Plant Enhancement Activity - PLT18 – Increasing on-farm food production with edible woody buffer landscapes

Enhancement Description
This enhancement is for the enhancing of windbreaks, alley cropping, silvopasture, or riparian forest buffer systems with trees and shrubs that produce edible products for human or wildlife consumption.

Land Use Applicability
Cropland, Pastureland

Benefits
An edible landscape is special in that it is planted with trees and shrubs that produce foods that we can eat/sell or that are beneficial for wildlife. Trees and shrubs can be used to provide shade, to improve microenvironments or to protect crops, or to mitigate challenging environmental issues. In an edible landscape they provide more than just a protective structure, they become sources of food that produce home grown and nutritious fruits and nuts, increase household food security, and create sites that provide critical habitat for pollinators and wildlife.

Conditions Where Enhancement Applies
This enhancement applies to all crop or pasture land use acres.

Criteria
1. Follow appropriate standard for basic agroforestry practice design.
2. Plant tree, shrub and bramble species that produce food and/or culinary items to create an edible landscape. Lists of suitable woody plants will be available at your local NRCS field office.
3. Maximize planting space by creating vertical structure with varying plant heights and plant sizes.
4. Use all of the following methods to improve edible food production:
   a. Add at least one edible food producing row to existing agroforestry practices or incorporate at least one edible food producing row into new planting designs.
   b. Adding planting masses in scattered clusters is encouraged.
   c. Plant a variety of tree, shrub and bramble species (3 or more; use native species whenever possible) with varying flowering times to favor pollinator species and to add a longer harvest time frame. Choosing several fruit bearing cultivars can provide an extended period of seasonal production.

d. Minimize herbicide use. Use spot weed treatments and avoid spraying when flowers are present.

Adoption Requirements

This enhancement is considered adopted when each selected acre has been planted to the desired tree, shrub and bramble species that produce food or culinary item.

Documentation requirements

1. List of edible food producing trees, shrubs and brambles.
2. Brief written description of the activities (criteria) completed with dates of application and receipts for planting stock, herbicides, etc.
3. Acreage of the enhancement activity.
4. Delineations on a map or aerial photo of landscape layout and placement.

References

Dana, M.N. 2001. Fruits and Nuts for Edible Landscaping. Purdue University Cooperative Extension Service. Landscape Horticulture, HO-190-W. http://www.hort.purdue.edu/ext/HO-190.pdf

Josiah, S.J. and J. Lackey. 2001. Edible Woody Landscapes for People and Wildlife. University of Nebraska Cooperative Extension.Lincoln, NE. http://www.unl.edu/nac/brochures/sfp/sfp3.pdf

USDA-NAC. 2008. Working Trees for Agriculture. USDA National Agroforestry Center, Lincoln, NE. http://www.unl.edu/nac/workingtrees/wta.pdf

USDA-NAC. 2006. Agroforestry: Sustaining Native Bee habitat for Crop Production. Agroforestry Notes – AF Note 32. USDA National Agroforestry Center. Lincoln, NE. http://plants.usda.gov/pollinators/Agroforestry_Sustaining_Native_Bee_Habitat_for_Crop_Pollination.pdf

USDA-NAC. 2006. Improving Forage for native Bee Crop Pollinators. Agroforestry Notes – AF Note 33. USDA National Agroforestry Center. Lincoln, NE. http://plants.usda.gov/pollinators/Improving_Forage_for_Native_Bee_Crop_Pollinators.pdf

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Reference:

- ***612 – Tree/Shrub Establishment***
- ***311 – Alley Cropping***
- ***391 – Riparian Forest Buffers***
- ***380 – Windbreak/Shelterbelt Establishment***

Woody Plants Suitable for edible woody buffer landscapes.

The following table lists plants that are suitable for human and/or wildlife consumption.

SPECIES		TREE RATING ZONE 1/	FOOD	H = human W = wildife
CONIFEROUS TREES				
Balsam Fir	(Abies balsamea)	1-4	F,W	W
Black Spruce	(Picea mariana)	1-4,5	F,W	W
Eastern Red Cedar	(Juniperus virginana)	1,2,4-6	F,W	W
Eastern White Pine	(Pinus strobus)	1-4,6	F,W	W
Jack Pine	(Pinus banksiana)	1 - 4	F,W	W
Northern White Cedar	(Thuja occidentalis)	1-4	F,W	W
Red Pine	(Pinus resinosa)	1-3	F,W	W
Tamarack	(Larix laricina)	1-4	F,W	W
White Spruce	(Picea glauca)	1-5	F,W	W
DECIDUOUS TREES				
American Plum	(Prunus americana)	1-6	S,F	H,W
Bigtooth Aspen	(Populus grandidentata)	1-6	F,W	W
Bitternut Hickory	(Carya cordiformis)	1,2,4,6	F,W	W
Black Cherry	(Prunus serotina)	1-6	S,F	H,W
Black Walnut	(Juglans nigra)	1,6	F,W	H,W
Bur Oak	(Quercus macrocarpa)	1-6	F,W	W
Common Chokecherry	(Prunus virginiana)	1-6	S	H,W
E. Cottonwood - Native	(Populus deltoides)	1-6	F,W	W

SPECIES		TREE RATING ZONE 1/	FOOD	H = human W = wildife
DECIDUOUS TREES continued				
Green Ash	(Fraxinus pennsylvanica)	1-6	F,W	W
Hackberry	(Celtis occidentalis)	1-6	W	W
Hawthorn	(Crataegus species)	1-4,6	W	H,W
Mountain Ash	(Sorbus americana)	1-4	F,W	W
Mountain Maple	(Acer spicatum)	1-3	S,F	W
No. Pin Oak	(Quercus ellipsoidalis)	1-6	F,W	W
No. Red Oak	(Quercus rubra)	1-4,6	F,W	W
Paper Birch	(Betula papyriferia)	1-4,6	F,W	W
Pin Cherry	(Prunus pennsylvanica)	1-6	S,F	W
Quaking Aspen	(Populus tremuloides)	1-6	F,W	W
Red Maple	(Acer rubrum)	1-4,6	S,F,W	W
Shagbark Hickory	(Carya ovata)	1,2	F,W	H,W
Sugar Maple	(Acer saccharum)	1-6	S,F,W	H,W
Swamp White Oak	(Quercus bicolor)	1,2,4,6	F,W	W
White Oak	(Quercus alba)	1,2,4,6	F,W	W
Willows – Native	(Salix spp)	1-6	F,W	W
Yellow Birch	(Betula alleghaniensis)	1-4,6	F,W	W
DECIDUOUS SHRUBS				
American black currant	(Ribes Americana)	1-6	F	H,W
American elderberry	(Sambucus nigra)	1,6	S	H,W
American Hazelnut	(Corylus americana)	1-5	W	H,W
Arrow-wood	(Viburnum dentatum)	1-6	F,W	W
Chokeberry	(Aronia melanocarpa)	1-3	W	H,W
False Indigo	(Amorpha fruticosa)	1,2,4-6	F	W
Gray Dogwood	(Cornus racemosa)	1-6	F	W
Hawthorns	(Crataegus spp.)	1-6	F,W	H,W
Highbushcranberry	(Viburnum trilobum)	1-6	F,W	H,W
Nannyberry	(Viburnum lentago)	1-6	F,W	W
Ninebark	(Physocarpus opulifolius)	1-3	F,W	W
Red Osier Dogwood	(Cornus stolonifera)	1-6	F	W
Serviceberry	(Amelanchier alnifolia)	2-6	S	H,W
Silky Dogwood	(Cornus amomum)	1,2,6	F	W
Silver Buffaloberry	(Sheperdia argentea)	5,6	S	W
Smooth Sumac	(Rhus glabra)	1-6	W	W
Staghorn Sumac	(Rhus typhina)	1-3	W	W
Native wild grape	(Vitas spp)			