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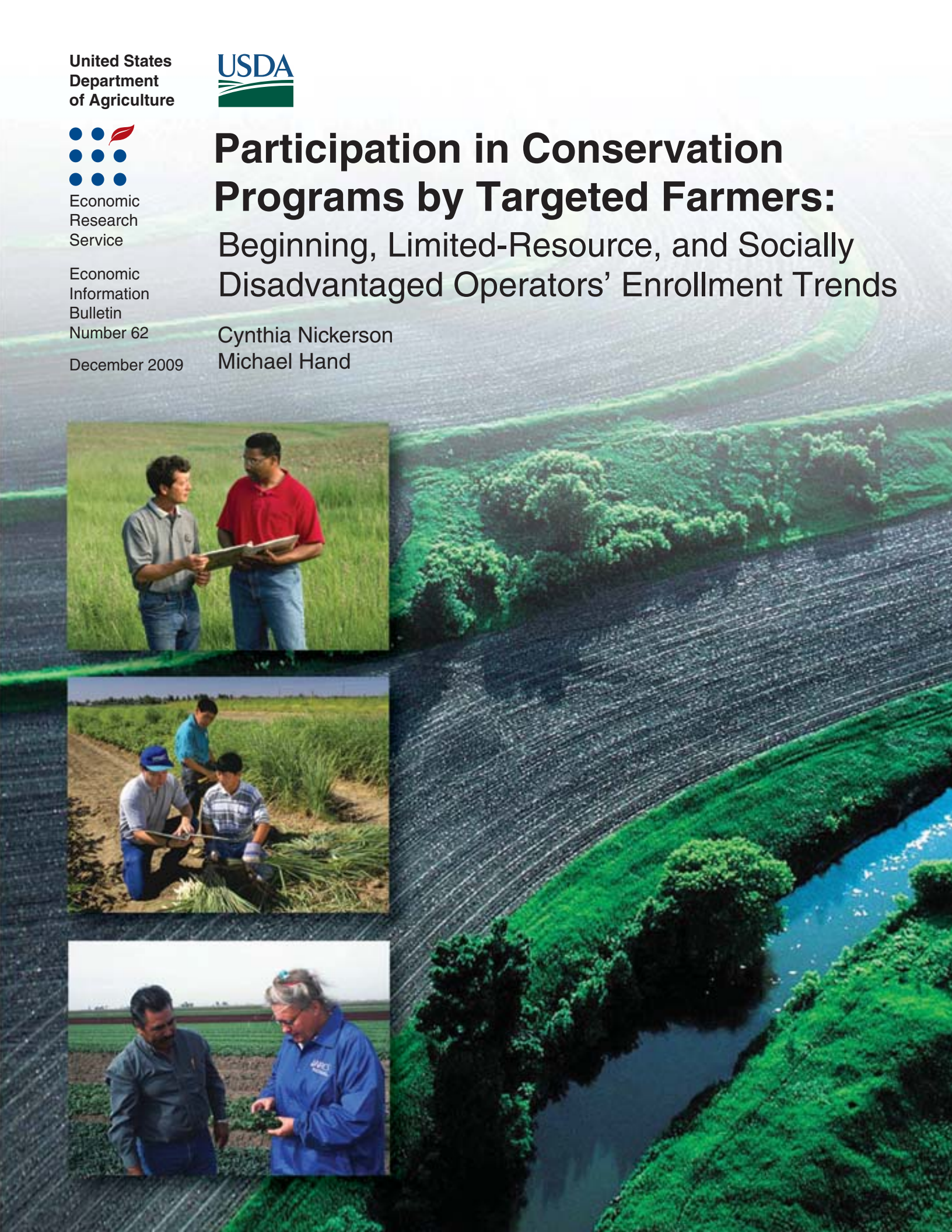
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Participation in Conservation Programs by Targeted Farmers: Beginning, Limited-Resource, and Socially Disadvantaged Operators' Enrollment Trends

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A Report from the Economic Research Service

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Participation in Conservation Programs by Targeted Farmers

Beginning, Limited-Resource, and Socially Disadvantaged Operators' Enrollment Trends

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Abstract

Beginning, limited-resource, and socially disadvantaged farmers make up as much as 40 percent of all U.S. farms. Some Federal conservation programs contain provisions that encourage participation by such “targeted” farmers and the 2008 Farm Act furthered these efforts. This report compares the natural resource characteristics, resource issues, and conservation treatment costs on farms operated by targeted farmers with those of other participants in the largest U.S. working-lands and land retirement conservation programs. Some evidence shows that targeted farmers tend to operate more environmentally sensitive land than other farmers, have different conservation priorities, and receive different levels of payments. Data limitations preclude a definitive analysis of whether efforts to improve participation by targeted farmers hinders or enhances the conservation programs’ ability to deliver environmental benefits cost effectively. But the different conservation priorities among types of farmers suggest that if a significantly larger proportion of targeted farmers participates in these programs, the programs’ economic and environmental outcomes could change.

Keywords: Conservation programs, Environmental Quality Incentives Program (EQIP), Conservation Reserve Program (CRP), Wetlands Reserve Program (WRP), beginning farmers, limited-resource producers, socially disadvantaged farmers and ranchers

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Summary

Targeted farmers include those with 10 or fewer years of experience, farmers with limited farm sales and income, and farmers belonging to segments of the population that have historically been subject to discrimination, such as African American, American Indian, Alaskan Native, Hispanic, Asian American, or Pacific Island farmers. Targeted farmers make up as much as 40 percent of all U.S. farms, and, although many participate in conservation programs, targeted farmers typically have not participated in government agricultural programs at the same rate as other farmers. To help offset potential barriers to participation, USDA offers targeted farmers more favorable payment and enrollment terms in conservation programs than are available to other farmers.

What Is the Issue?

Farm legislation in both 2002 and 2008 encouraged targeted farmers to participate in conservation programs by making them eligible for more favorable payment and enrollment terms than other farmers received. Such Federal provisions can alter program outcomes in unintended ways if targeted farmers adopt different conservation practices, address different environmental needs, or operate land that is more or less environmentally sensitive than the land operated by other farmers. Targeting certain farmer types could result in tradeoffs between environmental performance, cost-effective delivery of program benefits, and improved access to Federal conservation programs. This report addresses this issue by examining participation patterns in the Environmental Quality Incentives Program (EQIP), Conservation Reserve Program (CRP), and Wetlands Reserve Program (WRP) to provide information on the types of farmers who enroll, the geographic distribution of participants, the types and costs of conservation practices they implement, the resource issues they address, the natural resource characteristics associated with their farms, and whether different types of farmers participate in different ways. Participation rates are measured where possible based on both the number of farms and acres enrolled in conservation programs, as these two measures can provide very different pictures of targeted farmer participation. Those three conservation programs account for 74 percent of authorized conservation spending in the 2008 Farm Act.

What Did the Study Find?

During 2004-07, targeted farmers participated differently in conservation programs than did other farmers. While not definitive, evidence shows that targeted farmers tended to operate more environmentally sensitive land than other farmers, had different conservation priorities, and received different levels of payments. Those differences suggest that economic and environmental outcomes could change if the proportion of targeted farmers enrolled in the programs increases significantly.

Enrollment Patterns

Beginning and limited-resource farmers—two of the three targeted-farmer groups—were less likely to participate in EQIP than was the U.S. farm population as a whole (data on socially disadvantaged farmer participation in EQIP were not available). These two farmer types operated about 27 percent of all farms in 2006 but held 12 percent of EQIP contracts. This participation trend was observed in nearly every region of the country, suggesting that policies that make it easier for these farmers to enroll could increase participation. One new policy aimed at encouraging participation, however, is likely to have little effect. The 2008 Farm Act requires that 5 percent of EQIP funds be set aside annually for beginning farmers, but beginning farmers have typically received more than 10 percent of EQIP payments annually in recent years.

Like their participation patterns in EQIP, targeted farmers enrolled disproportionately fewer farms in conservation programs that retire land from production. Twenty-two percent of farms operated by all three groups of targeted farmers were enrolled in the CRP and WRP, even though they operate 31 percent of all farms. A different pattern emerges, however, when the amount of enrolled acreage is evaluated instead of the number of enrolled farmers: Targeted farmers enrolled disproportionately more acreage in CRP and WRP than other farmers. Targeted farmers operated 15 percent of farmland acres in 2007 but controlled 17 percent of acres enrolled in these programs.

Environmental Problems and Priorities for Treatment

Beginning farmers in the Delta region (the only area for which we could analyze soil data) who participated in EQIP tended to enroll more highly erodible land than other participating farmers. This trend suggests that conservation efforts by these farmers could provide more program benefits than efforts by other farmers. The available data, however, make it difficult to determine with certainty if targeting these farmers would increase program benefits because the characteristics of program participants may not represent this farmer group as a whole. If, in general, few beginning farmers operate highly erodible land (and the few that do have “self-selected” and have already chosen to enroll), targeting more of these farmers for enrollment may not provide more conservation benefits than are provided by other farmer types.

Conservation priorities of farmers participating in conservation programs differ by farmer type. Beginning and limited-resource farmers enrolled in EQIP addressed livestock forage and health needs and plant productivity/quality issues more often than did other farmer types. And although both beginning and limited-resource farmers participating in EQIP were more likely to farm closer to quality-impaired waters, the limited-resource farmers were less likely to address water quality problems. Several possible reasons may explain these tendencies. First, limited-resource farmers may face financial or other constraints in adopting practices that might improve water quality. Second, these farmers may derive more direct benefits by focusing on other issues (like improving plant health and vigor). Finally, limited-resource farmers tend to operate smaller farms that are not subject to the same regulatory requirements facing larger farm operators who use EQIP to

fund water pollution reduction practices (e.g., pollutant discharge regulations for concentrated animal feeding operations). In land retirement programs, targeted farmers of all types were more likely than other farmer types to be located in areas where proposed conservation efforts were expected to achieve the greatest reduction in soil erosion and the greatest improvement in water quality.

Costs of Treatment

The size of conservation payments varied among farmer groups.

- In EQIP, average payments (which represent the cost to government) to beginning farmers were significantly higher than the average payments to other farmers, while payments to limited-resource farmers were significantly lower. Both beginning and limited-resource farmers implemented a larger number of conservation practices than other farmers did, but the scale of those practices tended to be smaller.
- In CRP and WRP, targeted farmers enrolled a greater share of operated acreage and received smaller per acre payments, but the number and types of conservation practices adopted did not differ significantly from those of other farmers.

How Was the Study Conducted?

The analysis relied on USDA data from EQIP and CRP administrative records, the 2007 Census of Agriculture, and the National Resources Inventory (NRI). The analysis also used data from the Agricultural Resource Management Survey (ARMS), which is conducted annually by the National Agricultural Statistics Service and the Economic Research Service.

The EQIP and CRP contract data identified the resource problems that received treatment and, for EQIP, how payments and adoption of practices varied between beginning/limited-resource producers and other participant types. The analysis used the ARMS data from 2004-07 to analyze payment and acreage enrollments in CRP and WRP by farmer type and to summarize the characteristics of targeted farmers. The 2001 ARMS data on conservation practice adoption (the most recent year data were available) were used to examine conservation practice adoption patterns in land retirement programs. The census, NRI, and other data characterized the distribution of farmer types relative to measures of environmental conditions.

EQIP, CRP, ARMS, NRI, and census data were used to characterize differences among current conservation program participants and to suggest that targeted and other farmers may differ in their ability to provide environmental benefits cost effectively. Providing firm answers about the impacts of favoring particular farmer types would require more information, including quantitative estimates of the environmental benefits provided by different farmer types and whether targeted participants are more cost-effective providers of benefits than nonparticipants. Also, targeted farmers' acreages are disproportionately small, and information about program participants' farm sizes would be needed to distinguish whether differences between farmer types are due to the type of farmer or farm size.

Introduction

The Federal Government has a long history of providing assistance to farmers and ranchers to encourage the adoption of practices that reduce unintended negative environmental spillovers from agricultural production. Much of this conservation assistance is provided through voluntary programs that help finance the installation of conservation structures (e.g., riparian buffers and grassed waterways) and the adoption of environmentally friendly land management practices or that provide technical support to identify conservation needs and develop implementation plans. The 2008 Food, Conservation, and Energy Act (2008 Farm Act) is projected to increase conservation program funding by more than 17 percent. If appropriated at authorized levels, \$11.5 billion in conservation assistance will go to working farm and rangeland that remain in production, and \$13 billion will go to land retirement programs.

Both the 2002 and 2008 Farm Act legislation included provisions that ensure accessibility for all eligible farmers and ranchers to conservation programs. These provisions provide favorable payment terms to reduce unintentional barriers to participation for farmers who may face unique circumstances, such as limited farming experience, limited financial resources, and limited opportunities. The favorable payment terms are available to beginning, limited-resource, or socially disadvantaged segments of the farm population (“targeted farmers” for the purposes of this report).

Targeted farmers’ characteristics can affect their participation in conservation programs (see box, “Defining Targeted Farmers”). For example, recent Economic Research Service (ERS) research shows that beginning farmers tend to have smaller farms, lower levels of onfarm income, and different personal and household characteristics than do established farms (Ahearn and Newton, 2009) and that these differences can affect decisions about conservation activities (Lambert et al., 2006; Caswell et al., 2001).

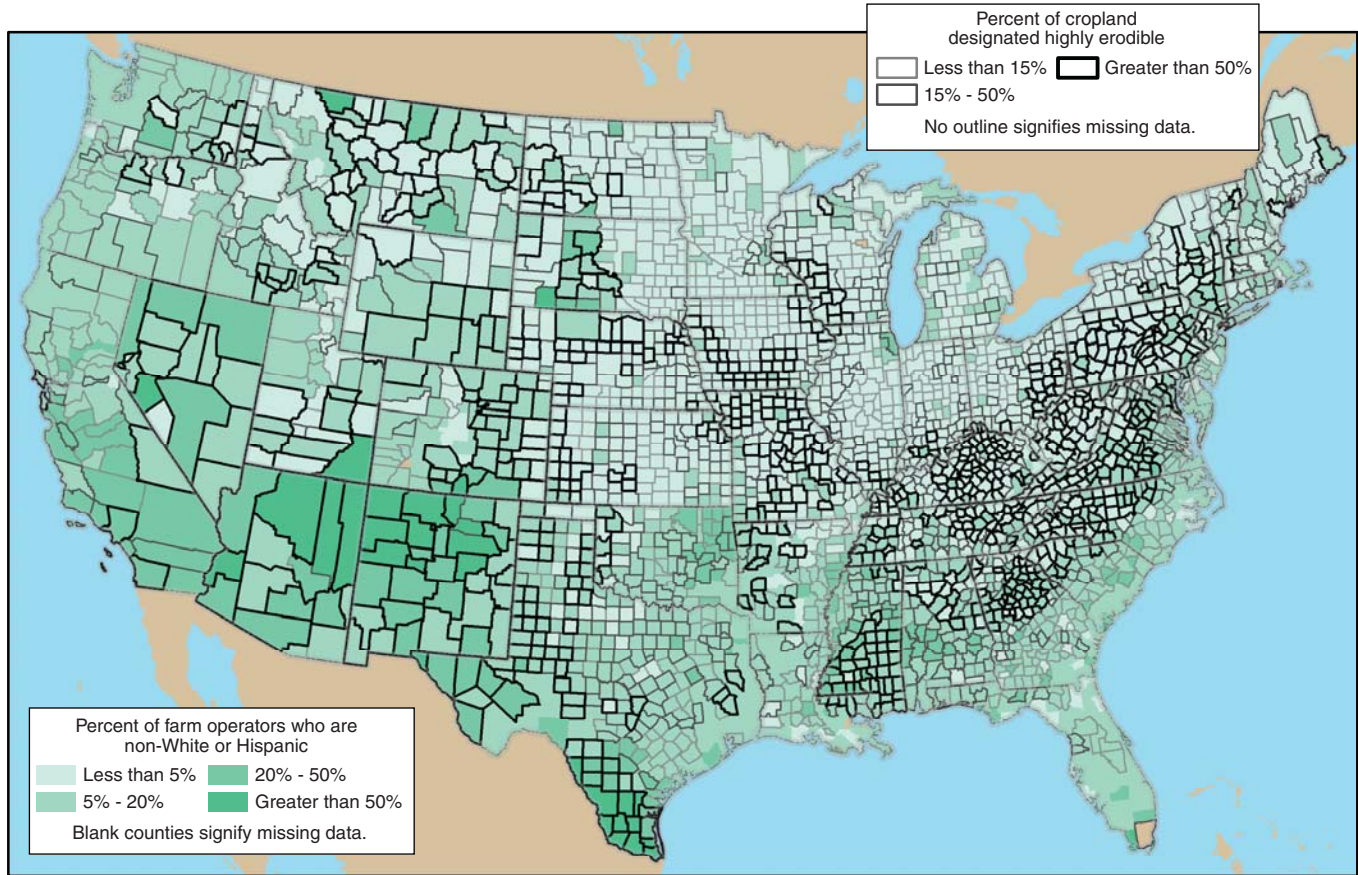
Providing favorable payment terms to particular types of farmers may make Federal conservation programs more accessible if targeted farmers could not participate without them. Some evidence suggests that encouraging participation by targeted farmers may also alter the environmental benefits generated by conservation programs. Comparing the distribution of farmer types and highly erodible land suggests that socially disadvantaged farmers are more likely than other farmers to be located in counties where a higher proportion of cropland is highly erodible (fig. 1).¹ When farmers are more likely to operate marginal land, targeting them for participation could increase the environmental benefits provided by conservation programs.

Changing program participation rates among targeted farmers could also affect program costs, and whether costs increase or decrease depends on the cost effectiveness of practices implemented by new participants. If the farmers who enroll in conservation programs provide environmental benefits at the lowest cost, encouraging their participation achieves both economic and accessibility goals. If applicants from targeted groups provide benefits at a higher cost, encouraging their participation may improve access at the expense of economic goals.

¹This comparison uses 2007 Census of Agriculture data, which identifies the principal operator’s race and ethnicity, and 1997 National Resources Inventory data that identifies cropland by erodibility level. The ARMS data used in this report define socially disadvantaged farmers and ranchers, but the Census data do not allow us to identify these farmers in precisely the same way (see appendix, “Data Sources”). However, the geographic distribution of these farmers is comparable between Census and ARMS.

Figure 1

Distribution of selected farmer types and highly erodible cropland, by county



Note: Counties in dark green with a black outline identify the greatest overlap between the distribution of selected socially disadvantaged groups and highly erodible cropland. Although some rangeland may also be subject to erosion, erodibility data are available only for cropland.

Source: 2007 Census of Agriculture (non-White and Hispanic operators) data and 1997 National Resources Inventory (highly erodible cropland) data.

This report examines participation patterns of targeted farmers relative to other farmers in major Federal conservation programs. We focus on the extent of their participation, the geographic distribution of participants, the types and costs of conservation practices implemented, and resource issues farmers typically face and address. Although the available data preclude a definitive assessment of economic tradeoffs from improving accessibility, this report improves our understanding of how these farmers use and impact conservation programs.

Defining Targeted Farmers

USDA has established definitions for beginning, limited-resource, and socially disadvantaged farmers (referred to as “targeted” for the purposes of this report). Our definitions correspond to USDA definitions to the extent that available data allow us to do so.

Beginning farmers and ranchers (BF)—Using data from USDA’s Agricultural Resource Management Survey (ARMS) (see appendix, “Data Sources”), we can identify up to three operators per farm and define beginning farmers and ranchers as operators with not more than 10 years of experience. In 2006, however, ARMS identifies more than one operator in only one version of the survey. For that year, we define beginning farms as those operated by a primary operator with not more than 10 years of experience. USDA generally defines beginning farmers and ranchers as those who materially and substantially participate in farm or ranch operations, but have not operated a farm or ranch for more than 10 consecutive years. If operated by an entity, this requirement applies to all members of the entity (USDA, 2007).

Limited-resource farmers and ranchers (LR)—Farmers and ranchers are defined as limited resource if in each of the last 2 years they earned less than \$105,000 in gross farm sales (adjusted for inflation) and had low household income (USDA, 2007; Hoppe et al., 2007). Low household income means that the household income was less than the national poverty level for a family of four or was less than half the county median household income in the 2 previous years.

Socially disadvantaged farmers and ranchers (SDA)—In this report, we define a farm as operated by a socially disadvantaged farmer and rancher if the principal operator is African American, American Indian, Alaskan Native, Hispanic, Asian American, or Pacific Islander. We do not include women in this definition. While some socially disadvantaged farmer definitions include groups subject to gender prejudice, our definition is consistent with the Conservation Title in the 2008 Farm Act, which excludes women (unless they meet the socially disadvantaged definition some other way). Prior to the 2008 Farm Act, conservation programs administered by USDA did not use socially disadvantaged farmer definitions. USDA does, however, have various credit, insurance, and outreach programs to improve access to USDA programs for such farmers and ranchers (Dismukes et al., 1997a).

What We Know About Targeted Farmers

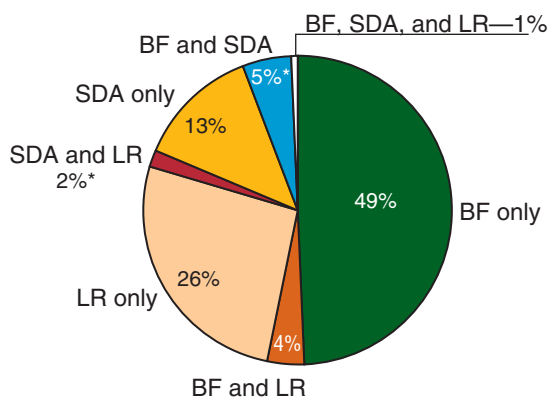
Targeted farmers include beginning, limited-resource, and socially disadvantaged farmers, and most farm operators identify with just one of these three groups (fig. 2). During 2005-07, the largest proportion (59 percent) of farms operated by targeted farmers was beginning-farmer operations. Socially disadvantaged (SDA) farmers accounted for 21 percent and limited-resource farmers, 33 percent. These percentages sum to more than 100, signaling that some farmers belong to multiple groups. For example, 5 percent of these farmers were both beginning and socially disadvantaged farmers, and 4 percent were both beginning and limited-resource farmers. Only 1 percent of these farms were operated by farmers who belonged to all three groups.

The characteristics of these operations can improve our understanding about why targeted farmers might participate in conservation programs differently than other farmers. Targeted farmers operate a sizable proportion of land. In 2007, they operated about 677,000 farms—nearly 31 percent of the Nation’s 2.1 million farms (fig. 3). Yet, these farmers account for a disproportionately small amount of farm production value, contributing only 12 percent of the nearly \$290 billion in farm commodities produced by all U.S. farms in 2007. This smaller farm production value reflects the fact that a larger proportion of these farmers operate small-scale family farms (defined as those with less than \$250,000 in sales) and that a smaller proportion of beginning and socially disadvantaged farmers identify farming as their major occupation—residential or lifestyle farms—compared with other farmer types (table 1).² Limited-resource farmers are more likely to report farming as their major occupation; however, fewer farms are operated by them. Low-sales farms and farmers who devote time to nonfarming occupations may face financial or labor constraints that preclude use of conservation practices that are capital- or management-intensive.

²The Economic Research Service developed a classification system that categorizes farms based on sales, major occupation of the primary operator, and farm ownership structure. For a detailed description, see Hoppe et al., 2007.

Figure 2

Farms operated by targeted farmers and ranchers



* Coefficient of variation is between 25 percent and 50 percent.

BF=Beginning farmers; SDA=Socially disadvantaged farmers; LR=Limited-resource farmers.

Note: Farms operated by women are not included with socially disadvantaged farmers, unless they otherwise meet the SDA definition.

Source: ERS calculation based on USDA’s pooled 2005-07 Agricultural Resource Management Surveys, Phase III, conducted by the National Agricultural Statistics Service and the Economic Research Service.

Figure 3

Share of total farms and production, by operator status

Percent



* Coefficient of variation is between 25 percent and 50 percent.

BF=Beginning farmers; LR=Limited-resource farmers; SDA=Socially disadvantaged farmers.

Notes: Farms operated by women include farms with female primary operators that do not meet the definitions of targeted farmers. The “all other farms” category includes farms where women are not primary operators. Totals may not sum to 100 due to rounding.

Source: ERS calculations based on USDA’s 2007 Agricultural Resource Management Survey, Phase III, conducted by the National Agricultural Statistics Service and the Economic Research Service.

Although their farms are typically small, some targeted farmers operate relatively large farms. In 2007, the median acres operated—the midpoint of the range of acres operated—by targeted farmers ranged from 41 to 75 acres, compared with 94 acres for small family farms and 118 acres for farms of all sizes operated by other farmer types (table 2). The high average number of acres operated, relative to median number of acres operated, suggests that all farmer types include relatively large farms. In particular, a few socially disadvantaged farms are organized as nonfamily farms that operate larger farms, on average. Also, socially disadvantaged farms specializing in livestock are about 150 acres larger, on average, than socially disadvantaged farms in general.

Beginning and limited-resource farmers are somewhat more likely than other farmers to report no production value. The share of these farmers reporting zero production value varies between 26 and 28 percent, compared with 23 percent of small family farms operated by other farmer types.^{3,4} Recent research that analyzes production and conservation behavior revealed that decisions not to produce crops or livestock are positively associated with conservation payments (Lambert et al., 2006). This suggests that conditions that temporarily rule out farming may not preclude conservation program participation, although a lack of production over several years could make some farmers ineligible to participate.

For farms reporting a positive production value, commodity production by targeted farmers appears similar to small family farms, at least at first glance. Livestock accounts for most of the production value for farmers of all types, and more than half of socially disadvantaged farmers specialize in livestock (table 2). Specialization in beef cattle and other grazing livestock is common among small farms, due to the low labor and low cost requirements (Hoppe et al., 2007). Of farmers with a majority of their production value from crop

³Production value reflects the market value of what is produced in a given year, regardless of whether it is shared among multiple parties or put into inventory. Farms may have no production due to adverse weather conditions, disease, or other reasons (Hoppe et al., 2007).

⁴When women are included in the definition of socially disadvantaged farmers, the proportion of socially disadvantaged farmers reporting zero production value rises from 20 percent to 33 percent.

