% |
| 2 | 16% | 18% |
| 3 | 20% | 15% |
| 4 | 17% | 12% |
| 5 | 15% | 10% |
| 6 | 2% | 1% |
| Total Respondents | 156 | 200 |

Applying such practices suggests an interest in the long-range productivity of the land and/or the health of wildlife. Having a competent operator to succeed to ownership would likely further that interest. Surveyed farmers/ranchers who had lined up owner-operator successors averaged 2.60 conservation practices, while those without such successors averaged 2.06; and the difference was statistically significant (Table 7.11). The table just below shows the percentage breakdowns by number of practices. Among the surveyed owner-operators with farmer successors identified, 34% had applied four to six practices in 2011. The corresponding

combined percentage for the respondents who did not have such successors was 23%. When we compare the two groups by the percentages that had zero or only one practice, the difference was 30% versus 44% (Table 7.12).

***In summary:*** The findings reported in Tables 7.8 to 7.12 focus on possible causal relationships of a bivariate nature—between (on the one hand) whether owner-operators of protected land had lined up farmer/rancher successors and (on the other hand) a set of five operator traits hypothesized to affect the likelihood of having such successors. In bivariate tests six variables were found to be statistically significantly related to that likelihood:

--the operators' age,
--their type of farming or ranching operation,
--their years as a farm or ranch operator,
--the size of their operation in acres,
--their operation's diversity of products raised, and
--the number of conservation practices that were applied.

This kind of analysis runs the risk of suggesting causal relationships that in reality are spurious. For example, perhaps it is not years in farming that make a practical difference in the likelihood of an owner-operator arranging for a farmer successor but, rather, age is the real cause that happens to be related to both farming years and the decision to line up a successor. To test for such spuriousness, we used a multivariate technique of analysis—logistic regression—to learn if any of the six hypothesized variables ceased to be a statistically significant predictor when it competed with the other five. Only one did—the type of farm enterprise. Controlling for the other four variables, the analysis showed that each of five remaining variables had its own statistically significant relationship to whether there was a successor expected to use the land for agricultural production: operator's age, years as a farm operator, diversity of the operation, its total number of acres, and the quantity of separate types of conservation practices applied.[104]

**6. Surveyed Owners' Opinions of the Effects of Land Conservation Easements on Succession**

In the interviews' section about succession issues, each surveyed owner was asked: "Is there anything about the conservation easement on your protected land that helps or hinders a relative or non-relative to become the next owner?" Of the 506 owners asked this question, only 79 (16%) said "yes," 80% (407) responded "No," 19 (4%) replied in words to the effect, "don't know," and one person refused to answer the question.

The 79 "yes" respondents were then asked the follow-up question, "What is there that helps or hinders?" Thirty-one (or 39%) of them made positive comments, such as that the reduction in the land's market value made it easier to sell to farmers and lowered the property taxes that the next generation would have to pay (Table 7.13). Also stated was that the money received from sale of easements enabled the current owners to develop a retirement fund sufficient for them to do without selling the land with its development rights intact. A related argument was that investments in the farm or ranch made possible by the easement allowed the current owners to pass on to their heirs an adequately strong business.

[104] The significance levels for the five independent variables were .001 to .03 except for the .098 value for the variable, number of separate conservation practices applied in 2011. The Nagelkerke R Square was .188.

Somewhat more than half (53%) of the 79 respondents gave reasons why they believed the conservation easements *hindered* the succession of ownerships (Table 7.13). Their comments focused mostly on aspects of the easements that made the land less attractive to the next generation: insufficient opportunities for owners' family members to live on the protected land (e.g., too few allowable housing lots or restrictions on their placement), prohibitions on subdivision-type residential development and non-agriculturally related commercial enterprises, and other regulations that made eased land's expected dollar value less than that of unprotected properties. As one surveyed owner put it, "The pool of potentially interested persons is reduced because the property is encumbered."

Some of the complaints given in response to this question may be avoidable through regulatory or administrative reforms. For example, one respondent contended the road frontage required for new homes was too large, thus reducing the number of separate homes that could be built on his land under easement. Another argued for relaxation of restrictions on agriculturally related business activity, specifically a winery that currently could not be operated on his protected land. Of course, these complaints came from a small percentage of the entire sample. Forty-one persons comprise just 8% of 506. However, it is likely that program administrators and other stakeholders are interested in learning about such concerns.

**Table 7.13. Among 79 surveyed owners who believed the conservation easements helped or hindered the transfer of ownership to relatives or non-relatives, the percentages reporting different helping and hindering effects**

| Helping Effects for Succession | Number of Respondents | Percent of the 79 Respondents |
|---|---|---|
| Easement reduces market value of land so that it is easier to sell to farmers (especially to younger farmers). | 8 | 10% |
| Taxes (property and/or inheritance) are reduced for next generation because the dollar value of the eased land is less. | 9 | 11% |
| Money received from sale of easement made it easier to pass the farm intact to the next generation (e.g., money improves the farm or goes into retirement fund for current owners). | 6 | 8% |
| Other ways that easement helps with transfer [a] | 8 | 10% |
| (Respondents with at least one positive comment) | (31) | (39%) |
| **Hindering Effects for Succession** | | |
| Pool of potential buyers or interested heirs is reduced by regulations affecting housing opportunities (e.g., the number of allowable sites is too few for households in the family, or they are restricted to unattractive locations). | 10 | 13% |
| Pool is reduced by restrictions on land's ability to generate income from development of subdivisions and/or commercial enterprises. | 14 | 18% |
| Pool reduced by other regulations—known and not yet introduced or decided on by the courts. | 5 | 6% |
| Easement hinders succession in other ways. [b] | 12 | 15% |
| (Respondents with at least one negative comment) | (41) | 52% |
| **Opinions Were Not Clearly Positive or Negative.** | 7 | 9% |
| Total respondents to the question about positive or negative effects | 79 | |

[a]An example was: "Less family infighting because can't divide up the land."

[b]An example was: "No monetary advantage; land is worth too little."

**7. To what extent will the next generation of owners of protected land consist of "young" or "beginning" farmers at the time of transfer of ownership?**

The Farm Credit System has defined "young farmers" as being no more than 35 years of age,[105] and USDA's definition of "beginning farmers" is those having "operated a farm or ranch for not more than 10 years."[106] The focus on young and beginning farmers has been part of a widespread concern about the aging of American farmers and ranchers and the need to recruit new ones. The average age increased from 39 years in 1945 to 45 in 1974 and then to 58 in 2007.[107]

In the section of our survey's interviews devoted to succession issues, we asked two follow-up questions to those owners who responded "definitely" or "probably" to the preceding question about whether the successor they had lined up would be "a farmer who uses the protected land for agricultural production":

--"Will the next owner likely be a young farmer, that is, no more than 35 years old?"

--"Will the next owner likely be a beginning farmer in the sense of not having been a farm operator for more than ten years?"

**Table 7.14. Among the 213[a] owners reporting that "definitely" or "probably" their successor would be "a farmer who uses the protected land for agricultural production," the percentages of such successors who would "likely be a young farmer"[b] and/or "a beginning farmer"[c]**

| **Likely to be:** | **Number** | **Percent** |
|---|---|---|
| **a young farmer:** Yes | 71 | 33% |
| No | 109 | 51% |
| Don't know | 32 | 15% |
| Won't reply | 1 | 1% |
| Total | 213 | 100% |
| | | |
| **Likely to be:** | **Number** | **Percent** |
| **a beginning farmer:** Yes | 69 | 32% |
| No | 122 | 57% |
| Not sure | 21 | 10% |
| Won't reply | 1 | 1% |
| Total | 213 | 100% |
| | | |
| | **Number** | **Percent** |
| **Likely to be either a young or beginning farmer** | 111 | 52% of 213 and 22% of all 506 surveyed owners |

[a]Includes owner-operators and owner-non-operators.

[105] Farm Credit Mid-America, *Young, Beginning, and Small Farmers:* (http://www.e-farmcredit.com/Benefits/YoungBeginningandSmallFarmers/tabid/109/Default.aspx (accessed February 223, 2013);

[106] Mary Ahearn and Doris Newton, 2009, *Beginning Farmers and Ranchers* (USDA, Economic Research Service): http://www.ers.usda.gov/media/156049/eib53_1_.pdf; *Farm Bill Forum Comment Summary and Background: Farm Loan Programs* (http://www.usda.gov/documents/FARM_LOAN_PROGRAMS.pdf.

[107] USDA, *Briefing on the Status of Rural America* (http://www.usda.gov/documents/Briefing_on_the_Status_of_Rural_America_Low_Res_Cover_update_map.pdf, slide 4).

[b]Defined as being no more than 35 years old.
[c]Defined as being a farm or ranch operator for no more than 10 years.

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Among the 213 owners who had selected the "definitely" or "probably" option (Table 7.7), 33% reported that the successor was likely to be a "young farmer," while 32% classified him or her as a "beginning farmer" (Table 7.14). For just over half 111 (52%), the next owner would be either young or beginning. The 52% measure looks good, except that we must not forget that the 213 cases in that calculation's denominator comprise only 43% of all 506 owners whom we surveyed, so that 111 respondents expecting either a young or beginning farmer as their successors represent 22% of the full sample.

**8. Policy Implications**

So there is room for improvement. What policy steps do our survey findings imply?

a. There may be some urgency to act. Among the 196 members (or 39%) of the entire sample who lacked written or oral succession agreements, 54 (or 27%) were 65 or older (Table 7.15).

**Table 7.15. Age of surveyed owners who reported having neither a written succession plan nor an oral agreement as to who the next owner(s) would be**

| Age Range | Number of Respondents | Percent |
|---|---|---|
| 18 to 35 | 13 | 7% |
| 35 to 50 | 43 | 22% |
| 51 to 64 | 83 | 42% |
| 65 to 70 | 20 | 10% |
| 71 and over | 34 | 17% |
| Age not known | 3 | 2% |
| | 196 | 100% |

**Table 7.16. Among the 196 owners who reported neither a written succession plan nor an oral agreement as to who the next owner(s) would be, their expectations as to the "likely" successors**

| Choices | # of Respondents | Percent |
|---|---|---|
| A relative who is not a farmer | 33 | 17% |
| A relative who is a farmer | 56 | 28% |
| A farmer who is not a family member | 23 | 12% |
| Someone who offers the best price for the land, whether or not he or she is a family member or farmer | 29 | 15% |
| Don't know | 54 | 27% |
| Refused to answer | 1 | 1% |
| Total | 196 | 100% |

b. Many of the surveyed owners without written or oral agreements were nevertheless expecting farmers to be their successors (Table 7.16). We asked the 196 respondents who reported no agreements yet in place:

"Who is likely to be the next owner of your protected agricultural land?

A relative who is not a farmer,

A relative who is a farmer,
A farmer who is not a family member, or
Someone who offers the best price for the land whether or not he or she is a family member of a farmer?"

Twenty-seven percent answered in words to the effect that they did not know whom to expect. However, 40% believed their successor would "likely" be a farmer (either a relative or non-relative). Explicit agreements would likely help such expectations to become realities, and there appears to be a substantial segment of owners of protected land (the 39% in this survey without a written plan or oral agreement)[108] who could benefit from, and may welcome, public or private agency assistance in developing such agreements. Another, overlapping kind of potential client would be the owner who at the time of the interviews told us that a written plan was "under consideration." Almost half (47%) of that group of 93 respondents had "oral agreements." Moving on to a written document might be a step that many or most would welcome.

c. In Section 4's analysis of the personal traits of owner-operators that increased the likelihood of succession agreements with production-oriented farmers, it was found that, besides age as a related factor, owner-operators were more likely to have lined up such successors if they had:

--relatively many years of making day-to-day management decisions for their farms or ranches,

--comparatively larger operation in acres,

--operations with some diversity in the sense of having both commercial crop and livestock components to the operation, and

-- a variety of conservation practices applied to their land.

d. Also useful to advocates of agricultural land protection may be the material discussed in Section 6 about traits of easements that helped with the transfer of ownership, including the tendency for land under easement to be more affordable and the related advantage of lower property taxes, as well as the traits that hinder transfer, such as the potential for buyers to find intolerable the restrictions on how the protected land may be used.

[108] 196 out of total sample of 506—see Table 7.5.

# Chapter 8

## Satisfaction with Owning Protected Agricultural Land

### 1. Introduction

In two sets of questions we asked the surveyed owners to evaluate their experiences with agricultural land under conservation easements. The first set came early in the interviews and focused on the goals or objectives the respondent had when selling easements and the extent to which they were achieved. The second set came towards the end and asked for each respondent's "overall evaluation of being an owner of farmland or ranchland protected through a conservation easement.[109]

Our three main purposes in asking these two sets of questions were:

(1) To identify the goals most commonly held by owners who sold easements and the extent to which they were achieved, with the expectation that such ranking information would be useful both to easement program administrators and to prospective owner-participants in the programs.

(2) To identify reasons for satisfaction/dissatisfaction that administrators could use when deciding which programmatic aspects to retain, reform, or add, and

(3) To identify the types of participants who were more and less likely to find satisfaction in agricultural land conservation programs. Such information could be useful for administrators' recruitment efforts.

### 2. Sellers of Easements

**2a. Reported goals or objectives for selling easements:** In the first two or three minutes of the interviews, the 479 respondents who sold easements (and who comprised 95% of the full sample) were asked:

--"What were your goals or objectives in selling a conservation easement on agricultural land you owned?

--"Did you have any other goals when you sold the conservation easement? If so, what were they?"

In answering these open-ended question about goals or objectives, 99% of the 479 sellers of easements gave at least one purpose for making the sale, 49% gave two or more, and 11%, three (Table 8.1). We looked for common themes in the responses and found five major ones in the sense of each having at least 10% of surveyed owners expressing it (Table 8.1). The most frequently given theme or type of goal, found in the statements of 327 (or 68%) of the 479

[109] The full texts of these questions are given in three different parts of the chapter, beginning towards the bottom of this first page, p. 98.

| **Table 8.1: Among the 479 surveyed owners who sold easements that protected their agricultural land, their reported goals or objectives in those sales, by type of goal or objective** | | |
|---|---|---|
| **Number of Separate Types of Goals or Objectives** | **Number of Respondents** | **% of Total Respondents** |
| Surveyed owners who gave at least one type of goal or objective | 473 | 99% |
| Gave at least two | 231 | 49% |
| Gave at three | 55 | 11% |
| **Types of Goals or Objectives that Respondents Reported** | | |
| *To save land for agriculture* | 327 | 68% |
| *To obtain money to meet personal or family financial needs* (children's education, home mortgage, cost of a parent's nursing home, one's own retirement fund. or making possible the transfer of farm ownership to one child by paying off other heirs not wanting to farm) | 133 | 28% |
| *To protect family heritage* (save farm that was in family several generations, save land for children and grandchildren, honor legacy of father, dying wish of husband, farm is where owner grew up) | 91 | 19% |
| *To improve the farm/ranch business* (such as by purchasing land, reducing mortgage or other farm debt, building or repairing farm buildings, and buying new equipment) | 77 | 16% |
| *To preserve a life style for self or family* (beautiful landscape, open space, land used for hunting, historically important land) | 66 | 14% |
| *To preserve environmental values*: protect habitat for wildlife, keep the area natural, preserve river or stream environment, keep up the conservation work, protect woodlands, promote water conservation, preserve the high-land mountain area | 33 | 7% |
| *To facilitate transfer of land ownership to the next generation* (such as because the land became more affordable for family members to buy , the estate and property taxes would become lower, and they could use easement sale proceeds to buy out brothers and sisters) | 23 | 5% |
| Other goals or objectives | 14 | 3% |
| No goal or objective given | 6 | 1% |
| **The Four Most Common Pairs of Types of Goals** | | |
| To save land for agriculture ***and*** to meet personal or family financial needs | 89 | 19% |
| To save land for agriculture *and* to protect family heritage | 42 | 9% |
| To save land for agriculture *and* to improve the farm/ranch business | 41 | 9% |
| To save land for agriculture *and* to protect lifestyle | 29 | 6% |

respondents, was using the easement *to save land for agriculture*. Examples of statements of this theme are:

--"Keeping the land in farm use only and not sold for private development for houses or other business outside of agriculture."
--"Thought it was great that I could protect the land from development."
--"We had a dairy farm and wanted to save it for agriculture."
--"We need agriculture land to grow crops and raise cattle on; people gotta eat from somewhere."

The type of goal with the second highest frequency (reported by 28% of this subsample) was *to obtain money from the easement sale to meet personal or family needs.*

--"To provide funding to diversify our income."
--"To catch up on some bills and stuff 'cause things weren't going very good."
--"To pay off the mortgage and some of my daughter's tuition."
--"It helped my dad get some money for being in the rest home."

The third most frequent type (from 19%) was to protect the land because it was part of the owner's *family heritage*. Many respondents gave the number of years or another time reference for how long their farms or ranches were owned by family members:

--"It was a farm in the family for over 100 years, and we wanted to keep it that way."
--"We are the fourth generation on the farm."
--"My mother inherited the farm [which had been] in the family since the 1850s, and it had always been her intent to keep it as a farm."
--"[The] land has been here in our family for 100 years, and I didn't feel like I had the right to divide the land [into parcels for housing or other non-agricultural uses]."

In the fourth-ranking set of shared goals, 16% of the surveyed owners made statements about *improving the farm/ranch business*:

--"To get money to pay down mortgage; everything around it was already in preservation."
--"Finished purchasing the farm."
--"The farm was run down. We were looking for a way to refund and re-equip . . . [and] made several equipment purchases."
--"Wanted money to build a barn and an indoor riding facility."

Goal statements about *preserving a rural or agricultural lifestyle* ranked fifth in frequency (14%). Examples are:

--"My place has a pond on it, about a half acre. The little kids like to come fishing. I always want the kids to come fishing."
--"Well, we have tremendous views; it is so beautiful. We are five miles from Lake Champlain."
--"Well I don't like neighbors."
--"Sixty-five years ago I took this land out of waste land and have made it a beautiful farm and I wanted it to stay that way. I was getting a lot of offers for development and it distressed me."

Our content analysis found also four *pairs* of goals reported by at least 5% of the subsample of 479 owners (Table 8.1). Eighty-nine owners (19% of the 479) reported being motivated by both a desire to protect their land for agricultural use and the goal of meeting personal or family financial needs. Another example of a pair is where 9% said that they were seeking both to save the land for agriculture and to protect their family heritage.

Table 8.2 shows the frequencies with which the five most frequently mentioned goals at the national level were reported in eight different Farm Production Regions. The Delta Region is not represented because none of the owners in our sample was from a state in that region (covering Arkansas, Louisiana, and Mississippi). Also, we combined the Northern Plains and Southern Plains production region because separately both had fewer than ten respondents. As in Table 8.1's distributions of types of goals, the most frequently reported objective—in all eight regions—was to protect land for agriculture (Table 8.2). In five regions (Northeast, Appalachia, Southeast, Lake States, and Pacific States), the goal of obtaining money to meet financial needs ranked second in frequency. The objective of protecting family heritage was second in the Corn Belt and Mountain States, while to preserve a lifestyle for self or family ranked second in the Plains States.

**Table 8.2: Among the 479 surveyed owners who sold easements, their goals or objectives in making those sales, percent by Farm Production Region[a]**

| Types of Goals | North-east n=222 % | Appalachia n=64 % | South-east n=19 % | Lake States n=29 % | Corn Belt n=44 % | Plains States n=12 % | Moun-tain States n=54 % | Pacific States n=35 % |
|---|---|---|---|---|---|---|---|---|
| To protect land for agriculture | 69 | 69 | 68 | 72 | 71 | 67 | 61 | 71 |
| To obtain money for personal or family financial needs | 26 | 38 | 32 | 31 | 18 | 17 | 24 | 40 |
| To protect family heritage | 15 | 17 | 0 | 21 | 32 | 17 | 32 | 20 |
| To improve farm or ranch business | 18 | 20 | 0 | 14 | 7 | 8 | 20 | 14 |
| To preserve a lifestyle for self or family | 12 | 16 | 32 | 10 | 14 | 25 | 19 | 6 |

[a]The percentages per column add up to more than 100% because nearly half the respondents (48%) reported two or three goals or objectives.

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**2b. Perceived extent of achieving goals after selling easements:** Directly after the open-ended questions about what motivated surveyed owners to sell conservation easements to their agricultural land, they were asked this follow-up question:

> --"To what extent has the sale of the conservation easement enabled you to achieve the goals you had at the time of the sale? To a great extent, to a moderate extent, to a slight extent, or to no extent at all."

Close to three-quarters (72%) of the 479 respondents chose the most positive response; they had achieved their goals "to a great extent" (Table 8.3). Another 22% selected "to a moderate extent," leaving just 6% in the "slight," "no extent," and "don't know/no answer" categories.

**Table 8.3. Among the 479 surveyed owners who sold easements that protected their agricultural land, their reports as to the extent to which the easement sale enabled them to achieve the goals they had at the time of the sale**

| Response Options | Number of Respondents Asked This Question | Percent of Total Asked This Question |
|---|---|---|
| To a great extent | 345 | 72% |
| To a moderate extent | 103 | 22% |
| To a slight extent | 13 | 3% |
| To no extent at all | 7 | 1% |
| Not sure | 10 | 2% |
| Did not answer | 1 | (0.2%) |
| Total respondents | 479 | 100% |

**Table 8.4. The extent that the 479 surveyed owners believed their goals or objectives in selling easements had been achieved, by their types of goals or objectives**

| Types of Goals or Objectives | To a Great Extent % | To a Moderate Extent % | To a Slight Extent % | To No Extent at All % | Don't Know or /Won't Answer % |
|---|---|---|---|---|---|
| **To save the land for agriculture** | | | | | |
| Respondents reporting only this one type of goal; none other was reported. n = 122 | 70 | 20 | 4 | 4 | 2 |
| All respondents reporting this goal and, in most cases, other goals as well. n = 327 | 75 (66)[a] | 20 | 2 | 1.5 | 1.5 |
| **To obtain money for personal/family needs** | | | | | |
| Respondents reporting only this type of goal; none other was reported. n = 23 | 57 | 35 | 4 | 0 | 4 |
| All respondents reporting this goal and, in most cases, other goals as well. n = 133 | 75 | 21 | 2 | 1 | 1 |
| **To protect family heritage** | | | | | |
| Respondents reporting only this type of goal; none other was reported. n = 22 | 82 | 9 | 0 | 0 | 9 |
| All respondents reporting this goal and, in most cases, other goals as well. n = 91 | 68 | 24 | 3 | 0 | 5 |
| **To improve the farm/ranch business** | | | | | |
| Respondents reporting only this type of goal; none other was reported. n = 20 | 65 | 30 | 0 | 5 | 0 |
| All respondents reporting this goal and, in most cases, other goals as well. n = 77 | 69 | 27 | 1.3 | 1.3 | 1.3 |
| **To preserve a lifestyle for self or family** | | | | | |
| Respondents reporting only this type of goal; none other was reported. n = 25 | 68 | 28 | 4 | 0 | 0 |
| All respondents reporting this goal and, in most cases, other goals as well. n = 88 | 73 | 17 | 6 | 3 | 1 |

[a]The Pearson Chi-square value was statistically significant at the .05 level in a two-sided test. Inside the parentheses is the percentage of "great-extent" responses from all surveyed owners who did not report this type of goal.

**2c. Did the percentage of "great-extent" responses vary significantly with the surveyed owners' goals?** For each of the five most frequently reported types of goals, Table 8.4 gives two distributions of answers: the percent reporting a goal type (1) when it was the only kind given in response to the open-ended questions and (2) when it was either the sole type or one of two or three.

*Protecting the family heritage* was associated with the highest percentage of "great-extent" responses—82%—when it was the only type reported (Table 8.4). *Saving the land for agriculture* ranked second with 70%. Third was *preserving a lifestyle*—with 68%.

Among the frequency distributions for cases when a goal type was either the sole objective reported or one of a group of two to three, *saving the land for agriculture* and *obtaining money for personal or family needs* tied for having the highest percent of "great-extent" responses—75%. Next-ranking was *preserving a lifestyle*, with 73%.

However, the percentage distributions for the five major types of goal are relatively similar—with majorities in all cases selecting the most positive response ("to a great extent"). To identify statistically significant differences, we used cross-tabulation analysis to compare (a) the percentages of "to a great extent" for the members of a group with the indicated goal to (b) the "great-extent" percentage of everyone else who had sold easements.

In only one cross-tabulation did we find a statistically significant difference.[110] Among the 327 respondents who had reported *saving land for agriculture* as one of their goals (or their only objective), 75% reported that their goal(s) had been met "to a great extent," while the corresponding value among the 152 other owners surveyed on this question was 66% (Table 8.4).

**2d. Did perceptions of the extent of goals being achieved vary significantly with other traits of surveyed owners?**

1. Farm Production Region: Among the easement-selling owners in the eight production regions, there was just one group whose percentage of "great extent" responses was statistically significantly higher than that of all other owners answering the same question. Of the total of 35 respondents from the Pacific States, 86% chose "to a great extent" compared to 71% among all others (Table 8.5).

2. Amount of money received from the easement sale: The interview included questions that allowed us to learn, by ranges of dollars, the approximate amounts that owners received from selling land conservation easements. When those amounts were cross-tabulated with the "great-extent" responses to the question about achieving the goals in selling easements, we found no consistent trend in the percent selecting the most positive option as the dollar ranges increased. However, the owners with the highest amount of proceeds ($2 million and higher) were significantly more likely to in be the "great-extent" group—89% versus 71% (Table 8.5). Also, when we compared the owners in the top four categories of easement payments ($750K to

[110] See the percentage in the "great-extent" column that has the letter "a" after it in superscript. The "a" refers the reader to a footnote to Table 8.4 explaining the results of a test for statistical significance.

$2 million and above) to those in the bottom four (less than $100K to less than $750K), there was a statistically significant difference—78% versus 70%.

**Table 8.5. Extent that the 479 surveyed owners believed their goals or objectives in selling easements had been achieved, by their geographic region and dollars received from their sales of land conservation easements**

| Traits of Surveyed Owners Who Had Sold Easements | To a Great Extent % | To a Moderate Extent % | To a Slight Extent % | To No Extent at All % | Don't Know/Won't Answer % |
|---|---|---|---|---|---|
| **Regions[a]** | | | | | |
| Northeast n=222 | 70 | 24 | 2 | 2 | 2 |
| Appalachia n = 64 | 70 | 23 | 2 | 3 | 2 |
| Southeast n=19 | 74 | 21 | 0 | 0 | 5 |
| Lake States n=29 | 59 | 34 | 7 | 0 | 0 |
| Corn Belt n=44 | 64 | 27 | 7 | 2 | 0 |
| Plains States n=11 | 92 | 0 | 0 | 0 | 8 |
| Mountain States n=54 | 69 | 29 | 2 | 0 | 0 |
| Pacific States n=35 | 86 (71)[b] | 14 | 0 | 0 | 0 |
| **Proceeds Received from Sale of Land Conservation Easement** | | | | | |
| Less than $100K n=54 | 71 | 23 | 2 | 2 | 2 |
| $100k to less than $250K n=116 | 72 | 21 | 4 | 3 | 0 |
| $250K to less than $500K n=113 | 66 | 25 | 4 | 1 | 4 |
| $500K to less than $750K n=47 | 74 | 26 | 0 | 0 | 0 |
| $750K to less than $1 million n=34 | 88 (61)[b] | 6 | 3 | 3 | 0 |
| $1 million to less than $1.5 million n=32 | 59 | 35 | 6 | 0 | 0 |
| $1.5 million to less than $2 million n=16 | 81 | 13 | 0 | 6 | 0 |
| $2 million and above n=18 | 89 (71)[c] | 11 | 0 | 0 | 0 |
| **Four Highest Categories** | | | | | |
| $750,000 and above n= 101 | 78 (70)[c] | 17 | 3 | 2 | 0 |

[a]None of the respondents in our sample came from the Delta Farm Production Region
[b]The Chi-square values were statistically significant at the .077 lend .018 levels, respectively, in two-sided tests.
[c]The Chi-square values were statistically significant at the .081 and.083 levels, respectively, in one-sided tests. We believed that a one-sided test was justified because of our hypothesis that owners receiving relatively high compensation for their easement would be relatively happier with the easement program.

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3. Farm or ranch operator, type of operation, primary occupation, residence, education, gender, and age: For these seven traits of seller-owners, Table 8.6 provides the distribution of responses about the extent of achieving goals in selling easements. For each of the groups and subgroups listed in the table, a majority of the surveyed owners selected the most positive response option—"to a great extent." Cross-tabulations yielded two cases of statistically significant differences. Among members of the "Farmer Occupation/Higher Sales" group, 57% chose "to a great extent," while among all others asked the question the value was 74%. The corresponding difference for college-education owners versus those without degrees was 77% versus 69%.

**Table 8.6. The extent to which the 479 surveyed owners believed their goals or objectives in selling easements had been achieved, by whether the seller-owner was an operator, by type of operation, occupation, residence, education, gender, and age**

| Traits of Surveyed Owners Who Had Sold Easements | To a Great Extent % | To a Moderate Extent % | To a Slight Extent % | To No Extent at All % | Don't Know/Won't Answer % |
|---|---|---|---|---|---|
| **Operator or Not** | | | | | |
| Yes, was an operator n= 336 | 73 | 21 | 3 | 1.5 | 1.5 |
| No, was not n= 143 | 71 | 22 | 3 | 1 | 3 |
| **Type of Operation[a]** | | | | | |
| Retirement: Operator reports he/she is retired n=41 | 78 | 17 | 0 | 0 | 5 |
| Residential/Lifestyle: Operator's principal occupation is not farming n=69 | 73 | 17 | 6 | 3 | 1 |
| Farming Occupation/Lower Sales: Grossing Less than $100K n=58 | 77 | 19 | 2 | 0 | 2 |
| Farming Occupation/Higher Sales: Grossing $100K to less than $250K n=30 | 57 (74)[b] | 40 | 3 | 0 | 0 |
| Large Family Farms: Grossing $250K to less than $500K n=41 | 68 | 29 | 3 | 0 | 0 |
| Very Large Family Farms: Grossing $500K and above n=65 | 77 | 20 | 1.5 | 0 | 1.5 |
| **Other Traits of Owners** | | | | | |
| Primary occupation was farm or ranch operator[c] n=222 | 72 | 23 | 2 | 1.5 | 1.5 |
| Lived on or near the protected land all year n= 340 | 73 | 20 | 3 | 2 | 2 |
| College degree or higher n=184 | 77 (69)[b] | 18 | 1 | 1 | 3 |
| Male n=365 | 71 | 22 | 3 | 2 | 2 |
| Female n=114 | 75 | 21 | 1 | 2 | 1 |
| Less than 45 years old n=35 | 83 | 17 | 0 | 0 | 0 |
| 45 to less than 55 years old n=84 | 75 | 20 | 4 | 1 | 0 |
| 55 to less than 65 years old n=138 | 70 | 24 | 3 | 1.5 | 1.5 |
| 65 to less than 75 n=128 | 70 | 22 | 2 | 2 | 4 |
| 75 and above n=92 | 71 | 21 | 3 | 1 | 4 |

[a]USDA, 2000, *ERS Farm Typology for a Diverse Agricultural Sector*, Agriculture Information Bulletin Number 759: http://www.ers.usda.gov/media/480803/aib759_1_.pdf (accessed September 6, 2012).
[b]The Chi-square values were statistically significant at the .052 and .062 levels, respectively, in two-sided tests. The numbers in parentheses are the "great-extent" percentages of all other owners who answered the question.
[c]"Primary" in the sense of being "the occupation on which you spent 50 percent or more of your work time in 2011."

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**2e. Multi-causal models for explaining perceptions of the extent to which the goals in selling easements were achieved:** The analytical tool, logistic regression, allows us to measure how well two or more causal conditions work together or compete to explain an outcome like believing that one's goals had been achieved "to a great extent." First, we tried as causal

variables only those five that in our cross-tabulations had yielded statistically significant differences:
--whether or not the respondents reported having the goal of saving land for agriculture,
--whether they were located in one of the Pacific States,
--the respondents had received at least $750,000 from the easement sale,
--their farm or ranch operation fell in the category, "Farming Occupation/Higher Sales", and/or
--they had a college degree.

In the logistic regression analysis, only the land-saving goal and the college-degree variables proved to be statistically significant predictors of "great-extent" responses.[111] Then we tried out all the survey questionnaire's occupation, gender, and age variables, plus various traits about how the preserved land was used (such as years elapsed since the respondents first owned land with an easement on it). The result was the addition of just one more predictor—the total protected acres that the respondent owned. However, the four variables together did not explain much.[112]

Therefore, we switched to analyzing the responses of the members of the owner-operator subsample (356), and we did somewhat better.[113] Owner-operators who sold easements were more likely to have selected the "great-extent" answer:
--if they had had the goal of saving land for agricultural use,
--if they had a bachelor's or graduate degree,
--they owned relatively many protected acres,[114]
--they had increased the number of acres, separate kinds of crops or livestock, and other components of their operation since they first operated protected land the owned (see Chapter 6),
--their current occupation was "retired" and/or
--they had been a farm or ranch operator relatively few years.

***Speculation about the six predictor conditions:*** Owners with the goal of saving land for agriculture have the advantage of seeing at least some progress (when the easement document is signed and filed with local authorities. The finding about college graduates being more positive may have something to do with having had the financial resources conducive to goal achievement. The ownership of comparatively many protected acres may also be an indicator of possessing the means to gain objectives. Many or most of the retired owner-operators may have had a time advantage. Not needing to work off the farm or to maximize current farm sales, they could have devoted more time to achieving their land protection goals. And owners with relatively fewer years in farming or ranching may have had greater need for, and appreciation of, the proceeds from the sale of easements.

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[111] Significant at the .100 level or better.
[112] The Nagelkerke R Square was only .058.
[113] Each of the five hypothesized causal variables was statistically significant at the .053 level or better, and together they yielded a Nagelkerke R Square of .143.
[114] Among the owner-operators who sold easements and believed that they had achieved their land protection goals "to a great extent," their average number of acres under easements was 497 acres versus 230 acres for all other respondents.

**3. Measuring Satisfaction with Owning Protected Land—Questions at the End of the Interviews**

In the last few minutes of the interview, we posed this question to all 506 respondents:

> "One of the few remaining questions is about your overall evaluation of being an owner of farmland or ranchland protected through a conservation easement. Looking back on your experiences as an owner of such land, how satisfied or dissatisfied are you? Very satisfied. Satisfied. Dissatisfied. Very dissatisfied?"

After answering this multiple-choice question, all owners were asked the two follow-up questions:

--"What were your reasons for giving that overall evaluation of owning protected land?"

--"Are there any other reasons for that overall evaluation?"

Nearly six in 10 (58%) respondents said that they were "very satisfied. Thirty-eight percent were "satisfied" and only 2.5% "dissatisfied" or "very dissatisfied" (Table 8.7).

**Table 8.7: Among all 506 surveyed owners, their satisfaction with their experiences "as an owner of farm or ranchland protected through a conservation easement"**

| Response Options | Number of Respondents | % of Total Sample |
|---|---|---|
| Very satisfied | 294 | 58% |
| Satisfied | 191 | 38% |
| Dissatisfied | 12 | 2% |
| Very Dissatisfied | 2 | 0.5% |
| Not sure | 5 | 1% |
| Did not answer | 2 | 0.5% |
| Total | 506 | 100% |

For Table 8.8 we classified the follow-up responses into types of reasons—positive and negative—and for each type gave the associated percentage distribution of answers to the preceding question about satisfaction or dissatisfaction with owning protected land. Most of the owners who gave at least one positive assessment (66%) were in the "very satisfied" group. Among the owners giving at least one negative assessment, the most common response (from 63% of that subsample) was "satisfied." Fifty respondents gave both positive and negative views (Table 8.8).

**4. What can be learned from the program participants' reasons for their assessments?**

The attitudes of current clients may have important impacts on the future health of land conservation programs. Satisfied clients may decide to enroll more land in the programs, urge relatives and friends to do so, and/or report their satisfaction to legislators who vote on re-authorizing programs or on appropriations for them. Dissatisfied clients can bring about just the opposite effects. This section of Chapter 8 elaborates on Table 8.8's entries for "Types of

**Table 8.8. Among all 506 surveyed owners, the degree of satisfaction with their experiences "as an owner of farm or ranchland protected through a conservation easement," by type of reason for the response option they chose**

| Types of Reasons | Response Options | | | | |
|---|---|---|---|---|---|
| | Very satisfied % | Satisfied % | Un-satisfied % | Very Unsat-isfied % | Don't Know or Won't Answer % |
| **Gave Positive Reasons n=432** | **66** | **33** | **0.2** | **0.2** | **0.6** |
| Satisfaction from having prevented agricultural land from being developed; having preserved it for agriculture n=**228** ***(45% of all 506 owners)*** | 68 | 32 | 0 | 0 | 1 |
| Program met expectations; no negative effects; they don't micromanage us **n=119** ***(24%)*** | 65 | 34 | 0 | 0 | 1 |
| Easement money used to buy agricultural land, to pay down the farm's mortgage, or otherwise improve the operation **n=61** ***(12%)*** | 79 | 21 | 0 | 0 | 0 |
| Saving the land for self or family because of its heritage and/or lifestyle value **n=57** ***(11%)*** | 79 | 19 | 0 | 0 | 2 |
| Used easement proceeds to meet personal or family needs (other than those of farm/ranch operation), e.g., to cover children's education, health care costs **n=49** ***(10%)*** | 69 | 31 | 0 | 0 | 0 |
| Working with helpful, pleasant staff from the relevant program agencies **n= 43** ***(8%)*** | 79 | 21 | 0 | 0 | 0 |
| Doing the right thing for the community or country: saving land to produce food, protect wildlife habitat, prevent flooding **n=42** ***(8%)*** | 71 | 27 | 0 | 0 | 2 |
| **Gave Negative Reasons n=101** | **23** | **63** | **11** | **2** | **1** |
| The process of negotiating the easements was flawed: too long, complicated, confusing, hard to get information about it **n=43** ***(8%)*** | 40 | 51 | 7 | 2 | 0 |
| The amount paid for the easement was inadequate **n=22** ***(4%)*** | 5 | 73 | 18 | 4 | 0 |
| Critical of easement regulations, such as limits on impervious surfaces and required buffers along streams **n=21 (4%)** | 10 | 76 | 14 | 0 | 0 |
| Critical of restrictions on building family homes or non-agricultural facilities like a cell phone tower **n=10** ***(2%)*** | 10 | 70 | 20 | 0 | 0 |
| Other problems with easements: that the easement is perpetual, difficult to get loans for eased land, the concern that regulations will increase **n=10** ***(2%)*** | 20 | 50 | 10 | 10 | 10 |
| **Respondents Gave Both Positive and Negative Reasons n=50** | 40 | 60 | 0 | 0 | 0 |

Reasons" for the level of satisfaction/dissatisfaction with owning protected land. For example, 45% of all 506 surveyed owners (or 228 respondents) gave reasons of the type that we summarize with the words, "Satisfaction for having prevented agricultural land from being developed…." Section 4a below provides examples of that kind of satisfaction. We believe that both these examples and Table 8.8's related percentages demonstrate that, during the survey period of January to May 2012, the attitudes of most FRPP participants were largely positive and that, at least in the majority of cases, believable reasons were offered to substantiate their positive assessments. On the other hand, the minority of critical statements may serve as guides to what needs to be fixed in the programs. The following discussion is limited to the types of reasons—positive and negative--given by at least 20 respondents.

**4a. Satisfaction from having protected agricultural land from development:** Among the reasons offered by the 228 owners for this kind of satisfaction were:

--the protection was long-term (for the "next 100 years");

--the farmland being preserved could be irreplaceable;

--the expectation that the conservation easement would protect the land from conversion to roads or other public uses (i.e., that the easement would override government's power of eminent domain);

--the removal of development rights would make the land more affordable to the ranchers or farmers who succeeded the current owners; and,

--in the absence of heirs committed to continue farming the land, the easement was needed to protect their land from development.

**4b. The land's easement status proved to be no significant hindrance.** The regulatory problems feared by some or many owners of eased land did not materialize. From 119 respondents (or 24% of the full sample) we received reasons like these:

--They were not "micromanaged" or "harassed" by the easement holders (e.g., a land trust, county government) after the protection agreement took effect.

--The easement's regulations did not compel them to make changes in their operation; for example, they already had stream buffers.

--Since they had participated in the writing the easement agreement, the regulations they experienced were what they expected.

**4c. Money from the sale of the easement enabled the purchase of land and other improvements to the farm or ranch operation.** Sixty-one owners (12% of the total) gave reasons such as:

--The money was used to buy additional farmland and/or to pay down the mortgage on land they currently owned.

--The proceeds went to constructing a farm building needed to expand the operation.

--A third example was the owner who used it as loan collateral to stay in his dairy business.

**4d. Saving the land because of its heritage or lifestyle value:** Fifty-seven respondents (11% of the total) explained their satisfaction with owning land under easements as a means to:

--keep land that had been in the family for several generations (e.g., "since the late 1800's");
--provide their children and grandchildren with attractive places to live, and
--protect other heritage or lifestyle benefits (such as being able to enjoy open-space vistas rather than seeing housing developments from their windows or porches).

**4e. Financial benefits to themselves or family (other than those for the farm or ranch operation).** Forty-nine respondents (10% of the total) spoke about using the proceeds for such purposes as:
--paying for their children's education,
--retiring the mortgage on their home, and
--meeting "continuing health costs."

**4f. The benefits of working with helpful staff from the relevant agencies:** Forty-three (or 8% of the sample) explained their satisfaction with being owners of protected land as deriving, at least in part from, the positive relations they had with the staff of program agencies. These relationships were important to them because, in the first place, owners may have to deal with personnel in two or more separate agencies. Secondly, the time during which program staff members interact with owner clients may extend over lengthy periods such as18 months, two years, or longer. Thirdly, agency contacts and their positive or negative effects on clients do not stop with the signing of the easement agreement. There are periodic inspection visits to the protected land, as well as possibly other trips or phone calls regarding how the land is managed. Also potentially very important are the clients' perceptions of the friendliness and helpfulness of agency staff. These traits can make "a huge difference." The characteristics of program staff that these 43 owners valued included being "sensible," "flexible," "knowledgeable " about working with property issues, willing to answer a lot of questions, and giving praise to the landowners when it is due.

**4g. Doing the right thing for the local community or the country:** Forty-three (8%) told us that they believed their participation in agricultural land protection programs was good for the local community or the country. In so doing they helped to achieve such purposes as:
--preserving "the finest remaining prairieland on earth,"
--protecting food sources that were "important for national security," and
--promoting the welfare of "the small town I live in."

**4h. Problems: The process for negotiating the easements was considered to be flawed:** A total of 20% of the full sample of 506 owners gave negative reasons for how they answered the survey question about satisfaction/dissatisfaction with owning protected land (Table 8.8). The most common of the negatives (from 43 respondents or 8% of the 506) concerned the easement negotiation process. The perceived flaws included: the full process taking too long (two years, two and a half, five years), difficulty in finding needed information about the process, mid-course changes in the rules and persons enforcing the rules, unsympathetic judges of applications, and last-minute rewriting of the easement text.

**4i. The amount paid for their easements was considered to be inadequate.** Twenty-two (or 4% of the total respondents) gave this type of negative reason. They were unhappy with

either the amount of money received or the net value after deducting their costs of applying for the payments. Generally, the easement is supposed to be worth the difference between "the fair market value of the property without an easement ... and its restricted value under the easement."[115] Criticized were the program agencies' criteria for arriving at that difference, as well as the choices of comparable properties when estimating the values. Another problem (that probably cannot be avoided) is the disparity in the development value of comparable agricultural land over time. Farmland appraised before the start of the housing downturn in 2006 would likely have had higher market values when compared to similar properties appraised in the years 2008-2011, which was when 77% of the easements in our study were finalized.

**4j. Criticisms of easement regulations:** Twenty-one (or 4%) of the owners criticized particular regulations, such as limits on impervious surfaces (e.g., "2% of the preserved land cannot be improved"), prohibitions on certain nonagricultural uses of the properties (such as cell towers), and required buffers along streams.

**5. Were the praises and complaints discussed above actually related to how the surveyed owners answered the preceding multiple-choice question about their satisfaction with owning protected land?**

There could be problems with our content analysis and/or with how the owners phrased their explanations. Table 8.9 gets at such relationships by indicating whether surveyed owners who gave a type of reason were statistically significantly more or less likely to have been "very satisfied" with their program. For all 12 types, they were. The finding for the first-listed type (Section 4a above) suggests that the owners' preservation actions and their legal consequences (restrictions on development) yielded positive feelings about the farmland preservation program. The cross-tabulation for this type of reason found that, among the 228 surveyed owners who reported it, 68% were "very satisfied," compared to 50% of the 278 other respondents who did not report a land-preservation reason. The statistics produced by the cross-tabulation indicated that it was highly unlikely (no more than one chance in one hundred) that the 18 percentage-point difference was due to chance factors alone.

The second-listed positive reason was that the program met the owners' expectations and/or had no negative effects. Sixty-five percent of the respondents giving this reason were "very satisfied," compared to 56% of the surveyed owners who did not have that reason.

The third reason came from owners who used proceeds from the easement sale to buy agricultural land, to pay down their farm mortgage, and/or otherwise to improve farm or ranch operation. They apparently believed that they had spent their money in productive ways. The percentage-point difference in "very satisfied" responses is 24 points (79% versus 55%).

The corresponding differences in the "negative reason" portion of Table 8.9 are 20 to 56 percentage points. For example, among the 22 owners who complained about the adequacy of easements payments, only 5% selected "very satisfied," compared to the 61% "very satisfied" level among the 484 respondents who gave different reasons. Section 7 below deals with the issue of whether these complaints shaped answers to the satisfaction question or whether the

[115]USDA, Natural Resources Conservation Service, *Farm Bill 2008: Farm and Ranch Lands Protection Program:* ftp://ftp-fc.sc.egov.usda.gov/MI/programs/FRPP/FarmBill2008_FRPP_QandA.pdf

latter resulted from some other causes that happened to correlate both with the complaints and the satisfaction measure.

**Table 8.9. Among all 506 respondents, the percent of cases where the owner was "very satisfied," by type of reason given for that evaluation**

| Types of Reason | Percentage of Owners with This Reason Who Answered "Very Satisfied | Percentage of All Other Owners Who Answered "Very Satisfied" |
|---|---|---|
| **Positive** | | |
| Satisfaction from having prevented agricultural land from being developed; having preserved it for agriculture | 68%[a] (n=228) | 50%[a] (n=278) |
| Program met expectations; no negative effects; they don't micromanage us | 65%[b] (n=119) | 56%[b] (n=387) |
| Easement money used to buy agricultural land, to pay down the farm's mortgage, or otherwise improve the operation | 79%[a] (n=61) | 55%[a] (n=445) |
| Saving the land for self or family because of its heritage and/or lifestyle value | 79%[a] (n=57) | 56%[a] (n=449) |
| Financial benefits to self or family (other than those to farm /ranch operation), e.g., to cover children's education, health care costs | 69%[b] (n=49) | 57%[b] (n=457) |
| Working with helpful, pleasant staff from the relevant agencies | 79[a] (n=43) | 56%[a] (463) |
| Doing the right thing for the community or country: saving land to produce food, protect wildlife habitat, prevent flooding | 71%[c] (n=42) | 57%[c] (n=464) |
| **Negative** | | |
| The process of negotiating the easements was flawed: too long, complicated, confusing, hard to get information about it | 40%[c] (n=43) | 60%[c] (n=463) |
| The amount paid for the easement was inadequate | 5%[a] (n=22) | 61%[a] (n=484) |
| Critical of restrictions on building family homes or non-ag facilities like a cell phone tower | 10%[a] (n=10) | 59%[a] (496) |
| Critical of other easement regulations, such as limits on impervious surfaces and required buffer along streams | 10%[a] (n=21) | 60%[a] (n=485) |
| Other problems with easements: that easement is perpetual, difficult to get loans for eased land, worry that regulations will increase | 20%[a] (n=10) | 59%[a] (496) |

[a]The Chi-square values were statistically significant at the .01 level or better in a two-sided test.
[b]The Chi-square values were statistically significant at the .10 level or better in a two-sided test.
[c]The Chi-square value was statistically significant at the .05 level or better in a two-sided test.

**6. Did satisfaction with owning protected land vary significantly by traits of the surveyed owners – their farm production region, amount of money they received from selling easements, years elapsed since first owned protected land, type of farm or ranch operation, occupation, education, gender, or age?** This section of the chapter reports on the results of analyses (using cross-tabulations) that test for conditions that may shape owners' satisfaction/dissatisfaction with the easements on their land.

**Table 8.10. Among all 506 surveyed owners, their degree of satisfaction from owning protected agland, by Farm Production Region and by dollars received from their sales of land conservation easements**

| | Response Options | | | | |
|---|---|---|---|---|---|
| **Traits of All Surveyed Owners** | **Very satisfied %** | **Satisfied %** | **Un-satisfied %** | **Very Un-satisfied %** | **Don't Know or Won't Answer %** |
| **Farm Production Region** | | | | | |
| Northeast n=240 | 58 | 36.5 | 3 | 2 | 0.5 |
| Appalachia n = 67 | 63 | 30 | 4 | 1.5 | 1.5 |
| Southeast n=20 | 55 | 45 | 0 | 0 | 0 |
| Lake States n=30 | 53 | 47 | 0 | 0 | 0 |
| Corn Belt n=46 | 50 | 46 | 2 | 2 | 0 |
| Plains States n=12 | 75 | 25 | 0 | 0 | 0 |
| Mountain States n=56 | 57 | 43 | 0 | 0 | 0 |
| Pacific States n= 35 | 63 | 34 | 3 | 0 | 0 |
| **Proceeds Received from Sale of Land Conservation Easement** | | | | | |
| Less than $100K n=54 | 55 | 35 | 6 | 2 | 2 |
| $100k to less than $250K n=116 | 52 | 45 | 2 | 0 | 1 |
| $250K to less than $500K n=113 | 55 | 41 | 0 | 1 | 3 |
| $500K to less than $750K n=47 | 62 | 32 | 4 | 0 | 2 |
| $750K to less than $1 million n=34 | 71 | 29 | 0 | 0 | 0 |
| $1 million to less than $1.5 million n=32 | 75 | 25 | 0 | 0 | 0 |
| $1.5 million to less than $2 million n=16 | 63 | 31 | 6 | 0 | 0 |
| $2 million and above n=18 | 67 | 33 | 0 | 0 | 0 |
| Owners in the Top Four Categories by Easement Sale Proceeds: $750K and above n= 100 | 70 (56)[a] | 29 | 1 | 0 | 0 |

[a]The Chi-square value was statistically significant at the .006 level in a one-sided test. The number in parentheses is the percentage of "very satisfied" owners who received less than $750K.

Table 8.10 shows that, across seven of the eight Farm Production Regions represented in our sample, majorities of the surveyed owners reported being "very satisfied" as owners of preserved land. The exception was the Corn Belt's 50% measure for that response option. The Table's second part shows that, regardless of differences in the dollar amount of the proceeds from easement sales, majorities of the surveyed owners were "very satisfied." And neither by production region nor by dollar range of proceeds was there any statistically significant difference, except when we combined the top four ranges of easements payments and compared that grouping to the lowest four ranges. There was a significant difference of 15 percentage

points—70% versus 55%. Not surprisingly, the owners who received more money were more likely to be "very satisfied." On the other hand, there was no relationship between being "very satisfied" and the years elapsed since the respondent first owned protected land (no table). We speculated that the passage of time might dampen or increase owners' enthusiasm with agricultural land conservation.

**Table 8.11. Among all 506 surveyed owners, their degree of satisfaction from owning protected land, by whether they were owner-operators and type of operation, occupation, residence, gender, and education,**

| Traits of Surveyed Owners Who Had Sold Easements | To a Great Extent % | To a Moderate Extent % | To a Slight Extent % | To No Extent at All % | Don't Know/Won't Answer % |
|---|---|---|---|---|---|
| **Operator or Not** | | | | | |
| Yes, was an operator n= 356 | 59 | 37 | 2 | 0.5 | 1.5 |
| No, was not n= 150 | 56 | 38 | 4 | 1 | 1 |
| **Type of Operation[a]** | | | | | |
| Retirement: Operator reports he/she is retired n=42 | 52 | 45 | 3 | 0 | 0 |
| Residential/Lifestyle: Operator's principal occupation is not farming n=47 | 62 | 36 | 2 | 0 | 0 |
| Farming Occupation/Lower Sales: Grossing Less than $100K n=68 | 57 | 40 | 1.5 | 0 | 1.5 |
| Farming Occupation/Higher Sales: Grossing $100K to less than $250K n=36 | 55 | 36 | 3 | 3 | 3 |
| Large Family Farms: Grossing $250K to less than $500K n=43 | 65 | 35 | 0 | 0 | 0 |
| Very Large Family Farms: Grossing $500K and above n=74 | 63 | 34 | 1.5 | 0 | 1.5 |
| **Other Traits of Owners** | | | | | |
| Primary occupation[b] was farm or ranch operator n=238 | 59 | 37 | 2 | 0.5 | 1.5 |
| Lived on or near the protected land all year n= 354 | 60 | 36 | 2.5 | 0.5 | 1 |
| College degree or higher n=201 | 63[3] (55) | 33 | 2 | 0.5 | 1.5 |
| Male n=384 | 58 | 39 | 2 | 0.3 | 0.7 |
| Female n=122 | 58 | 34 | 4 | 1 | 3 |
| Less than 45 years old n=36 | 64 | 28 | 3 | 0 | 5 |
| 45 to less than 55 years old n=94 | 50 | 48 | 1 | 1 | 0 |
| 55 to less than 65 years old n=142 | 58 | 36 | 3 | 1 | 2 |
| 65 to less than 75 n=132 | 64 | 34 | 1 | 0 | 1 |
| 75 and above n=95 | 58 | 38 | 4 | 0 | 0 |
| Owners in the Top Two Age Groups: 65 years and older | 62 (55)[3] | 35 | 2 | 0 | 1 |

[a]USDA, 2000, *ERS Farm Typology for a Diverse Agricultural Sector*, Agriculture Information Bulletin Number 759: http://www.ers.usda.gov/media/480803/aib759_1_.pdf (accessed September 6, 2012).
[b]"Primary" in the sense of being "the occupation on which you spent 50 percent or more of your work time in 2011."

[c]The Chi-square values were statistically significant at the .06 and .08 levels, respectively in one-sided tests. We believed that one-sided tests were justified because we hypothesized that satisfaction would include with educational level and age.

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A similar analysis of "very satisfied" responses by occupation, type of farm/ranch operation, and five other traits of the owners yielded only two statistically significant differences (Table 8.11). Owners with at least college degrees were more likely to be "very satisfied" than owners without that much formal education. Also more likely were owners of at least 65 years of age.

There were no significant differences across the six different types of farm/ranch operations. None of the "very satisfied" percentages was more than 7.6 percentage points away from the entire sample's median percentage of 59.5 (no table).

**7. Multi-Causal Analysis of Owner Traits Associated with Being "Very Satisfied":** Using logistical regression analysis, we tested to see which, if any, of the 15 statistically significant differences reported in Tables 8.9 to 8.11 held up when those candidate causal conditions competed with each other and additional ones that we introduced.[116] The competition included the goals for preserving agricultural land that owners reported when answering question early in the interview (Table 8.1). Other candidates included all the traits listed in Table 8.11, as well as the total protected acres that the respondent owned, the years elapsed since he or she first owned land under a conservation easement, and the path to ownership of such land (i.e., whether he/she sold the easement versus purchasing or inheriting the land with an easement already on it).

Emerging from the competition were the nine conditions listed below. They were statistically significantly related to respondents being "very satisfied" with their experiences as owners, when taking into account the causal influence of all other listed variables.[117]

Therefore, other things being equal, the surveyed owners were *more likely* to have selected the "very-satisfied" response option if:
--one (or their only) goal in selling an easement was to save land for agricultural use,
--their goals included the protection of what they regarded as their family's heritage,
--they had the goal of protecting a rural or agricultural lifestyle,
--they evaluated the staff of the easement program and perhaps related agencies as "sensible," "flexible," "supportive," or otherwise helpful,
--they used proceeds from the easement sale to buy agricultural land, construct farm buildings, or improve their operations in other ways, and/or
--they had received at least $750,000 in payments for the easement,

They were *less likely* to be "very satisfied" if:

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[116] Although the statements of reasons for satisfaction/dissatisfaction listed in Table 8.9 came in the interviews after those satisfaction opinions, they still may be considered to have identified causes of those opinions. The statements refer to prior conditions (such as positive and negative actions by the staff of preservation programs), as well as to respondents' own prior actions, such as investing proceeds from easement sales to improve their farm or ranch operations.

[117]The Nagelkere R Square for this eight-variable logistic regression equation was .233. All the variables were statistically significant at the .05 level except for the excessive-time condition, whose significance level was .053.

--they complained about the excessive time required to negotiate easements and obtain payment,
--they found inadequate the payment they received when selling the conservation easement, and/or
---they found fault with other regulations imposed by the easement.

**8. Policy Implications**

Not surprisingly, several of the above findings point to causes of client satisfaction that protection programs can affect. Staff can be trained to do their best to be "sensible," "flexible," and otherwise helpful. Programs can aim to minimize the total time required to reach closure on easements, as well as being as generous in easement payments as defensible appraisal processes and available funds can support. Programs may offer to potential easement sellers the examples of the preservation goals of owners already in the program. Our findings indicate that the kinds of goals make significant differences in owner satisfaction

## Overall Summary

**1. Did the protected properties "contain sufficient acres to sustain agriculture production"?** USDA's published "Eligibility Criteria" for the FRPP included that requirement. Among all 506 surveyed owners, the median (or midway point) in the distribution of their protected acres was 140 acres, significantly higher than the 80-acre median for all farming operations covered by the nation-wide 2007 Census of Agriculture.

**2. How was the protected land being used?** Almost half (48%) of the 506 surveyed owners reported that all their protected acres were in agricultural use in 2011, another 22% had from 75% to 99% being farmed or ranched, and for only 4% were none of those acres used for agriculture. Among the 356 owner-operators, the average percentage of protected acres in agricultural use, 82%, was not statistically significantly higher than mean value reported by the 150 owner-non-operators—77%.

**3. To what extent was the protected land surrounded by other agricultural properties or parkland rather than by developed land?** Forty-three percent of the owners reported that nine-tenths or more of the land around their farm or ranchland was in agricultural use or parkland, and 19% more estimated that measure to be from 75% to less than 90%. Few (21%) perceived their protected land to be surrounded mostly (more than 50%) by housing, stores, or other development.

**4. In the absence of the sale of conservation easements, to what extent would the subject farm or ranch lands have been developed out of agricultural use?** Nearly half (49%) of the owners who had sold easements (479) believed that, without easements, their land would have been developed or sold or would have "probably" or "eventually" been developed or sold. Eleven percent were not sure, and 29% told us that their land would have stayed in agricultural use despite the absence of easements.

**5. Who were the owners of the protected land?** They were 99% white and mostly men (81%). Seventy percent were operators of at least some of that land. Almost all (95%) had sold conservation easements to protect land they owned, although some—6%--had both sold easements and purchased or inherited land already protected by easements. Just 4% were exclusively "second-generation" owners in the sense they had purchased or inherited previously protected land.

**6. What have been the impacts of owning protected land on the owners' lives?** Close to half (47%) of the 479 owners who had sold easements said that they would have been worse off if they had not made those sales, such as because they would have been forced to sell the land, or they would have found it financially or otherwise more difficult to farm the land. Forty percent reported that their lives would have been no different, and 1% said they would have been better off if no sale had been made.

**7. What benefits have the owners of protected land generated for the communities in which the land is located?**

a. Forty-two percent of the 356 owner-operators (or 30% of all surveyed owners) reported that in 2011 they had *directly marketed agricultural goods* (such as fruits, vegetables, and hay for horses) that they produced. Twenty-six percent marketed food (such as at farmers' markets or via direct deliveries to individual customers or schools), and almost all (96%) of that group of 26% produced at least some of the food on their protected land.

b. The owners who sold easements to their land tended *to plow back the proceeds from those sales into their agricultural properties and operations*. Eighty-four percent of this group of 479 spent at least some of the money that way, and more than half the group (52%) devoted the "largest share" of total expenditures to agricultural purposes. These expenditures were probably not trivial in size because the payments for the easements tended to be considerable. The owners who reported spending the largest share of the proceeds on agricultural purposes averaged an estimated $535,287 from the easement sales.

c. Much or most of the agriculturally related *expenditures tended to be made in the same county* as where the protected land was located. This was true in 96% of the cases involving the repayment of loans on agricultural land the respondents already owned, in 89% of the cases of using the proceeds to purchase additional land, and 83% where the owner hired companies or individuals to construct new ranch or farm facilities or to repair or expand existing ones.

d. Three-fourths of all surveyed owners reported that they had applied to their land under easements in 2011 at least one *conservation practice*–such as to protect soil from erosion, water from pollution, wildlife habitat from damage, and pasture land from overgrazing. Fifty-seven percent reported at least two such practices, and 39%, three. Almost a quarter (24%) of these appliers of conservation measures said that at least one practice was new since they first owned protected land. Less water pollution and better wildlife habitat have obvious benefits for the broader community, while reducing soil erosion and damage to pasture land may be seen as yielding primarily longer-term benefits in the sense of keeping the land viable for farming, which helps landowners, operators, and agricultural service businesses, as well as the ultimate consumers of the land's products.

**8. To what extent did owner-operators expand or otherwise improve their farms or ranches after they first owned and operated land that was under conservation easements?**

a. Among the 247 surveyed owners who operated protected land in both 2011 and at least one year beforehand, 22% had by 2011 *increased the number of acres in their farms or ranches*. The differences in acres added were not small in comparison to the first year's size. Among those who expanded their total acres, half reported increases of at least 98%; and one quarter of the group added 204% or more.

b. Many operators expanded their operations in one or more of seven other ways: by increasing their *number of separate crops* produced that grossed at least $1,000 per year, the number of *different kinds of livestock products* worth that much, the total number of separate types of *marketing outlets,* and/or the kinds of *management systems* (e.g., organic farming, precision farming), *processed products* (like wine or cheese), *agriculturally related enterprises*

(e.g., custom-farming, repairing of farm equipment), or *energy-generating facilities* (solar panels, geothermal heating). We asked about net changes in these eight different components of farm/ranch operations (acres, number of crops, livestock products, etc.) and found that 40% of the 247 owner-operators had reported either (a) a net increase in at least one component and no net decreases in any others or (b) two or more net additions in at least two components and a decrease in just one.

Moreover, 60% of the 247 were owner-operators who had sold conservation easements to their land and who, when spending money from proceeds of the sales, directed the "largest share" to an agricultural purpose. Therefore, 75 percent of the 247 made such investments and/or were in the group of 40% noted above that expanded their operations.

**9. Were the surveyed owners of protected land preparing for the eventual transfer of ownership of the land?** Forty-seven percent reported having written succession agreements, and another 14% said they had oral agreements. The likelihood of having arranged formally for the next owner increased with the age of the current owner, although even among the 75 respondents in the age bracket of 71 years and older, just over half (56%) had one of the other form of agreement.

**10. Were the successors under the formal agreements likely to be farmers who would "use the protected land for agricultural production"?** Among all surveyed owners, 42% had successors that fit this condition. Among the owner-operators, the corresponding measure was 44%. Compared to one national and two state-level surveys about ownerships transfer, the 44% measure was better, while for one survey from Michigan it was below.

**11. All surveyed owners were asked if there was "anything about the conservation easement on your protected land that helps or hinders a relative or non-relative to become the next owner?"** Eighty percent answered "no," 16% said "yes," and the remaining 4% either "did not know" or refused to answer. Among the 16%, the most frequent explanation dealt with how in their minds the reduction in the land's market value made it easier to sell to farmers and lowered the property taxes that the next generation would have to pay.

**12. To what extent will the next generation of owners of protected land consist of "young" or "beginning" farmers at the time of transfer of ownership?** This issue was directly broached with the 213 owner-operators who had lined up a successor would who "definitely" or "probably" be a farmer intent on using the land for agricultural purposes. Fifty-two percent of the 213 said that their successor would likely be a "young" or "beginning" farmer. In the interview "young" was defined as no more than 35 years old and "beginning" as having been an operator for no more than 10 years.

**13. Were there other ways that the easement programs supported by the FRPP have helped young or beginning farmers?** The survey found three other ways. Some respondents were young or beginning farmers when they sold easements to land they owned. Others purchased or inherited protected land during those time periods in their lives. And a third group rented agricultural land under easements that might otherwise have been developed. Considering these three ways and the fourth discussed in the previous paragraph, we found that 35% of the entire

sample of 506 owners had either benefited, themselves, or were providing benefits (i.e., renting to young or beginning farmers or having designated them as successors).

**14. What were the goals of owners who sold easements to their agricultural land?** The most frequently given type of goal, found in the statements of 327 (or 68%) of the 479 sellers, was *to save land for agriculture.* The type of goal with the second highest frequency (reported by 28%) was *to obtain money from the easement sale to meet personal or family needs.* Third in importance (19%) was *to protect the land because it was part of the owner's family heritage* (e.g., the land had been in the family for generations). Fourth, shared by 16% of the surveyed owners, were goals for *improving the farm/ranch business.*

**15. To what extent did the owners believe they had achieved their goals?** Close to three-quarters (72%) of the 479 respondents chose the most positive response; they had achieved their goals "to a great extent" (Table 8.3). Another 22% selected "to a moderate extent," leaving just 6% in the "slight," "no extent," and "don't know/no answer" categories.

**16. Near the end of the interview, respondents were asked to rate their experiences as "being an owner of farmland or ranchland protected through a conservation easement?"** Nearly six in 10 (58%) of the surveyed owners said that they were "very satisfied. Thirty-eight percent were "satisfied" and only 2.5% "dissatisfied" or "very dissatisfied."

# IMPACTS OF THE FEDERAL FARM AND RANCH LANDS PROTECTION PROGRAM:

## An Assessment Based on Interviews with Participating Landowners

American Farmland Trust

# IMPACTS OF THE FEDERAL FARM AND RANCH LANDS PROTECTION PROGRAM:

## An Assessment Based on Interviews with Participating Landowners

## INTRODUCTION

America's working lands are at risk. In just 25 years, 23 million acres of farm and ranch land were converted to developed uses.[1] That's an area about the size of Indiana. Between 1982 and 2007, the nation also lost about 18 million acres of "other rural land," which included land devoted to farmsteads, agricultural structures and windbreaks, but primarily encompassed forest land—an integral part of commercial farms in some regions of the country. This period of unprecedented development accounts for more than one-third of all the land ever developed in the history of the United States. And we converted relatively more of our best land—prime soils that require fewer inputs and are less prone to erosion.[2] Looking forward, land that grows our food is especially vulnerable. Ninety-one percent of fruits, tree nuts and berries and 78 percent of vegetables are produced in urban-influenced counties where development pressure is most intense.[3]

State and local governments have led the response to farmland loss, creating a range of policies and programs. A key approach is the use of agricultural conservation easements. Since 1977, 31 states have authorized purchase of agricultural conservation easement (PACE) programs to buy

easements from willing landowners to keep land available for agriculture. Twenty-seven states have active state-level programs, and at least 91 independently funded local PACE programs are active in 20 states.[4] Private land trusts also protect farm and ranch land. Land trusts acquire or help other entities acquire land or conservation easements, and at least 192 have protected land for agriculture. Altogether, public programs and land trusts have protected 5 million acres of farm and ranch land nationwide.[5]

These efforts have been advanced by the federal Farm and Ranch Lands Protection Program (FRPP). The FRPP is a USDA Natural Resources Conservation Service (NRCS) program that provides matching funds to state and local PACE programs, land trusts and tribal governments to buy conservation easements on farm and ranch land. To date the NRCS has invested about $1.2 billion, contributing to the protection of nearly 1.1 million acres nationwide.[6]

Beyond these accomplishments, the NRCS, farmland protection advocates and policymakers sought evidence that the FRPP was achieving its stated purpose and delivering public benefits.[7] More specifically, has the FRPP improved agricultural viability? Has the program spurred on-farm conservation? Does the FRPP help the next generation of farmers gain access to land? To answer these questions, American Farmland Trust (AFT), with support from the NRCS, initiated a study based on interviews with participating landowners. AFT collaborated with Dr. J. Dixon Esseks at the Center for Great Plains Studies of the University of Nebraska-Lincoln to assess the impacts of the FRPP.

## METHODS

To examine program outcomes, Dr. Esseks organized interviews with owners of land protected by conservation easements purchased in part with FRPP funds. AFT worked with Dr. Esseks to develop the questionnaire, coordinating input from the NRCS and selected public easement acquisition programs, land trusts and members of Congress. AFT also provided previous surveys of landowners enrolled in state farmland protection programs to help shape survey questions.

The scope of the study and limited availability of contact information barred a complete census. NRCS easement division staff supplied contact information for landowners who had protected their land between October 1, 2005, and January 2012. Dr. Esseks removed duplicates and then drew a series of random samples from a list of 1,156 unique landowners. Trained staff at the University's Bureau of Sociological Research conducted interviews with 506 landowners, achieving a 54 percent response rate. The randomly drawn sample is representative of the full list, and findings may be generalized to program participants during the same period.

Dr. Esseks compiled and analyzed the survey responses and prepared a full technical report. AFT drew selected findings for this summary. The full report is available on AFT's Farmland Information Center website: **www.farmlandinfo.org**.

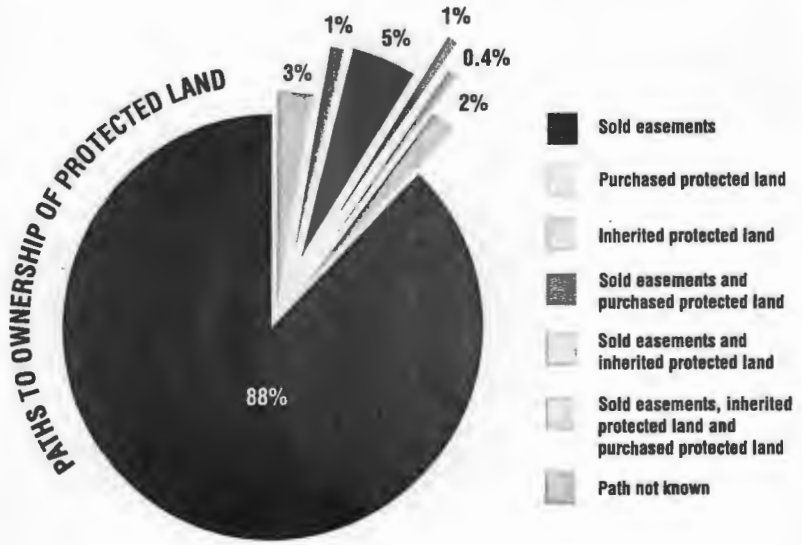
## CHARACTERISTICS OF PARTICIPATING LANDOWNERS AND FARMS

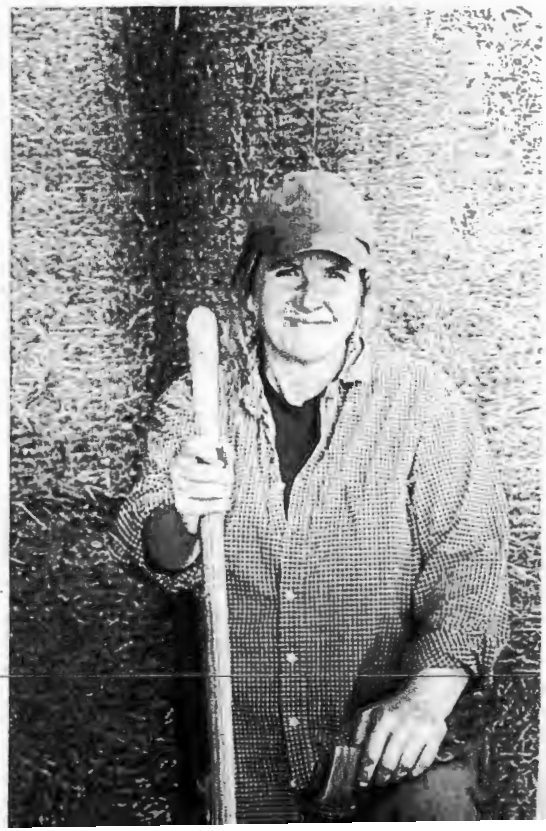
**Paths to Ownership of Protected Land**
Participating landowners either sold an agricultural conservation easement, purchased protected land, inherited protected land or some combination of these paths. Eighty-eight percent had sold easements on their land and had not acquired protected land in any other way. Respondents who had acquired protected land exclusively through purchase or inheritance accounted for 3 percent and 0.4 percent of all respondents, respectively. Ninety-five percent of the surveyed landowners had sold easements on at least some of their protected agricultural land.

**Landowner Demographics**
Seventy-six percent of all respondents were men and 24 percent were women. Among the 356 owner-operators, 81 percent were men, and 19 percent were women. The percentage of women operators slightly outpaced the percentage of women principal operators reported in the 2007 Census of Agriculture (14 percent).

Seventy-one percent of the landowners who participated in the study were 56 or older; 41 percent were 66 or older. Only 25 percent were 36 to 55, and just 3 percent were 35 or younger.

**Location of Farms and Ranches**
Overall, the regional breakdown of survey participants tracks the distribution of program participants from the full list supplied by the NRCS. Interviews were conducted with 240 landowners from the Northeast, 67 from Appalachia, 56 from the Mountain States, 46 from the Corn Belt, 35 from the Pacific States, 30 from the Lake States, 20 from the Southeast, 10 from the Northern Plains and two from the Southern Plains.[8]



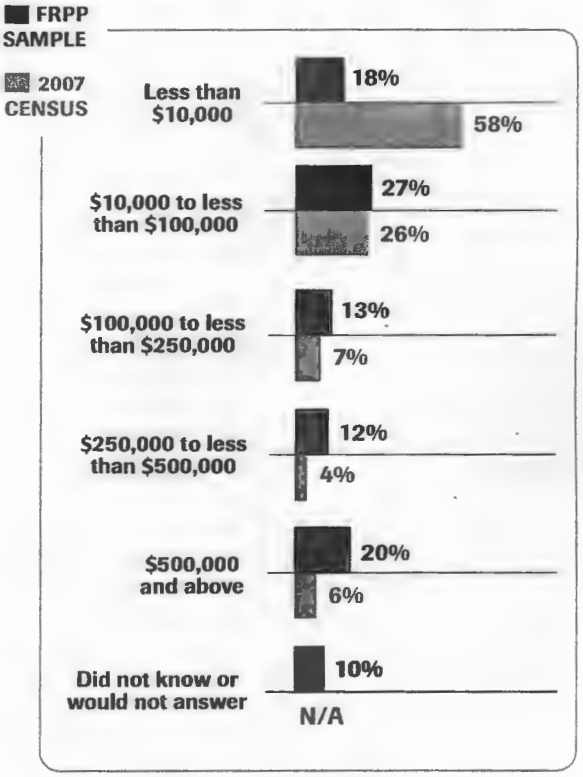
**Farm Size**
The average size of protected agricultural properties was 352 acres and the median was 140 acres. In comparison, the 2007 Census of Agriculture reported that the average farm size was 418 acres and the median was 80 acres.

**Products Raised**
Among the 356 owner-operators, 84 percent raised field crops such as corn, soybeans, wheat, vegetables and hay and 64 percent used their land for pasture or rangeland for livestock. Other common uses included non-harvested cropland (24 percent), wooded acres that produce timber products or maple syrup (19 percent), fruits, nursery or greenhouse crops (11 percent) and energy crops like switchgrass, wheat straw and maize (5 percent).

**Sales**
Gross sales reported by the owner-operators were higher on a proportional basis than sales reported in the 2007 Census of Agriculture. Relatively more operations among the FRPP sample fell in the three higher sales ranges, and a smaller proportion of the FRPP sample reported operations generating less than $10,000 in annual revenue.

**Direct Marketing**
Among owner-operators, 42 percent reported that they have marketed agricultural products directly to consumers. Forty percent have sold goods to individuals, 9 percent directly to groups of consumers (at restaurants, schools and hospitals) and 7 percent to both. More than one-quarter (26 percent) of the owner-operators surveyed directly marketed *food* to consumers. By way of comparison, only 6 percent of the nation's 2.2 million operators sold food items directly to consumers according to the 2007 Census of Agriculture.

**Percentage of Operators Reporting Gross Cash Receipts**



## FINDINGS

### I. FRPP KEEPS LAND AVAILABLE FOR AGRICULTURE

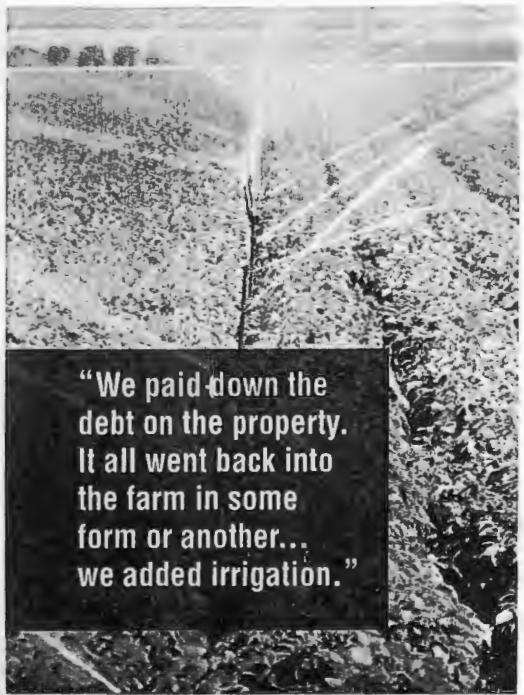
Most FRPP-protected land is in active production; 96 percent of landowners said that at least some of their protected acreage was in active agricultural use. Eighty-five percent reported that at least half of their conserved acres were in active agricultural use, and 70 percent reported at least three-quarters were being farmed. Nearly half (48 percent) reported that all of their easement land was in production in 2011. The Mountain States had the highest share of owners of protected properties (71 percent) reporting all of their land in agricultural production.

Because wooded areas used to raise agricultural products like Christmas trees, maple syrup or timber were not included, these findings likely undercount agricultural use in regions where significant proportions of active farms are forested. According to the 2007 Census of Agriculture, woodland accounts for 25 percent of all farmland in the Northeast, and for five of the 11 Northeastern states, woodland comprises more than 40 percent of total agricultural acres. Wooded land can be enrolled in the FRPP subject to certain limits.[9] Therefore, it is not surprising that tree-covered regions like the Northeast and Appalachia appear to have relatively less active agricultural production occurring on FRPP-protected farms.

What's more, 70 percent of the surveyed owners are farmers or ranchers. The proportion of operators is even higher among respondents who *purchased* protected farms:

- 75 percent of respondents who only purchased protected land were operators;
- 92 percent of individuals who sold an easement and purchased protected land were operators; and
- The two individuals who sold easements, inherited protected land *and* purchased protected land were both operators.

These results confirm that protected land remains available to bona fide producers for agriculture, even among subsequent owners.




### Percentage of Protected Properties by Proportion in Agricultural Use and Farm Production Region

| Farm Production Region | 0% | More than 0% to less than 25% | 25% to less than 50% | 50% to less than 75% | 75% to less than 100% | 100% |
|---|---|---|---|---|---|---|
| Appalachia | 8% | 0% | 6% | 19% | 24% | 43% |
| Corn Belt | 4% | 0% | 4% | 2% | 33% | 57% |
| Lake States | 0% | 3% | 3% | 10% | 40% | 43% |
| Mountain States | 3% | 2% | 2% | 4% | 18% | 71% |
| Southeast | 5% | 0% | 5% | 5% | 30% | 55% |
| Northeast | 3% | 6% | 11% | 23% | 18% | 39% |
| Northern & Southern Plains | 8% | 8% | 0% | 8% | 17% | 58% |
| Pacific States | 6% | 0% | 3% | 6% | 20% | 66% |
| All Respondents | 4% | 4% | 7% | 15% | 22% | 48% |

## II. FRPP IMPROVES AGRICULTURAL VIABILITY

The FRPP supports agricultural viability in several ways. First, it provides liquid capital for farmers to invest in their operations. Eighty-four percent of landowners who sold easements on their land spent at least some of the proceeds for agricultural purposes. Nearly half used the money to construct, expand or repair agricultural buildings or structures including barns, silos, greenhouses, storage sheds, fences or buildings to process or market agricultural products. More than a third used the proceeds to repay loans on agricultural land they already owned. Twenty percent of owners who sold easements used funds to install or expand conservation practices.

Close to two-thirds (65 percent) ranked an agricultural purpose as either their first or second largest expenditure. More than half reported that spending related to agriculture represented their *largest* expenditure. The average easement payment received by these landowners was $535,287.

Participants reported making changes to strengthen their operations since they first owned protected land. The study compared several indicators in the first year the operator farmed protected land to the most recent full production year (2011). Among the 247 respondents who fell into this subgroup:

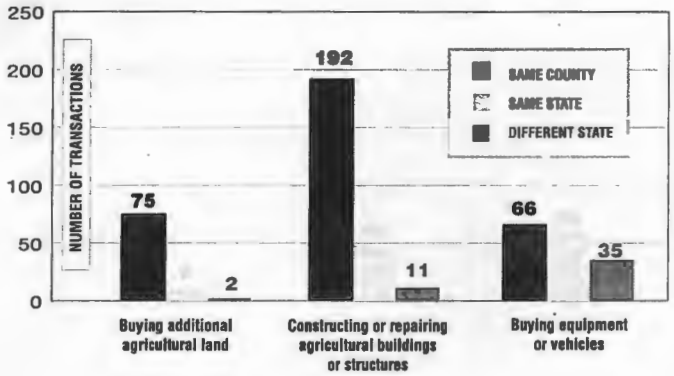
- 21 percent had increased their total acres while just 9 percent had decreased their acreage; among those who added acres, more than half nearly doubled the size of their farms;
- 19 percent increased the number of different outlets used to sell their products, and only 7 percent dropped one or more;
- 11 operators started marketing products directly to groups of consumers, while only one operator dropped this form of marketing;
- 36 started using a new management system (such as nutrient management, pest management, precision farming, organic farming or grazing systems) since the land had been protected, while only three producers discontinued a specific management system;
- 3 percent of operators expanded the number of cost-saving energy facilities, including solar panels, wind turbines, geothermal heat pumps or manure digester systems, and none stopped using them since protecting their land.

It's likely that proceeds from easement sales helped pay for these changes. Nearly all (95 percent) of the subgroup of 247 operators had sold easements, and 64 percent of those who did said that they spent the largest share of their proceeds on farm-related purposes.

### How Respondents Spent Easement Proceeds

| | Number of Respondents | Percentage Reporting |
|---|---|---|
| Meeting personal or household needs or purposes | 330 | 69% |
| Constructing, expanding or repairing agricultural-use buildings or other structures on their land | 231 | 48% |
| Repaying loans on agricultural land they already owned | 179 | 37% |
| Buying equipment or vehicles for farming or ranching or for processing or marketing their agricultural products | 134 | 28% |
| Installing or expanding conservation practices | 97 | 20% |
| Buying additional agricultural land | 84 | 18% |
| Starting up or expanding the use of a management system | 49 | 10% |
| Other expenditures on agricultural operations | 24 | 5% |
| Landowners who reported spending at least some of the proceeds for agricultural purposes | 403 | 84% |

## Where Easement Proceeds Were Spent




The FRPP also strengthens the agricultural sector in communities with participating farms. Easement proceeds spent on agricultural purposes tend to be spent locally (i.e., in the same county as the protected land). Money was invested in agricultural land—reducing or eliminating debt to build equity or acquiring new land—and spent at agriculturally related businesses.

- 96 percent of landowners who paid down loans on agricultural land said it was the protected farm or other agricultural land located in the same county;
- 89 percent of respondents who used proceeds to buy additional agricultural land purchased it in the same county;
- 83 percent who reported expenditures on building, expanding or repairing agricultural structures said the work was undertaken by individuals or contractors from the same county; and
- 49 percent of landowners who bought equipment or vehicles purchased them in the same county.

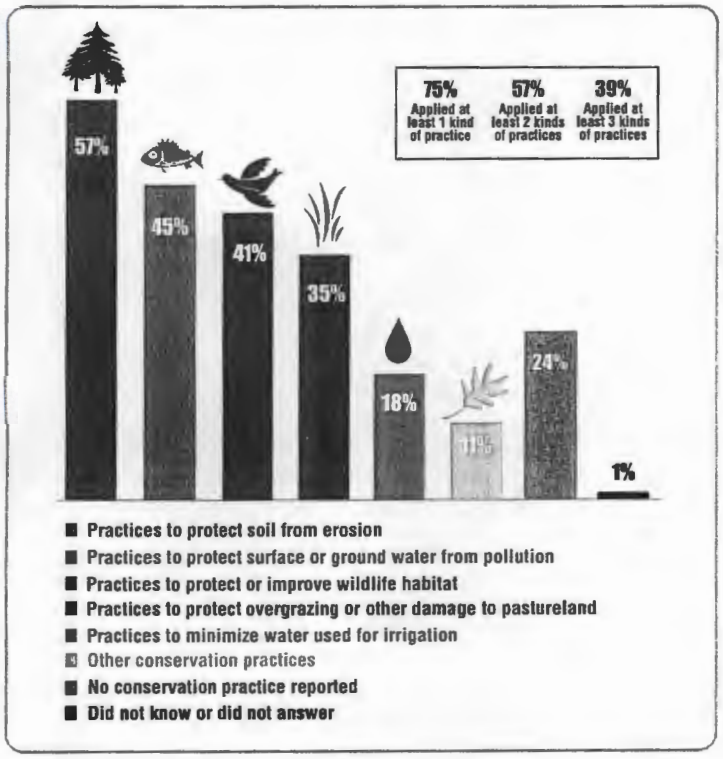
Lastly, the program helps partners assemble blocks of protected land. The research found that protected farms and ranches tend to be near additional agricultural land or open space. Sixty-two percent of all respondents said that three-quarters or more of the land within a mile of their protected land was either in agricultural use or was "other protected land, like a park." Even in the densely populated Northeast, 52 percent of respondents reported that 75 percent or more of the land near their protected property was being farmed or was open. Creating core agricultural areas supports a range of agricultural activities, sustains vital ancillary businesses, helps head off land use conflicts and holds down operating costs.

### III. FRPP ENCOURAGES ON-FARM CONSERVATION

More than two-thirds of the 506 landowners reported having a *written* conservation plan at the time of the survey. Ninety-two percent of this group reported at least some progress in implementing the plan, and 50 percent said it was "completely applied." In addition, 75 percent of landowners reported the application of at least one conservation practice and many participants applied multiple practices.[10] More than two-thirds of the owner-operators in the FRPP sample reported implementing practices to prevent soil erosion or to protect water quality. In comparison, only 23 percent of operators responding to the 2007 Census of Agriculture said they used conservation methods to achieve comparable outcomes. On average, owner-operators among the FRPP sample applied more practices than non-operators (2.3 versus 1.5 out of six kinds discussed).

The research suggests a few reasons for the high proportions of conservation plans, rates of plan implementation and adoption of conservation practices. First, FRPP rules require plans for highly erodible land and certain forested parcels. Landowners

## Conservation Practices Applied to FRPP-Protected Agricultural Land in 2011




were not asked if these rules applied to their protected land in order to obtain more frank responses about degree of plan implementation. However, among the respondents who said they were "encouraged" to begin new conservation practices since the execution of the easement, 11 verified that the new practices were required to manage highly erodible soils or forest land.

Second, among the 122 landowners who initiated new practices since the execution of the easement, 48 percent reported that they had received "encouragement" from the farmland protection program (i.e., the public or private entity that executed the easement). In addition to FRPP rules, forms of "encouragement" included education about the need for on-farm conservation, technical assistance in the development of a conservation plan or application of specific practices, and information about funding sources to implement recommended practices.

Lastly, funds from easement sales help landowners apply practices. Among the landowners who sold easements, 20 percent used proceeds to help install or expand conservation practices.

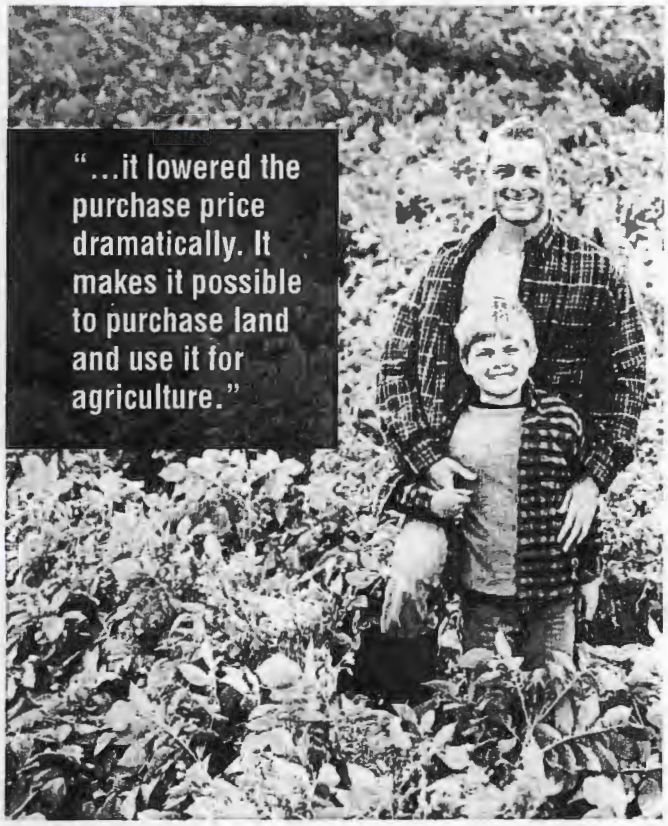
### IV. FRPP HELPS FARMERS GAIN ACCESS TO LAND

The study highlights a few ways the FRPP helps farmers obtain land. First, the program helps finance land acquisition. As mentioned earlier, 55 percent of landowners who sold easements spent proceeds on repaying loans on agricultural land they already owned or buying additional land.

Furthermore, the FRPP helps make land more affordable at the outset. Among the 43 owners who *purchased* protected land, 65 percent reported that the price was lower than comparable unprotected land; 39 percent said the price was "much lower" and 26 percent answered "somewhat lower." Seventeen of the 43 had rented the protected land before purchasing it. When the purchasers were asked *why* they bought protected land, 30 percent said they bought the land because it was affordable. Purchasers also reported that the easement helped them secure financing. Among the 37 percent who thought the easement helped them get a loan, six said it did so by reducing the price of the land.

The research found that among respondents with succession plans, most planned to transfer their land to farmers. Among the 61 percent of respondents with written or oral agreements, 69 percent reported that the next owner would either "definitely" or "probably" be a farmer who will use the protected land for agricultural production. Fifty-eight percent of owner-operators had either a written or oral agreement; among this group, the percentage saying the next owner would likely be a farmer who would use the land for agriculture climbed to 75 percent. Notably, 92 percent of the identified next generation operators among all landowners were reported to be children or other relatives.

FRPP may also help facilitate transfers. Of the 79 landowners who said the easement had an effect on succession, four in 10 offered positive comments. For example, eight owners said the easement reduces the market value of the land, which makes it easier to sell to farmers, nine noted that the easement helps reduce taxes on the land for the next generation and six said the easement proceeds made it easier to pass on the farm intact because they were able to improve the operation and/or create a retirement account. Five percent of respondents who sold easements explicitly reported that one of their goals for participating in the program was to facilitate transfer of ownership to the next generation.




## How Does FRPP Help Young and Beginning Farmers?

The FRPP helps young and beginning farmers gain access to land.[11] Twelve young and/or beginning farmers purchased protected land, and 19 landowners reported that they rent their protected land to young and/or beginning farmers. Fifty-six young and/or beginning farmers sold easements. Proceeds may have been used to pay down debt on farmland, acquire additional land or make improvements to their operations. Furthermore, 111 owners with identified farmer successors reported that the next owner would be a young or beginning farmer. All told, 35 percent of the surveyed owners reported one or more ways in which the farmland protection program had either helped them gain ground when they were "young" or "beginning farmers" or would benefit these types of farmers in the future.

### LANDOWNER SATISFACTION

Virtually all landowners, 96 percent, expressed satisfaction with being an owner of protected land; almost six out of 10 landowners were "very satisfied." Only 14 individuals were dissatisfied. Landowners were asked to supply reasons for their overall assessment. Eighty-five percent of landowners provided positive explanations, and 20 percent offered critical remarks. Fifty individuals supplied both positive and negative reasons.

The top positive explanation for their overall assessment was that the program enabled them to protect agricultural land from development. It was provided by 45 percent of all owners. The chief complaint—registered by 8 percent of participants—was the long, complicated process to sell an easement. Just 4 percent objected to easement restrictions such as limits on impervious surfaces and stream buffers.

The research also examined landowner motivations for participating in the program. More than two-thirds of landowners who sold easements said they did so to save their land for agriculture. Nineteen percent indicated that they wanted to protect the family legacy (i.e., "save a farm that had been in the family for generations"). Sixteen percent were motivated by the opportunity to free up capital that could be invested in their operation. As noted above, 5 percent told interviewers that a goal was to facilitate transfer of ownership to the next generation.

Nearly three-quarters said they had achieved their goals "to a great extent"; 22 percent said "to a moderate extent." Just 3 percent said the easement sale only enabled them to achieve their goals to a "slight" extent, and only 1 percent reported that the easement did not help them achieve their goals "at all."

Close to half (47 percent) said that they would have been "worse off" if they had not sold an easement on their property. They gave a range of reasons including being forced to sell or develop the land (14 percent), finding it financially more challenging to continue the operation (10 percent) or having to work more years before retiring or passing the land to heirs (3 percent).

## DISCUSSION

Productive farm and ranch land is an essential resource. Food production, and therefore long-term food security, depends on the availability of agricultural land. Working lands support local economies through sales of farm goods, job creation, support services and businesses, and underpin secondary markets such as food processing and distribution. Farmland also generates more in revenues than it costs in community services, paying its own way while helping to balance local budgets. Well-managed farm and ranch land provides food and habitat for wildlife, helps control flooding, absorbs and filters stormwater and aids groundwater recharge. Farm and ranch land adds to community character and quality of life.

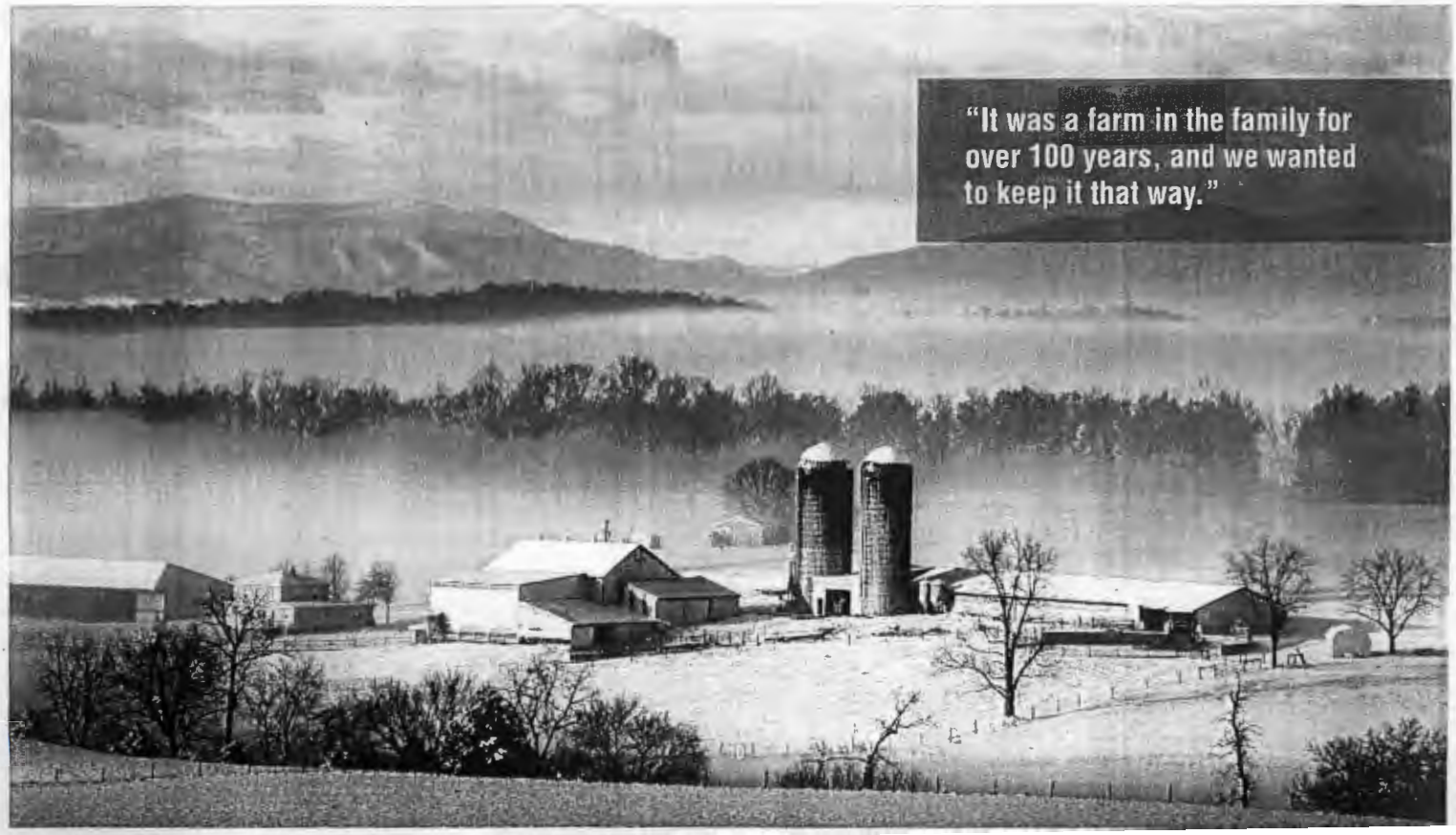
The research shows that the FRPP saves threatened agricultural land. More than a third of respondents who sold easements said that without the program their land *already would have been developed.* And land protected by FRPP is supporting serious commercial enterprises: half of the protected farms are 140 acres or more, 75 percent larger than the national median, and relatively more operators of FRPP-protected farms fall into the top sales categories.

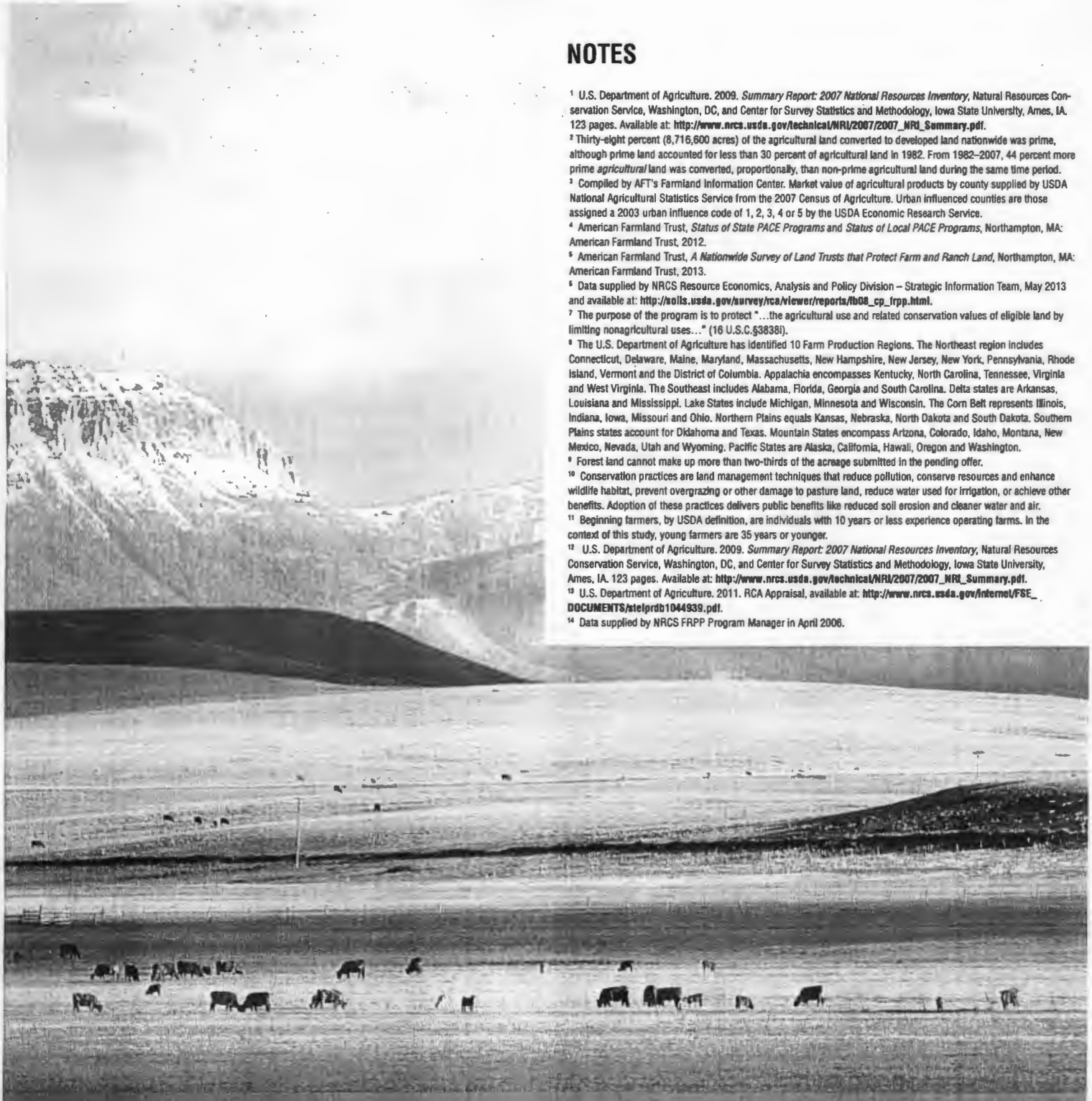
At the same time, FRPP-protected farmland delivers public benefits. Protected farms are growing food and other agricultural products for local consumers. Proceeds from easement sales are contributing to local economies, and additional conservation measures are being adopted to head off soil erosion, protect water quality and improve wildlife habitat.

Beyond these achievements, the research reveals additional program impacts that help ensure a future for farming. The sale of agricultural conservation easements gives landowners the security, motivation and means to make changes that improve the long-term profitability of their operations. Landowners' expenditures help support critical agricultural-related businesses, bolstering the viability of the entire sector. This study also suggests multiple ways the FRPP helps farmers obtain land for agriculture. Keeping farmers on the land is one of the most important farmland protection strategies, increasing the likelihood that the protected land, and even nearby unprotected agricultural land, will stay in agriculture.

Findings also show that the FRPP encourages on-farm conservation. Development is the most visible, but not the only, threat to productive farm and ranch land. Close to 1.75 billion tons of soil were lost in 2007.[12] And, 5.4 million acres in the contiguous 48 states have saline soils—heavy accumulations of salts that force farmers to abandon production.[13] FRPP requirements prompt better resource management, and funds from easement sales, coupled with information and assistance provided by PACE program and land trust staff, make more conservation possible. The FRPP addresses resource degradation to support long-term viability; tying conservation measures to permanent protection ensures that gains will not be undone by development.

The FRPP delivers unparalleled value. Every federal dollar allocated to this program is matched by an estimated two dollars[14] in landowner donations, private funds and dollars from state, local and tribal governments. The collective investment by FRPP partners makes a compelling case for future federal funding to protect working lands. The findings from this study strengthen the argument. The FRPP saves a critical resource from development, provides public benefits and addresses the underlying threats to our farm and ranch land. It is a comprehensive approach to a complex and urgent issue.





# NOTES

[1] U.S. Department of Agriculture. 2009. *Summary Report: 2007 National Resources Inventory*, Natural Resources Conservation Service, Washington, DC, and Center for Survey Statistics and Methodology, Iowa State University, Ames, IA. 123 pages. Available at: **http://www.nrcs.usda.gov/technical/NRI/2007/2007_NRI_Summary.pdf**.

[2] Thirty-eight percent (8,716,600 acres) of the agricultural land converted to developed land nationwide was prime, although prime land accounted for less than 30 percent of agricultural land in 1982. From 1982–2007, 44 percent more prime *agricultural* land was converted, proportionally, than non-prime agricultural land during the same time period.

[3] Compiled by AFT's Farmland Information Center. Market value of agricultural products by county supplied by USDA National Agricultural Statistics Service from the 2007 Census of Agriculture. Urban influenced counties are those assigned a 2003 urban influence code of 1, 2, 3, 4 or 5 by the USDA Economic Research Service.

[4] American Farmland Trust, *Status of State PACE Programs* and *Status of Local PACE Programs*, Northampton, MA: American Farmland Trust, 2012.

[5] American Farmland Trust, *A Nationwide Survey of Land Trusts that Protect Farm and Ranch Land*, Northampton, MA: American Farmland Trust, 2013.

[6] Data supplied by NRCS Resource Economics, Analysis and Policy Division – Strategic Information Team, May 2013 and available at: **http://soils.usda.gov/survey/rca/viewer/reports/fb08_cp_frpp.html**.

[7] The purpose of the program is to protect "…the agricultural use and related conservation values of eligible land by limiting nonagricultural uses…" (16 U.S.C.§3838i).

[8] The U.S. Department of Agriculture has identified 10 Farm Production Regions. The Northeast region includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont and the District of Columbia. Appalachia encompasses Kentucky, North Carolina, Tennessee, Virginia and West Virginia. The Southeast includes Alabama, Florida, Georgia and South Carolina. Delta states are Arkansas, Louisiana and Mississippi. Lake States include Michigan, Minnesota and Wisconsin. The Corn Belt represents Illinois, Indiana, Iowa, Missouri and Ohio. Northern Plains equals Kansas, Nebraska, North Dakota and South Dakota. Southern Plains states account for Oklahoma and Texas. Mountain States encompass Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah and Wyoming. Pacific States are Alaska, California, Hawaii, Oregon and Washington.

[9] Forest land cannot make up more than two-thirds of the acreage submitted in the pending offer.

[10] Conservation practices are land management techniques that reduce pollution, conserve resources and enhance wildlife habitat, prevent overgrazing or other damage to pasture land, reduce water used for irrigation, or achieve other benefits. Adoption of these practices delivers public benefits like reduced soil erosion and cleaner water and air.

[11] Beginning farmers, by USDA definition, are individuals with 10 years or less experience operating farms. In the context of this study, young farmers are 35 years or younger.

[12] U.S. Department of Agriculture. 2009. *Summary Report: 2007 National Resources Inventory*, Natural Resources Conservation Service, Washington, DC, and Center for Survey Statistics and Methodology, Iowa State University, Ames, IA. 123 pages. Available at: **http://www.nrcs.usda.gov/technical/NRI/2007/2007_NRI_Summary.pdf**.

[13] U.S. Department of Agriculture. 2011. RCA Appraisal, available at: **http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1044939.pdf**.

[14] Data supplied by NRCS FRPP Program Manager in April 2006.


## Acknowledgements

This project was made possible through a contribution agreement with USDA Natural Resources Conservation Service and support from the members of American Farmland Trust. AFT appreciates thoughtful review by NRCS easement division staff. Thank you to the 506 agricultural landowners who agreed to be interviewed and who permanently protected their land to keep it available for farming.


**American Farmland Trust** is the nation's leading conservation organization dedicated to protecting farmland, promoting sound farming practices and keeping farmers on the land. For more information, visit **www.farmland.org** or call (202) 331-7300.

The **Natural Resources Conservation Service** is an agency within the United States Department of Agriculture that works with landowners through conservation planning and assistance to benefit the soil, water, air, plants and animals for productive lands and healthy ecosystems.

The **Farmland Information Center** is a clearinghouse for information about farmland protection and stewardship. It is a project of AFT maintained on behalf of the USDA NRCS. Visit **www.farmlandinfo.org** or call (800) 370-4879.

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NRCS

# Status of State PACE Programs

As of May 2013, 27 states have state-level purchase of agricultural conservation easement (PACE) programs. Four states—Arizona, Georgia, Hawaii and Missouri—have authorized PACE but do not yet have programs. Montana had a state-level program that was discontinued in 2003 when state authorization expired. This table displays the status and summarizes important information about farm and ranch land protection programs in 28 states that have funded easement acquisitions. For a program to be included, the protection of agricultural lands must be one of its core purposes, accomplished primarily by compensating landowners for the value of the easement.

Some programs (e.g., Delaware and Massachusetts) purchase and hold easements directly. Others also have the authority to acquire and co-hold easements with partners (e.g., county governments). A few programs (e.g., New York and Virginia) only provide grants to eligible entities, such as local governments and land trusts, to buy easements. In Alabama and New Mexico, the state's role is limited to holding and monitoring easements; other entities execute the projects.

## Explanation of Column Headings

### Year of Inception / Year of First Acquisition

"Year of Inception" is the year in which the PACE program was authorized. "Year of First Acquisition" is the year in which the program acquired its first easement.

### Easements or Restrictions Acquired

Number of agricultural conservation easements or conservation restrictions acquired through the state program. This number does not necessarily reflect the total number of farms/ranches protected because some programs acquire a property in stages and/or may hold multiple easements on the same farm/ranch. Some state programs do not hold easements but instead provide funds for easement purchases to local governments or land trusts.

### Acres Protected

Number of acres protected by the program.

### Land in Farms

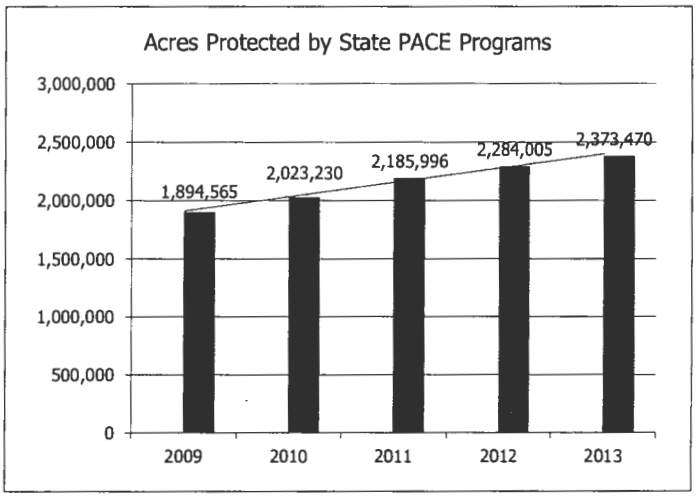
Acres of land in farms as reported in the 2007 Census of Agriculture released by the United States Department of Agriculture's National Agricultural Statistics Service (USDA-NASS). For the purposes of the Census of Agriculture, USDA-NASS defines a "farm" as any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the census year.

### Program Funds Spent to Date

Dollars spent by each program to acquire easements on farms/ranches. This amount may include unspent funds dedicated for installment payments on completed projects. Unless otherwise noted, these figures do not reflect incidental land acquisition costs, such as appraisals, insurance and recording fees, or the administrative costs of running the program. These figures do not include additional funds contributed by federal programs, local governments (counties and municipalities), private land trusts, foundations and/or individuals.

### Additional Funds Spent to Date

Funds contributed toward state program acquisitions by federal programs, local governments, private land trusts, foundations and/or individuals (see "Funding Sources Used to Date").




*continued on page 6*

# PURCHASE OF AGRICULTURAL CONSERVATION EASEMENTS

| State | | Year of Inception / Year of First Acquisition | Easements or Restrictions Acquired | Acres Protected | Land in Farms (acres) | Program Funds Spent to Date |
|---|---|---|---|---|---|---|
| **Alabama** | | | | | | |
| | Alabama Department of Agriculture and Industries | 2004/2005 | 21 | 4,591 | 9,033,537 | $1,636,866 |
| **California** | | | | | | |
| | California Farmland Conservancy Program | 1995/1997 | 167 | 55,576 | 25,364,695 | $83,654,226 ^ |
| **Colorado** | | | | | | |
| | Great Outdoors Colorado △ | 1992/1995 | 370 | 589,910 | 31,604,911 | $170,561,460 ^ |
| **Connecticut** | | | | | | |
| | Connecticut Farmland Preservation Program | 1978/1979 | 296 | 38,546 | 405,616 | $133,300,000 |
| **Delaware** | | | | | | |
| | Delaware Agricultural Lands Preservation Program | 1991/1996 | 716 | 107,754 | 510,253 | $140,987,690 |
| **Florida** | | | | | | |
| | Rural and Family Lands Protection Program | 2001/2001 | 9 | 5,035 | 9,231,570 | $10,721,408 ^ |
| **Kentucky** | | | | | | |
| | Purchase of Agricultural Conservation Easement Corporation | 1994/1998 | 156 | 31,792 | 13,993,121 | $13,823,269 |
| **Maine** | | | | | | |
| | Maine Farmland Protection Program | 1999/1990 | 36 | 8,671 | 1,347,566 | $8,017,500 ^ |
| **Maryland** | | | 2,631 | 361,847 | 2,051,756 | $672,375,706 ^ |
| | Maryland Agricultural Land Preservation Foundation | 1977/1980 | 2,099 | 285,701 | | $434,111,776 |
| | Rural Legacy Program | 1997/1999 | 532 | 76,146 | | $238,263,930 ^ |
| **Massachusetts** | | | | | | |
| | Agricultural Preservation Restriction Program | 1977/1980 | 832 | 69,035 | 517,879 | $214,214,124 ^ |
| **Michigan** | | | | | | |
| | Farmland and Open Space Preservation Program | 1994/1994 | 115 | 22,409 | 10,031,807 | $31,127,250 |
| **Montana** | | | | | | |
| | Montana Agricultural Heritage Program × | 1999/2000 | 8 | 9,923 | 61,388,462 | $888,000 |
| **New Hampshire** | | | 104 | 13,590 | 471,911 | $16,223,738 |
| | Agricultural Lands Preservation Program | 1979/1980 | 31 | 2,864 | | $5,000,000 |
| | Land Conservation Investment Program × | 1987/1988 | 36 | 6,232 | | $5,349,008 |
| | Land and Community Heritage Investment Program ~ (2012) | 2000/2001 | 37 | 4,494 | | $5,884,730 |
| **New Jersey** | | | | | | |
| | New Jersey Farmland Preservation Program | 1983/1985 | 2,143 | 201,146 | 733,450 | $957,119,571 |
| **New Mexico** | | | | | | |
| | New Mexico Natural Heritage Conservation Program | 2010/2010 | 3 | 5,930 | 43,238,049 | $850,000 |

Note: For explanation of column headings and symbols, please see fact sheet text.

# STATUS OF STATE PROGRAMS AS OF JANUARY 2013

| Additional Funds Spent to Date | Program Funds Available | Program Funds Available Per Capita | Outstanding Applications | Funding Sources Used to Date | State |
|---|---|---|---|---|---|
| | | | | | **Alabama** |
| $3,273,731 | N/A | N/A | N/A | Appropriations, FRPP | |
| | | | | | **California** |
| $62,489,996 | $2,486,000 | $0.07 | 7 | Appropriations, bonds, mitigation fees, private contributions, FRPP | |
| | | | | | **Colorado** |
| $399,269,161 | $23,000,000 | $4.43 | 14 | Local government contributions, lottery proceeds, FRPP | |
| | | | | | **Connecticut** |
| $32,568,000 | $20,000,000 | $5.57 | 100 | Bonds, local government contributions, private contributions, recording fees, FRPP | |
| | | | | | **Delaware** |
| $53,913,583 | $4,000,000 | $4.36 | 140 | Appropriations, bonds, lawsuit settlement funds, license plate revenue, local government contributions, private contributions, real estate transfer tax, transportation funding, FRPP | |
| | | | | | **Florida** |
| $1,374,825 | $2,087,454 | $0.11 | 30 | Appropriations, bonds, local government contributions, FRPP | |
| | | | | | **Kentucky** |
| $7,451,666 | N/A | N/A | N/A | Appropriations, bonds, tobacco settlement funds, ACUB, FRPP | |
| | | | | | **Maine** |
| $8,173,252 | $4,451,622 | $3.35 | N/A | Appropriations, bonds, credit card royalties, local government contributions, private contributions, FRPP | |
| $194,572,841 | $24,988,920 ¤ | $4.25 | 2 | | **Maryland** |
| $182,526,595 | $16,947,141 | | 2 | Appropriations, bonds, local government contributions, private contributions, property tax relief program withdrawal penalties, real estate transfer tax, FRPP | |
| $12,046,246 | $8,041,779 ¤ | | 0 | Appropriations, bonds, local government contributions, private contributions, real estate transfer tax, FRPP | |
| | | | | | **Massachusetts** |
| $85,686,660 | $13,430,000 | $2.02 | 94 | Appropriations, bonds, local government contributions, mitigation fees, private contributions, transportation funding, FRPP | |
| | | | | | **Michigan** |
| $8,645,655 | $0 | $0.00 | 0 | Local government contributions, private contributions, property tax relief program withdrawal penalties, FRPP | |
| | | | | | **Montana** |
| $1,420,710 | $0 | $0.00 | 0 | Appropriations, FRPP | |
| $17,258,218 | N/A | N/A | N/A | | **New Hampshire** |
| $140,000 | $0 | | 0 | Appropriations, local government contributions, FRPP | |
| $0 | $0 | | 0 | Bonds | |
| $17,118,218 | N/A | | N/A | Appropriations, recording fees, FRPP | |
| | | | | | **New Jersey** |
| $550,805,889 | $207,496,185 | $23.41 | 350 | Appropriations, bonds, local government contributions, private contributions, sale of fee-simple purchased properties, state sales and use tax, FRPP | |
| | | | | | **New Mexico** |
| $1,200,000 | $0 | $0.00 | N/A | Appropriations, FRPP | |

# PURCHASE OF AGRICULTURAL CONSERVATION EASEMENTS

| State | | Year of Inception / Year of First Acquisition | Easements or Restrictions Acquired | Acres Protected | Land in Farms (acres) | Program Funds Spent to Date |
|---|---|---|---|---|---|---|
| **New York** | | | | | | |
| | New York State Agricultural and Farmland Protection Program ~ (additional funds spent to date reported 2008) | 1996/1998 | 209 | 47,843 | 7,174,743 | $119,204,241 ^ |
| **North Carolina** | | | | | | |
| | Agricultural Development and Farmland Preservation Program | 1986/1999 | 81 | 13,123 | 8,474,671 | $12,902,746 |
| **Ohio** | | | | | | |
| | Agricultural Easement Purchase Program ❖ | 1999/1999 | 287 | 50,107 | 13,956,563 | $36,048,202 |
| **Pennsylvania** | | | | | | |
| | Pennsylvania Agricultural Conservation Easement Purchase Program | 1988/1989 | 4,364 | 470,155 | 7,809,244 | $853,000,000 |
| **Rhode Island** | | | | | | |
| | Purchase of Farmland Development Rights Program | 1981/1985 | 96 | 6,830 | 67,819 | $30,221,000 |
| **South Carolina** | | | | | | |
| | South Carolina Conservation Bank | 2002/2004 | 35 | 11,598 | 4,889,339 | $11,236,304 |
| **Texas** | | | | | | |
| | Texas Farm and Ranch Lands Conservation Program | 2005/2005 | 2 | 2,300 | 130,398,753 | $2,200,000 |
| **Utah** | | | 63 | 79,082 | 11,094,700 | $12,933,172 |
| | Critical Agricultural Land Conservation Fund | 1999/2001 | 26 | 15,483 | | $456,000 |
| | LeRay McAllister Critical Lands Conservation Fund | 1999/2000 | 37 | 63,599 | | $12,477,172 |
| **Vermont** | | | | | | |
| | Vermont Housing and Conservation Board, Farmland Preservation Program | 1987/1987 | 593 | 142,920 | 1,233,313 | $65,608,150 |
| **Virginia** | | | 60 | 12,742 | 8,103,925 | $8,742,253 ^ |
| | Department of Conservation and Recreation, Virginia Land Conservation Foundation | 2000/2001 | 17 | 7,009 | | $3,440,094 ^ |
| | Office of Farmland Preservation, Matching Grant Program | 2001/2008 | 43 | 5,733 | | $5,302,159 ^ |
| **Washington** | | | | | | |
| | Farmland Preservation Program ~ (2012) | 2007/2008 | 25 | 3,048 | 14,972,789 | $8,249,647 ^ |
| **West Virginia** | | | | | | |
| | West Virginia Agricultural Land Protection Authority | 2000/2009 | 11 | 2,843 | 3,697,606 | $1,701,875 |
| **Wisconsin** | | | | | | |
| | Purchase of Agricultural Conservation Easements Program | 2009/2011 | 17 | 5,124 | 15,190,804 | $4,824,076 ^ |
| **STATE TOTALS** | | | **13,450** | **2,373,470** | **436,988,852** | **$3,622,372,474 ^** |

Note: For explanation of column headings and symbols, please see fact sheet text.

# STATUS OF STATE PROGRAMS AS OF JANUARY 2013

| Additional Funds Spent to Date | Program Funds Available | Program Funds Available Per Capita | Outstanding Applications | Funding Sources Used to Date | State |
|---|---|---|---|---|---|
| | | | | | **New York** |
| $44,270,029 | $12,000,000 | $0.61 | 0 | Bonds, bottle bill revenue, license plate fees, local government contributions, real estate transfer tax, FRPP | |
| | | | | | **North Carolina** |
| $55,614,319 | $2,289,100 | $0.23 | 20 | Appropriations, local government contributions, private contributions, FRPP | |
| | | | | | **Ohio** |
| $11,773,147 | $6,409,663 | $0.56 | 27 | Bonds, local government contributions, private contributions, FRPP | |
| | | | | | **Pennsylvania** |
| $483,100,000 | $57,000,000 | $4.47 | 2,000 | Appropriations, bonds, cigarette tax, interest on securities, local government contributions, municipal landfill fees, property tax withdrawal penalties, FRPP | |
| | | | | | **Rhode Island** |
| $44,905,538 | $1,973,000 | $1.88 | 29 | Appropriations, bonds, local government contributions, private contributions, transportation funding, FRPP | |
| | | | | | **South Carolina** |
| N/A | N/A | N/A | N/A | Real estate transfer tax, recording fees | |
| | | | | | **Texas** |
| N/A | $3,800,000 | $0.15 | N/A | Appropriations, Federal Coastal Impact Assistance Program | |
| $176,633,845 | N/A | $0.00 | 0 | | **Utah** |
| $21,955,225 | $0 | | 0 | Appropriations, local government contributions, private contributions, FRPP | |
| $154,678,620 | N/A | | N/A | Appropriations, local government contributions, private contributions, FRPP | |
| | | | | | **Vermont** |
| $82,505,000 | $2,800,000 | $4.47 | 70 | Appropriations, bonds, Farms for the Future pilot program, local government contributions, mitigation fees, private contributions, real estate transfer tax, transportation funding, FRPP | |
| $9,539,650 | $2,711,590 | $0.33 | N/A | | **Virginia** |
| $0 | $363,750 | | N/A | Appropriations | |
| $9,539,650 | $2,347,840 | | N/A | Appropriations | |
| | | | | | **Washington** |
| $9,000,000 | N/A | N/A | N/A | Bonds, development impact fees, local government contributions, private contributions, real estate transfer tax, FRPP | |
| | | | | | **West Virginia** |
| $2,596,223 | $2,975,000 | $1.60 | 108 | Appropriations, deed recording fees | |
| | | | | | **Wisconsin** |
| $1,753,907 | $0 | $0.00 | 0 | Bonds, private contributions, FRPP | |
| **$2,349,795,845** | **$393,898,534** ¤ | | **2,991** | | |

## Status of State PACE Programs

*continued from page 1*

**Program Funds Available**

Program funds available for the current fiscal year to acquire easements on agricultural land.

**Program Funds Available Per Capita**

Program funds available per capita are based on state population estimates for 2012 from the U.S. Census Bureau.

**Outstanding Applications**

Backlog of applications reported by program administrators.

**Funding Sources Used to Date**

Sources of funding for each program. "Transportation funding" refers to federal money disbursed under The Moving Ahead for Progress in the 21st Century Act and its predecessors for "transportation enhancements." Easement acquisitions that protect scenic views and historic sites along transportation routes were eligible for these funds prior to 2012.

The Army Compatible Use Buffer (ACUB) Program provides funds to establish easement-protected buffer areas around military installations.

The federal Coastal Impact Assistance Program authorizes funds to be distributed to oil and gas producing states to mitigate the impacts of oil and gas extraction from the continental shelf.

The federal Farm and Ranch Lands Protection Program (FRPP) provides matching funds to state, local and tribal governments and certain non-governmental organizations to purchase agricultural conservation easements.

In addition to these sources of funding, several programs reported contributions from private sources.

### Notes

[Δ] Program activity includes fee simple acquisitions of agricultural land. Great Outdoors Colorado grant recipients are required to resell land acquired in fee subject to a conservation easement.

[^] "Program Funds Spent to Date" includes incidental land acquisition costs and/or personnel costs.

[x] Program has terminated or is no longer acquiring agricultural conservation easements.

[~] Figure carried forward from previous PACE tables.

[¤] "Program Funds Available" includes money for other land conservation purposes.

[❖] Total includes 14 easements, 3,000 acres and $1.5 million of additional funds spent that were credited to the Southern Ohio Tobacco Agricultural Easement Program (SOTAEP). SOTAEP was a one-time partnership between the Ohio Department of Agriculture, Southern Ohio Agricultural and Community Development Foundation and five local Soil and Water Conservation Districts. The Ohio Department of Agriculture currently administers these easements. In prior years SOTAEP's activity was represented separately on this table.

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