

# Creating Agroforestry Infrastructure for Adoption

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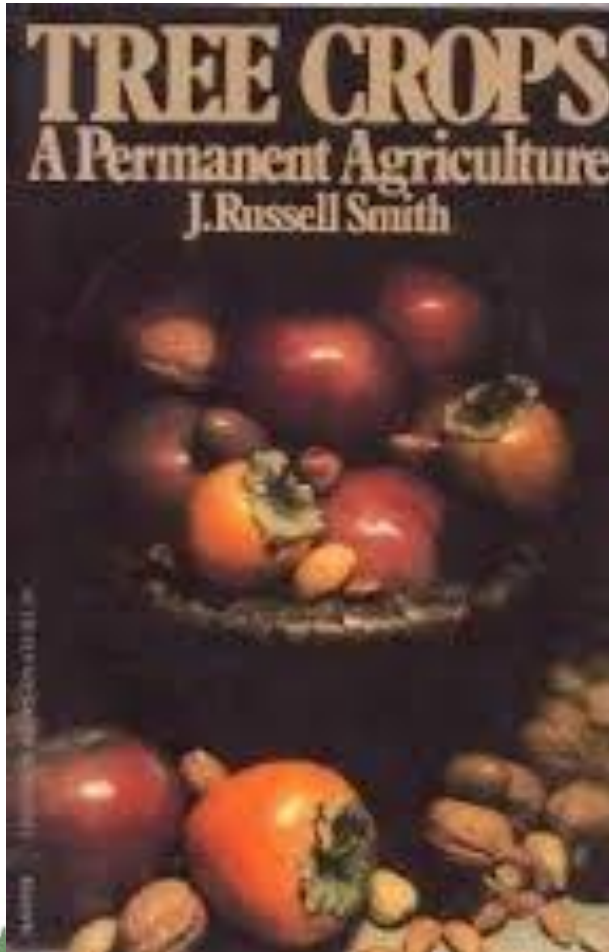
# State of Our Land



Iowa - 2011



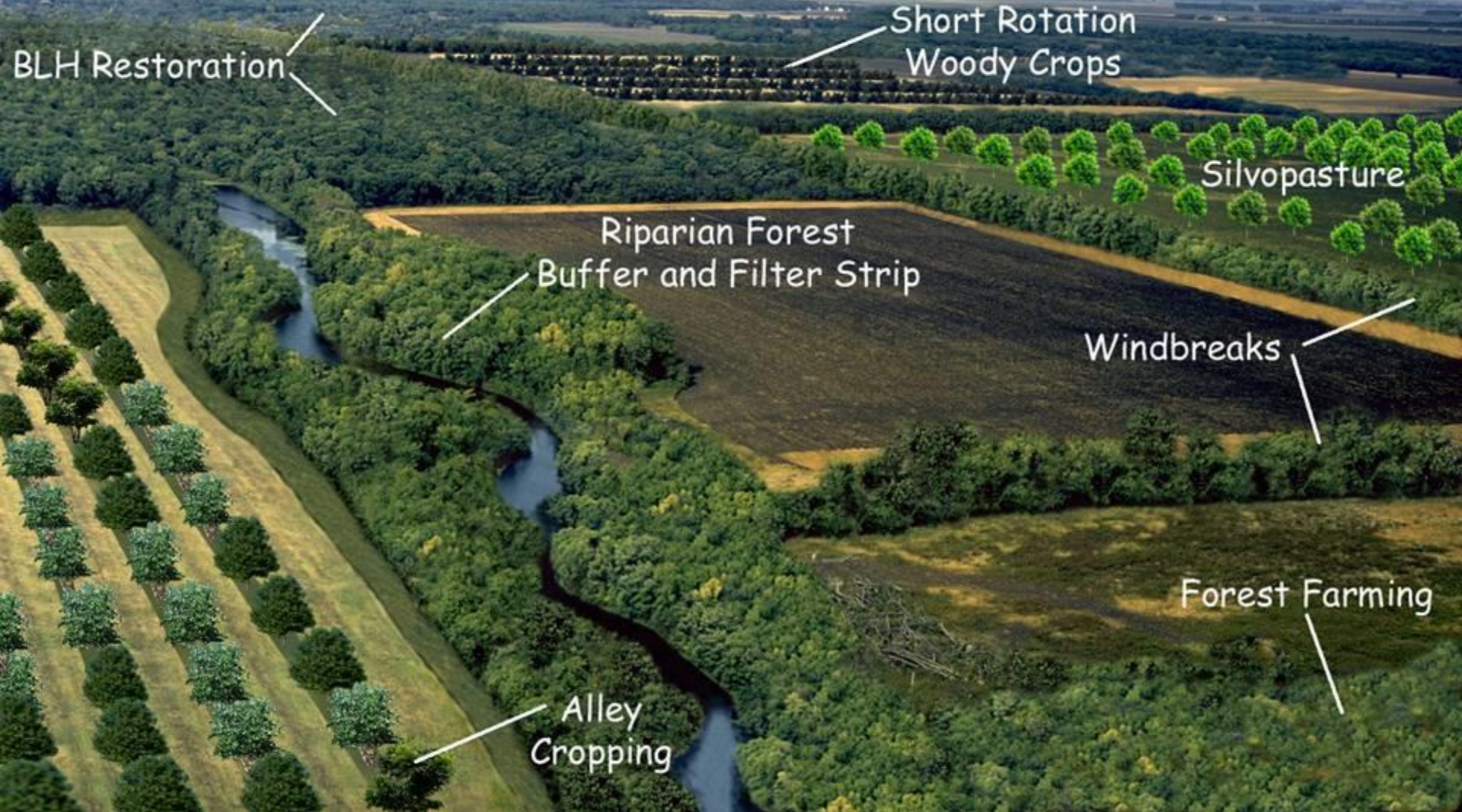
# Agroforestry Vision



“I see a million hills green  
with crop-yielding  
trees...The hills of my  
vision have farming  
that fits them and  
replaces the poor  
pasture, the gullies ...”

J.R. Smith, 1920's

# 2015 –Agroforestry Vision

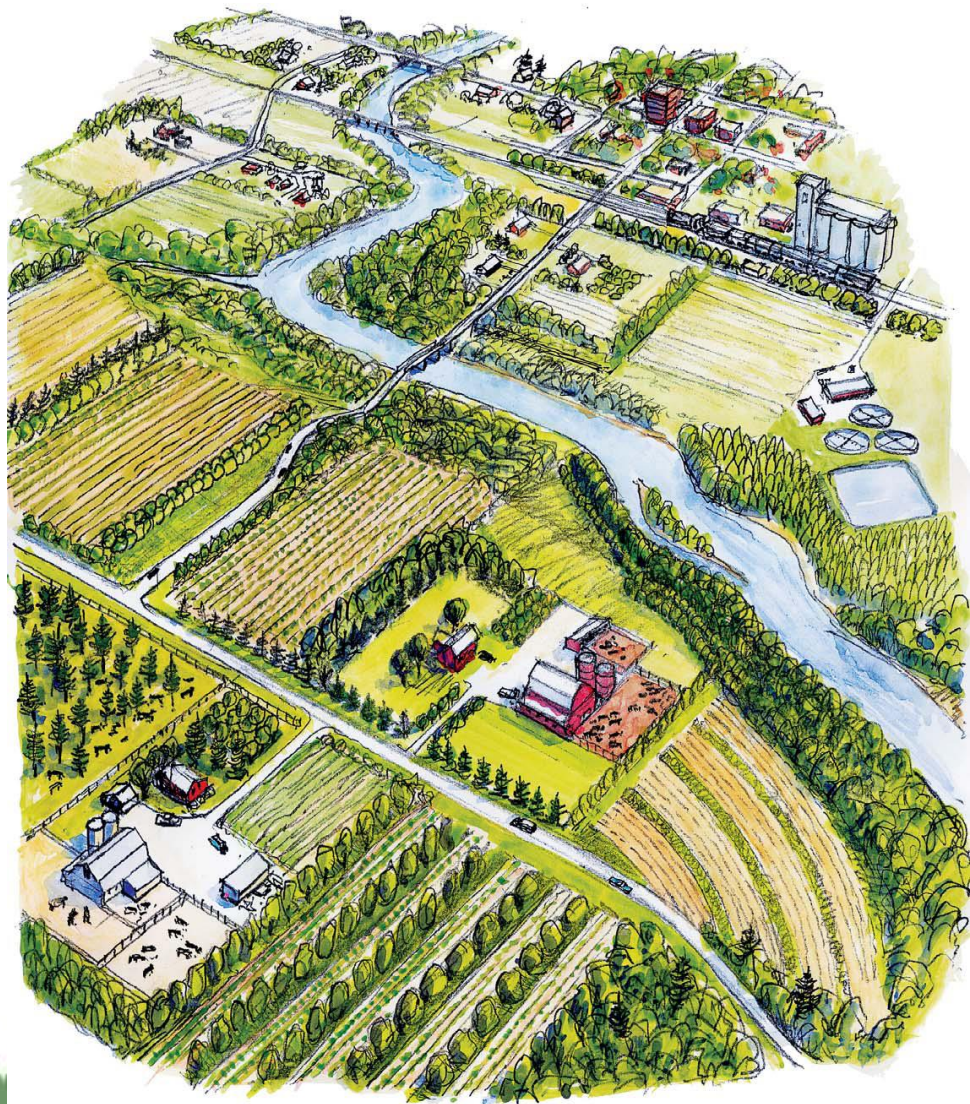


**Creating productive and healthy farms, ranches, woodlands, and communities through agroforestry**



# 2015 – Agroforestry Vision

*Landowners, managers, tribes, and communities adopt agroforestry practices resulting in improved water, soil, and air quality; sustainable agriculture; product diversity; and rural wealth.*





# Opening the Door to Agroforestry



# Agroforestry Adoption = 4 P's

To achieve agroforestry adoption will require:



Partnerships



Programs



Professionals



Peer-to-Peer Learning

PROFITS



# Partnerships

- ☐ Northeast Silvopasture Working Group
- ☐ Northeast Forest Mushroom Growers Network
- ☐ Chesapeake Bay Agroforestry Working Group
- ☐ 1890 Land-Grant Universities Agroforestry Consortium
- ☐ Forest Farming Network in Appalachia
- ☐ eXtension Communities of Practice
  - ☐ Forest Farming
  - ☐ Goats & Sheep







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## Forest Farming

Connect with us



We are forest farmers, university faculty, and agency personnel working together to provide useful farming information. We have a variety of forest farming expertise and believe that through collaboration we will advance the practice.

### Main Steps Involved in Forest Farming of Specialty Mushrooms

Biologically, forest cultivation of mushrooms involves fungal decay of an organic substrate, usually wood. The substrate is the "food source" for the fungus...>Read More

Select a different institution

[http://www.extension.org/forest\\_farming](http://www.extension.org/forest_farming)



# Partnerships

- ☐ Mid-America Agroforestry Working Group
- ☐ Hybrid Hazelnut Consortium
- ☐ Upper Midwest Hazelnut Development Initiative
- ☐ Pacific Northwest Agroforestry Working Group
- ☐ Organic Coffee Agroforestry Network in Puerto Rico
- ☐ Pacific Islanders Agroforestry Working Group





# MID-AMERICAN AGROFORESTRY WORKING GROUP

MAAWG

[about this working group](#) / [what is agroforestry?](#) / [partners](#) / [contact us](#)

CASE STUDIES

ABOUT THIS WORKING GROUP

AGROFORESTRY PRACTICES



TWITTER

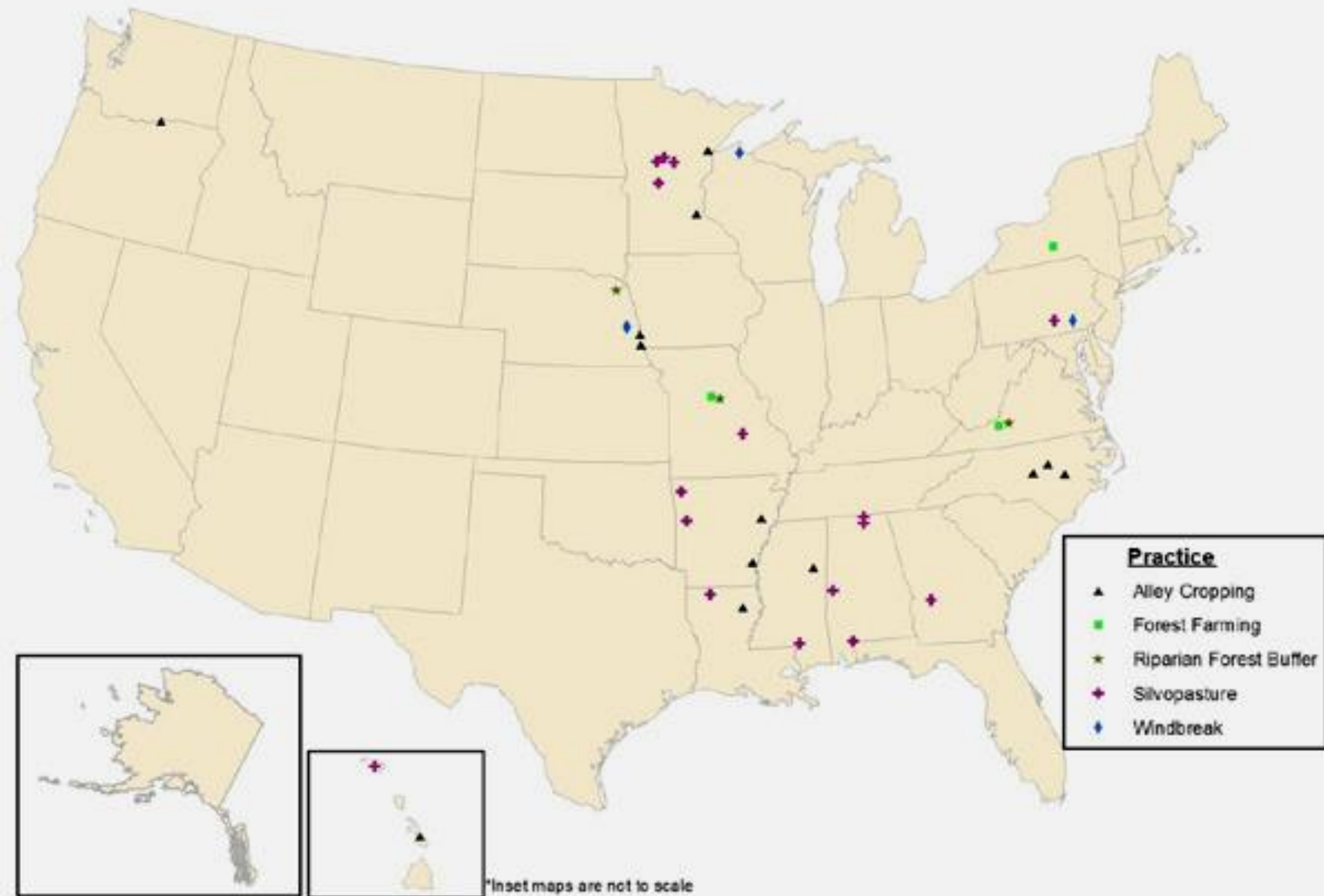
- Grad student opportunity! MS Graduate Assist: forest

- Initiate and coordinate actions to address and resolve the core issues; and
- Communicate with key audiences about the working group's purpose, goals, core issues actions and findings.

<http://midamericanagroforestry.net/>



# Agroforestry Demonstration Sites



Institutions	Town	State	Focus	Established
Louisiana AgCenter: Hill Farm Research Station	Homer	LA	Silvopasture	
University of Minnesota Extension	Sauk Centre	MN	Silvopasture (red pine, white pine, and red oak)—see <a href="#">Objective 2.2</a>	
University of Minnesota Extension; 3 landowner farms	Brainerd	MN	Silvopasture—see <a href="#">Objective 2.2</a>	Starting 2013
	Vermdale	MN		
	Leader	MN		
University of Minnesota Extension	Cloquet	MN	Alley cropping for bioenergy (Two systems: hybrid poplar-willow and red pine-willow)	Planned for 2013
University of Minnesota	Rosemount	MN	Alley cropping for bioenergy: perennial woody (willow) and herbaceous polyculture crops (forbs, legumes, and tall grass prairie species)	In progress
UMCA: <a href="#">Wurdack Farm</a>	Cook Station	MO	Silvopasture (cattle and hardwood)	2003
UMCA: <a href="#">Horticulture and Agroforestry Research Center (HARC)</a>	New Franklin	MO	Forest farming, riparian buffer, silvopasture, alley cropping, windbreak demonstrations, and forage shade trials	1993
Mississippi State University Forest and Wildlife Research Center; NIFA: McIntire-Stennis	Holly Springs	MS	Shortleaf and loblolly pine agroforestry systems for biofuel	2008
Mississippi Forestry Commission; Federation of Southern Cooperatives/Land Assistance Fund	Baxterville	MS	Silvopasture (75 acres to showcase hay, pine straw, cattle, and high-end forest products)	In progress
North Carolina State University: <a href="#">Center for Environmental Farming Systems</a>	Goldsboro	NC	Alley cropping (randomized block design with five replications: loblolly, longleaf, cherrybark oak and soy/corn); silvopasture	2007
North Carolina State University; Virginia Tech; Weyerhaeuser	Raleigh	NC	Alley cropping for bioenergy (70 acre replicated trials of loblolly pine-switchgrass)	In progress
North Carolina A&T University	Four farms	NC	Alley cropping & forest farming ( <i>Moringa oleifera</i> at North Carolina A&T University; cow peas, watermelons, corn, bok choy, collards, pecans, chestnuts, eastern black walnuts, medicinals in others)	2011

# Agroforestry Demonstration Sites





# Programs

## USDA

- Environmental Quality Incentives Program (EQIP)
- Conservation Stewardship Program (CSP)
- Conservation Reserve Program (CRP)
- Sustainable Agriculture Research and Education (SARE) Grants
- Forest Stewardship (Forest Service)
- Specialty Crop Block Grant (Ag Marketing Service)

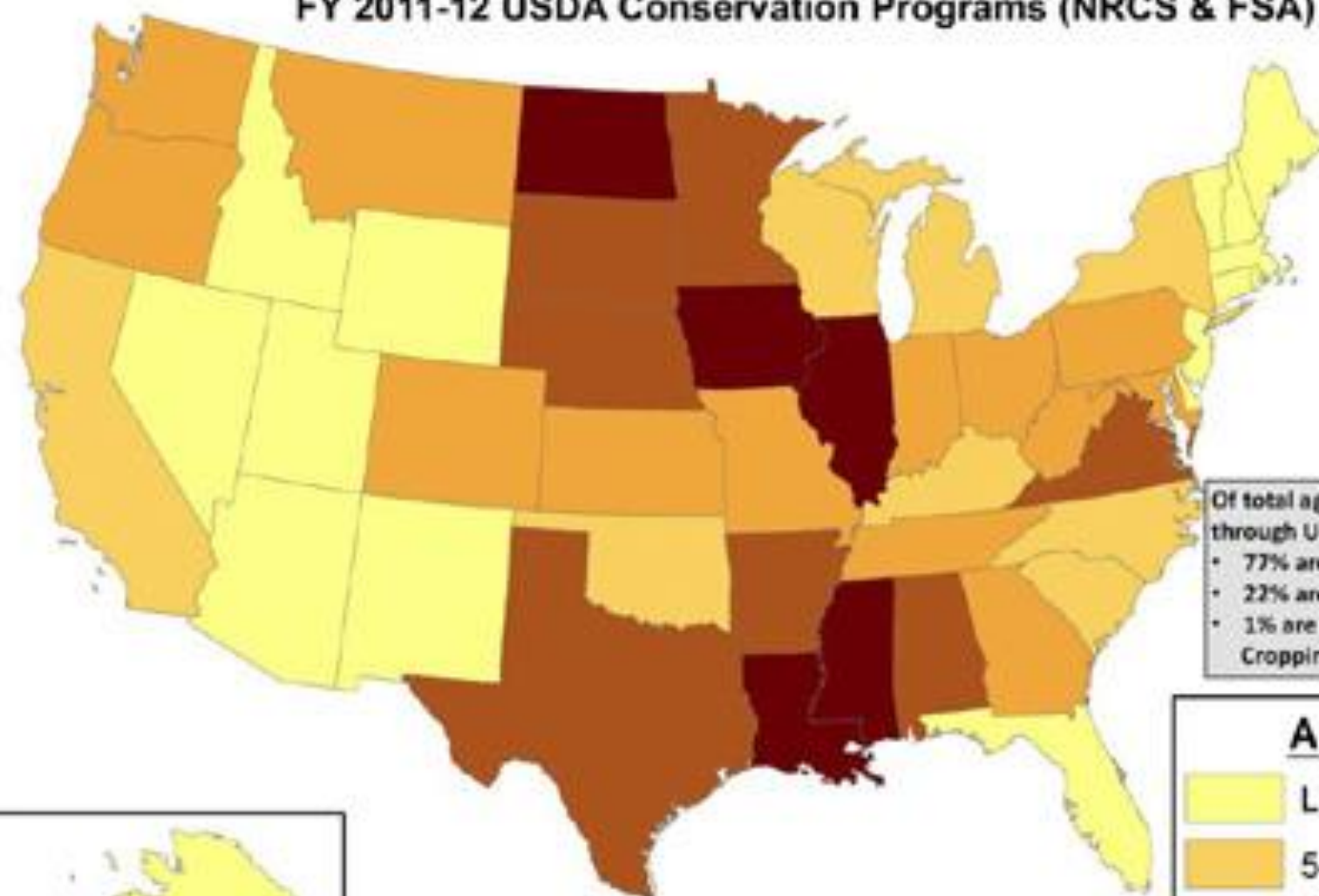
## U.S. Fish and Wildlife Service

- Partners for Fish and Wildlife (PFW) Funding Incentive



# Acres Applied

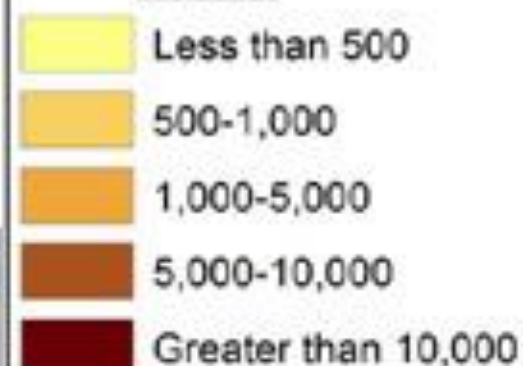
FY 2011-12 USDA Conservation Programs (NRCS & FSA)



Of total agroforestry acres applied through USDA conservation programs:

- 77% are Riparian Forest Buffers
- 22% are Windbreaks
- 1% are Alley Cropping, Multi-Story Cropping, & Silvopasture

## Acres



### Hawaii & Pacific Area\*

\* Includes Guam, No. Mariana, Am. Samoa, Palau, Micronesia, Marshall Islands

### Caribbean Area\*

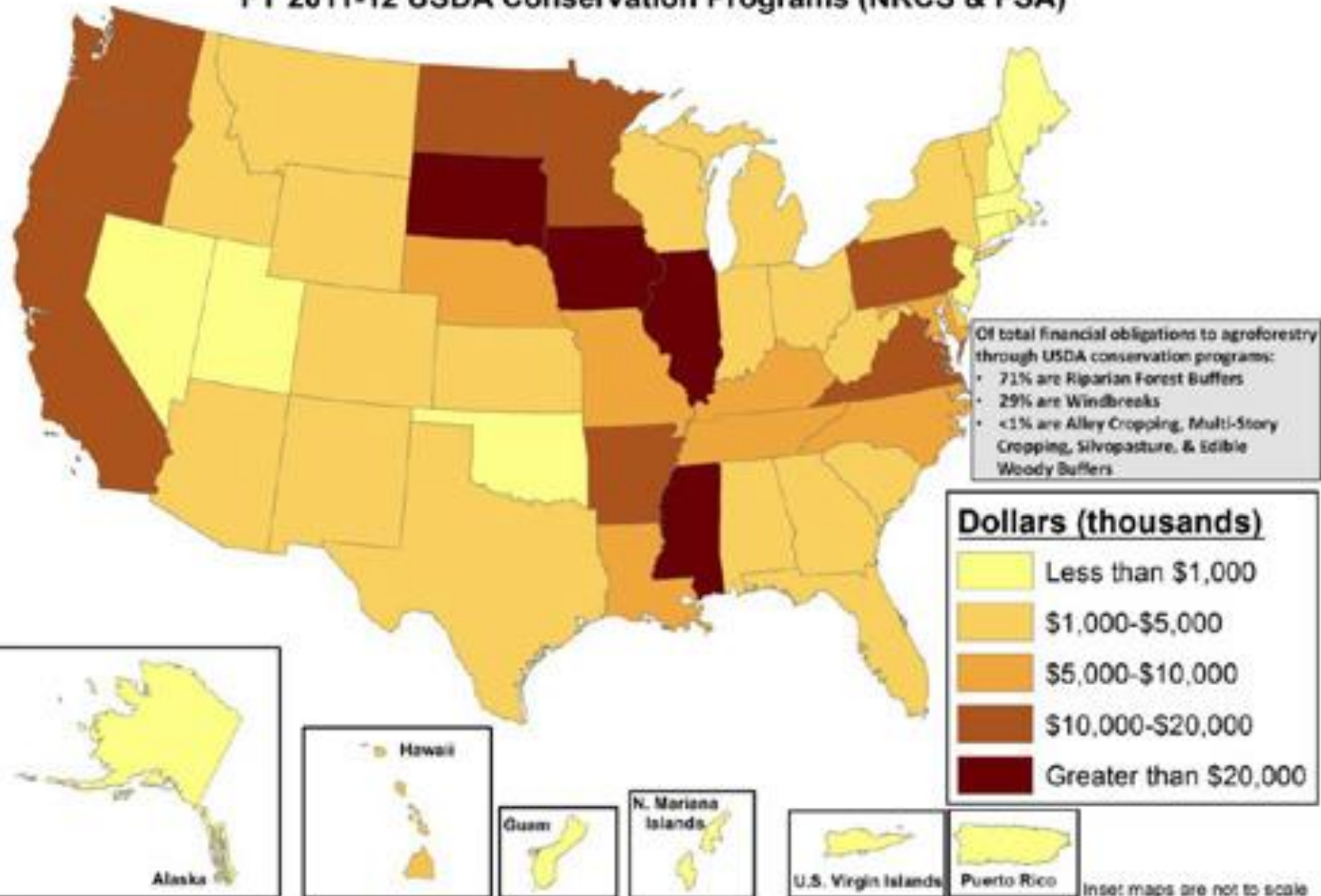
\* Includes Puerto Rico and U.S. Virgin Islands

Inset maps are not to scale



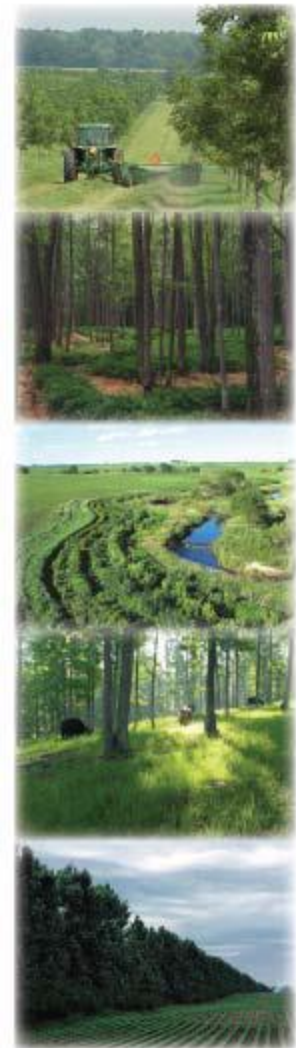
# Financial Obligations

FY 2011-12 USDA Conservation Programs (NRCS & FSA)



# Private Programs

- National Fish and Wildlife Foundation (NFWF)
  - Native Plant Conservation Initiative
  - Conservation on Private Lands
- National Wild Turkey Federation (NWTf)
- Quail Unlimited (QU)
- Ducks Unlimited (DU)
- Pheasants Forever (PF)





# Professionals

Expanding  
Agroforestry  
Knowledge and  
Expertise



# Professionals

- Educating natural resource professionals can help increase the adoption of agroforestry systems and practices.
- Educational opportunities exist but are often ad-hoc and depend on the creativity of educational leaders.
- Many gaps exist throughout the country where agroforestry has potential but where not many hands-on educational opportunities are available.





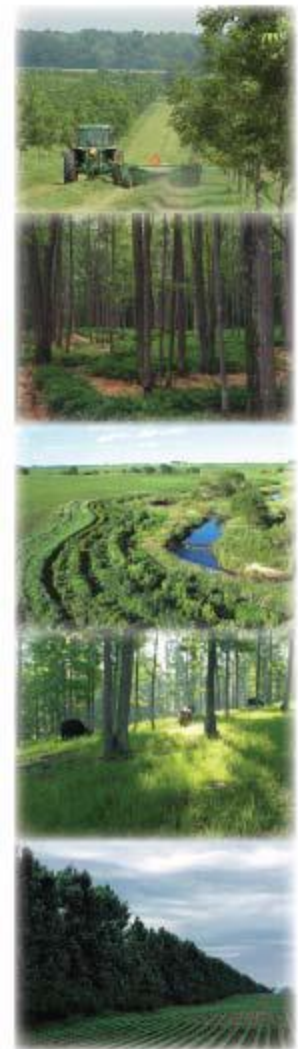
# Professionals

- Formal Education

- Graduate Programs: U of MO, U of FL, Oregon State
- Undergraduate Agroforestry Classes @ universities in CA, FL, GA, HI, IA, MO, MS, NE, NC, OR, PA, VA
- Community Colleges: HI and IL

- Informal Education/Continuing Education

- Workshops
- Online Courses and Webinars



[ ABOUT THIS COURSE ]

[ COURSE MODULES ]

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#### WELCOME!

Silvopasture is an agroforestry practice that integrates livestock, forage production, and forestry on the same land-management unit. Silvopasture systems are deliberately designed and managed to produce a high-value timber product in the long term while providing short-term annual economic benefit from a livestock component through the management of forage or an annual crop component.

This website is a companion resource to the technical handbook, *Silvopasture: Establishment & management principles for pine forests in the Southeastern United States*. ([click here](#) to download handbook). The site is designed as an online course and a resource to enable natural resource professionals and landowners to understand and apply the economic and ecological principals of Silvopasture.

LOGIN OR REGISTER FOR THIS COURSE

Once you complete all Modules and Quizes, you will receive 3.0 CFE Credit Hours in Category 1-CF from the Society of American Foresters.

# Online Course about Silvopasture

<http://www.silvopasture.org/index.html>

Center



Resources  
Conservation  
Service

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## 14TH NORTH AMERICAN AGROFORESTRY CONFERENCE. JUNE 1-3, 2015



User Rating: 0 / 5

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AFTA members should be excitedly anticipating a great three-day conference in Ames, Iowa this summer. See the website below for details.

[extension.iastate.edu/forestry/](http://extension.iastate.edu/forestry/)

The conference title is "Agroforestry as a Catalyst for On-Farm Conservation and Diversification" and it will take place at the Holiday Inn Conference Center at the Iowa State University campus. The website also lists other nearby accommodation options.

Written by

<http://www.aftaweb.org/>

## EVENTS

[View Full Calendar](#)

### POPULAR TOPICS

[silvopasture](#)  
[AFTA](#)  
[planting design](#)  
[Canada](#)

## EUROPEAN AGROFORESTRY - BUILDING IN MOMENTUM



User Rating: 0 / 5

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The European Agroforestry Federation (EURAF) has been active on many fronts. Although policies, regulations and programs in North America are, in many cases, substantially different from those in the various European member countries and the European Union, especially under the Common Agricultural Policy, AFTA members will be interested to read, not only about the EURAF initiatives, but also about the various member countries.

The EURAF website offers hours of interesting reading at:

<http://www.agroforestry.eu> and highlights local initiatives, public events and practices in all Europe's diversity, from the dry Mediterranean climates of

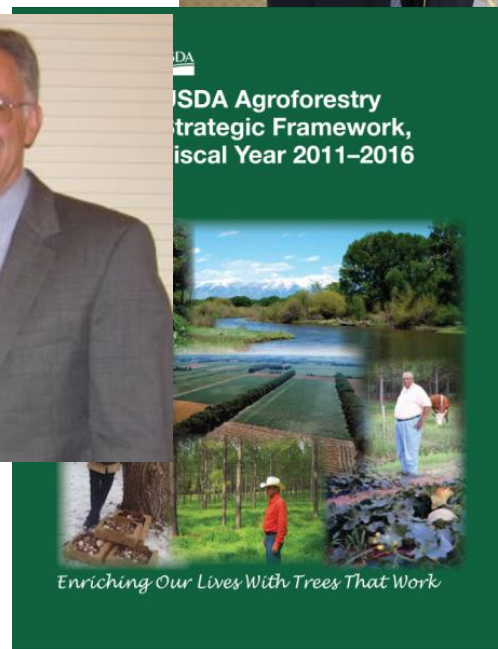
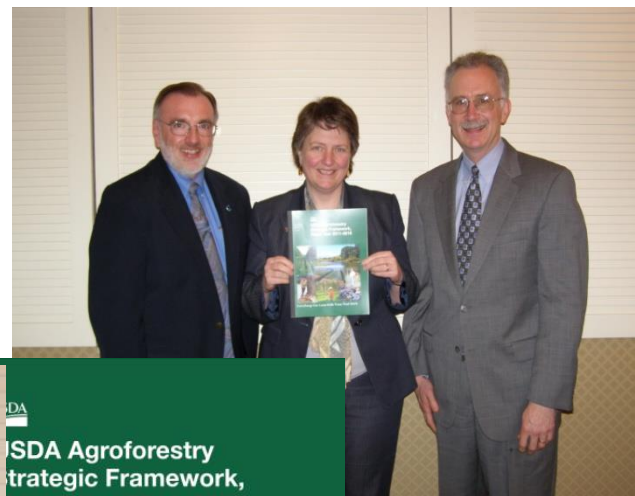
Greece, Italy and Spain, to northerly regions such as Sweden and Scotland.

### MOST READ ARTICLES

[What is Agroforestry?](#)  
[Wild-Simulated Forest Farming for Ginseng Production](#)  
[Alley Cropping](#)  
[Medicinal Herb Crops Can Earn Extra Income for Forest Farmers](#)  
[Silvopasture](#)

# USDA Agroforestry Strategic Framework, 2011-2016

- **Released June 2011**
- **Developed by interagency team** (five USDA agencies, National Association of State Foresters & Conservation Districts)
- **Input from 90 stakeholders** (Agroforestry Learning Workshop, May 25-26, 2010)





# Greater Agroforestry Knowledge by Resource Professionals May Lead to More Agroforestry



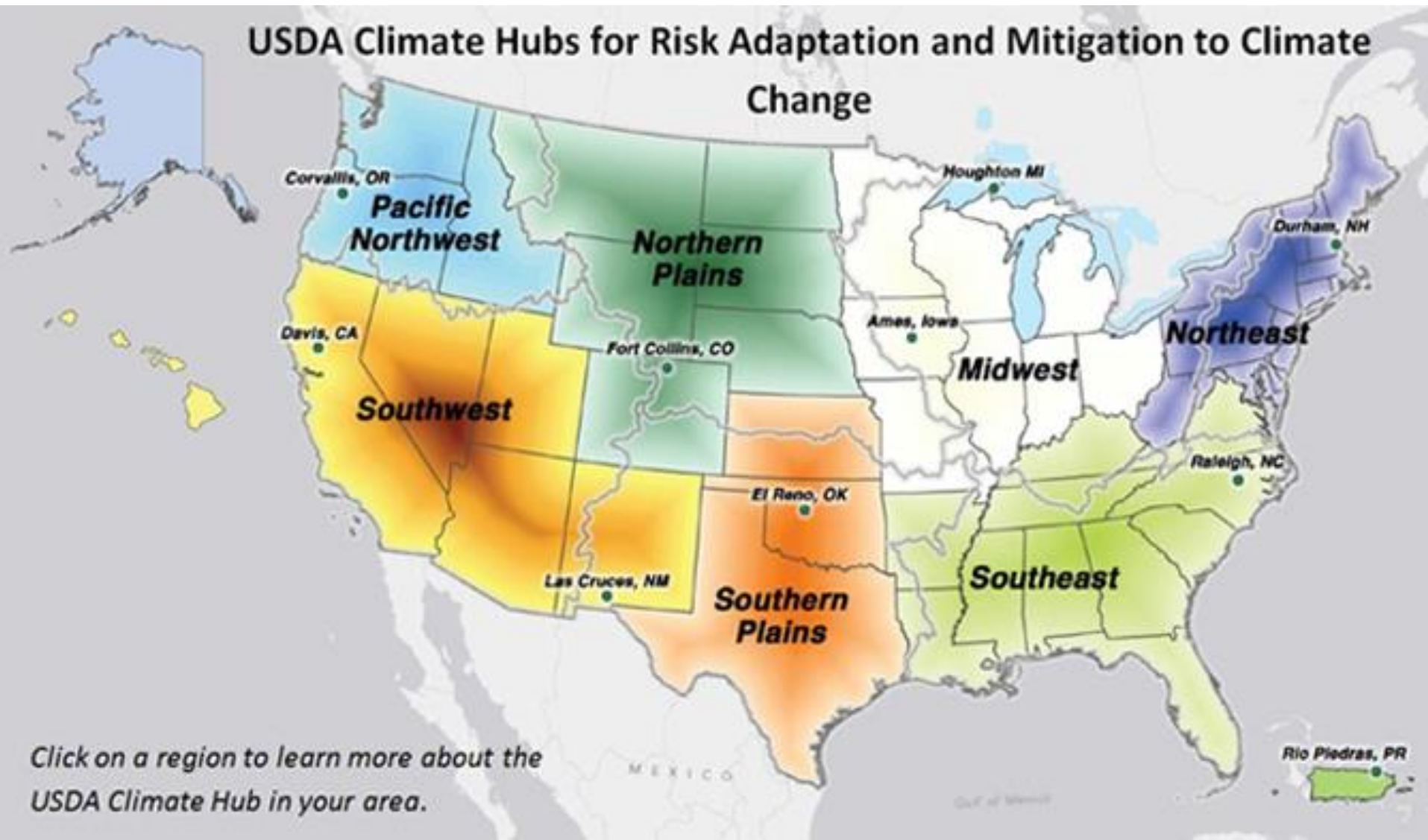
## Appendix H: NRCS Practice Standards in the Field Office Technical Guide

*Table H1.— Natural Resources Conservation Service State offices that have adopted agroforestry practice standards as of November 2012.*

State	Alley Cropping (311) Acres	Multi-Story Cropping (379) Acres	Riparian Forest Buffer (391) Acres	Silvopasture (381) Acres	Windbreak/ Shelterbelt Establishment (380) Feet	Windbreak/ Shelterbelt Renovation (650) Feet
National Standard Update	2011	2010	2010	2011	2011	2010
Alabama			X	X		
Alaska			X		X	X
Arizona	X	X	X	X	X	X
Arkansas	X		X		X	X
California	X		X	X	X	X
Colorado	X	X	X	X	X	X
Connecticut	X		X	X		
Delaware			X		X	
District of Columbia	X		X		X	
Florida	X		X	X	X	X
Georgia			X	X	X	X
Hawaii	X	X	X	X	X	X
Idaho	X	X	X	X	X	X
Illinois	X		X		X	X
Indiana	X		X		X	X
Iowa			X		X	X
Kansas	X		X	X	X	X
Kentucky			X	X	X	X
Louisiana	X		X	X		
Maine			X		X	
Maryland	X		X		X	
Massachusetts			X		X	X
Michigan	X		X		X	X
Minnesota	X		X		X	X
Mississippi			X	X	X	

# Mitigating Climate Change with Agroforestry

## USDA Climate Hubs for Risk Adaptation and Mitigation to Climate Change



*Click on a region to learn more about the USDA Climate Hub in your area.*



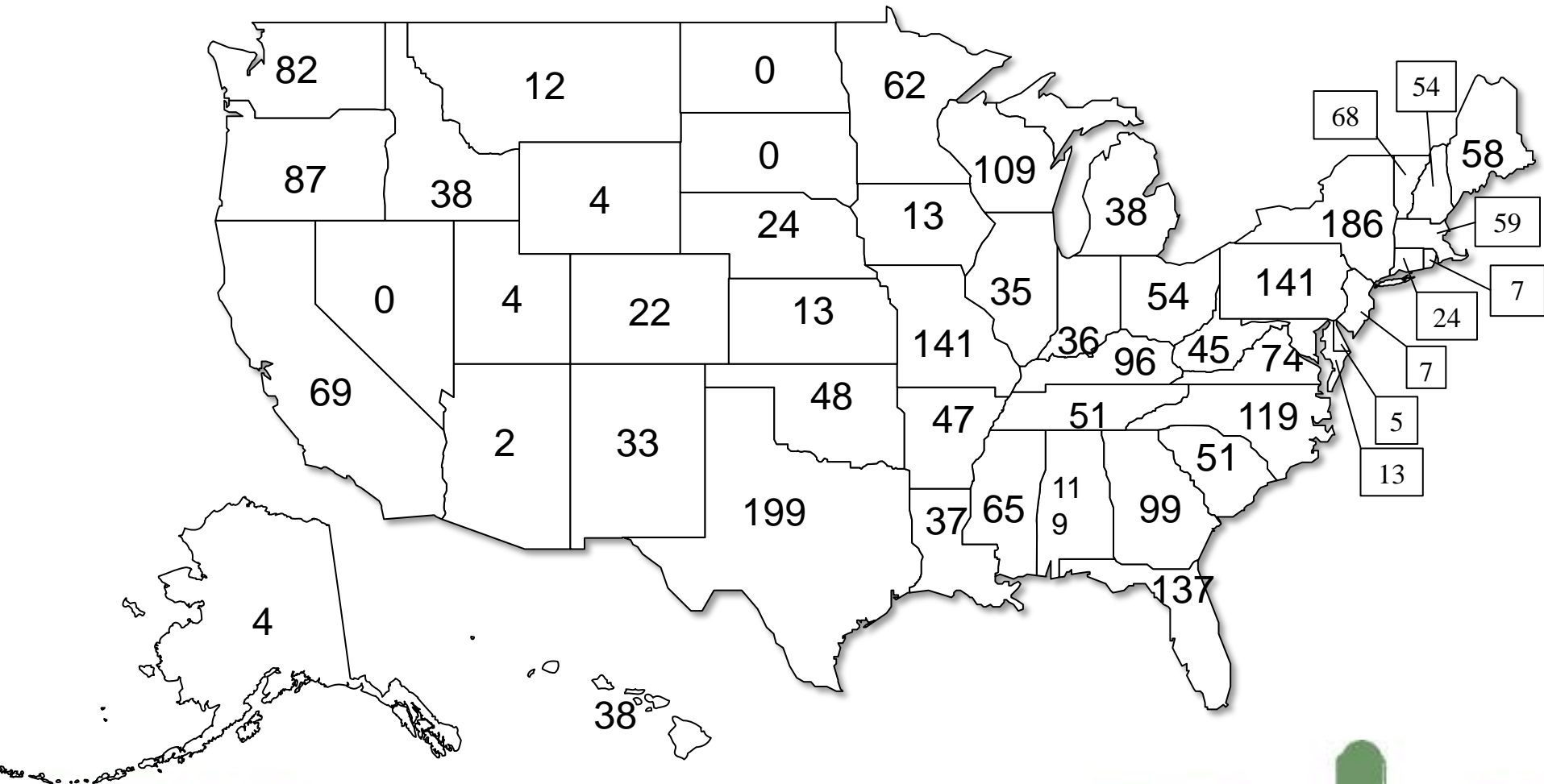


# Peer-to-Peer Learning





# 2,725 farms said they practiced alleycropping or silvopasture





United States Department of Agriculture



# Agroforestry:

USDA Reports to America,  
Fiscal Years 2011–2012—  
Comprehensive Version



# Learning From Those Who Are Doing!



<http://www.usda.gov/documents/usda-reports-to-america-comprehensive.pdf>



# Learning From Those Who Are Doing

## Chestnuts at Red Fern Farm

Tom Wahl and Kathy Dice raise a variety of fruit, berry and nut crops at [Red Fern Farm](#) nursery and tree farm in southeast Iowa. Chestnuts are one of the farm's most marketable crops. Due to high demand, Wahl has become a chestnut broker for other growers in his area. Read this [MAAWG case study](#). Download a 2-page print-friendly PDF version of the [Red Fern Farm case study](#).

## Elderberries at East Grove Farm

Kurt Garretson and his family specialize in elderberries and other heritage crops on the historic [East Grove Farm](#) near Salem, Iowa, where they are also developing a winery. Read this [MAAWG case study](#). Download a 2-page print-friendly PDF version of the [East Grove Farm case study](#).

## Silvopasture at Early Boots Farm

At [Early Boots Farm](#), beginning farmer Tyler Carlson and wife Kate Droske are incorporating an agroforestry practice known as silvopasture into the gourmet, grass-fed and finished beef farm they are establishing on family land near Sauk Centre, Minnesota. [MAAWG case study](#). Read this [MAAWG case study](#). Download a 2-page print-friendly PDF version of the [Early Boots Farm case study](#).

## Pecans and Niche Crops at Shepherd Farms

Dan and Jan Shepherd started growing nuts and other "niche" crops and livestock in 1971 on their diversified farm in north-central Missouri. Read this case study in the *New American Farmer: Profiles of Agricultural Innovation* (SARE 2005). Since the time of this profile, the pecan crop has become the focus of [Shepherd Farms'](#) business. Their farm store is still open in the fall to sell pecans and other farm-related items.

<http://midamericanagroforestry.net/>



## North Central Region

[www.sare.org/ncrsare/](http://www.sare.org/ncrsare/)

### Fiscal Year 1999

- Iowa. Oak Savanna restoration - diversity in a rotational grazing system
- Iowa. Crop bearing windbreak/shelterbelt project
- Minnesota. Growing various species of Angelica as a forest crop in the Midwest
- Missouri. Brambles and Sassafras agroforestry project
- Missouri. "Scoto Sand" agroforestry demonstration
- South Dakota. Improve grazing profits by marketing cedar

### Fiscal Year 2000

- Michigan. Building a thermal blast peeler to prepare chestnut for on-farm, value-added processing
- Minnesota. Evaluation of Christmas tree varieties for northern Minnesota
- Missouri. Growing medicinal mushrooms on hardwood stumps and tops
- Missouri. Strategically thinning a pecan orchard and use of the by-product for sustainable management
- Ohio. Best cultivation practices for at-risk medicinal herbs
- Ohio. Increasing production in native stands of Paw Paws
- South Dakota. Kiyaska timber salvage and restoration project

### Fiscal Year 2001

- Missouri. Increasing farm production by converting fenceline brush to agroforestry
- Missouri. Maximize returns on marginal ground using silvopastoral management practices with Chestnut trees, rare breed sheep, and guard llamas
- Iowa. Potential markets for the prairie's edge sustainable woods cooperative
- Minnesota. Marketing sustainable wood products
- Ohio. Using animals to manage pawpaw patches
- Nebraska. The establishment of nut and timber species with varying cultural methods into crop acres (conversion) production of a viable economy with less chemical inputs

### Fiscal Year 2002

- Ohio. Agroforestry practices of ginseng and goldenseal in natural stand of hardwood forest trees
- Ohio. Research and development of a small farm maple syrup operation in Jefferson Township, Montgomery County, Ohio
- Kansas. Using agroforestry to winter cattle
- Minnesota. Promoting healthy maple forests
- Minnesota. Utilizing water conservation and infiltration for Black Walnut production

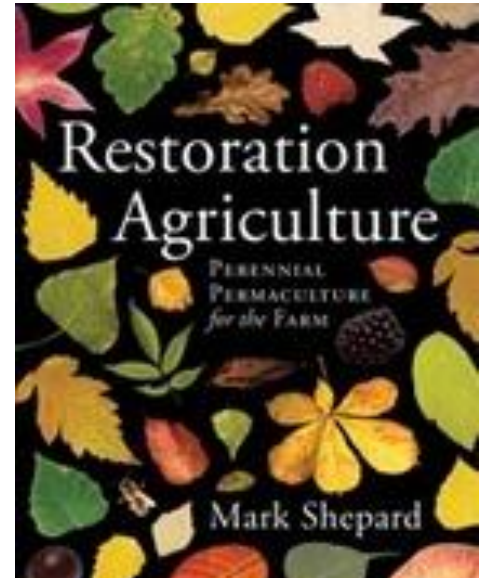
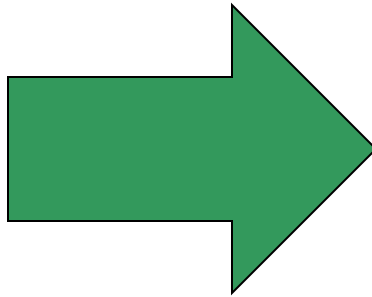
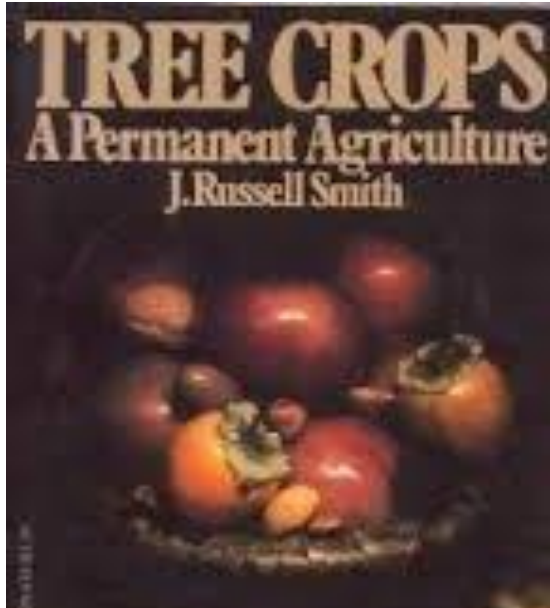
### Fiscal Year 2003

- Minnesota. Developing a Saskatoon market in the Upper Midwest
- Missouri. Agroforestry application of non-timber forest species - nursery growers cooperative
- South Dakota. Growing native fruits of the North Central region

Learning From  
Those Who  
Are Doing



# What is Your Vision for Agroforestry?







**THANK YOU**





# QUESTIONS?

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