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Forest Service
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Riparian Corridors and Area-Wide Planning Necessary for Wildlife

by Kim Isaacson, Technology Transfer Specialist, NAC, Lincoln, Nebraska

Agroforestry practices can provide wildlife habitat as well as help address many environmental concerns, making a landscape more healthy. On the left is a landscape that could be enhanced with agroforestry practices. On the right the same photo has been digitally enhanced by adding trees and shrubs. Note the connected field windbreaks which provide travel lanes for wildlife as well as protect soils, crops, and livestock. The riparian zones provide benefits for terrestrial and aquatic wildlife, while helping to improve water quality. (Photos by Gary Wells, NRCS Landscape Architect).

The landscape of rural America is changing. Wildlife corridors (linear patches of grass, shrubs, and trees that differ from their surroundings) are removed to expand fields and make room for urban development. The result is a landscape that exports significant quantities of sediment and chemical pollutants into waterways, lakes, and wetlands. This evolving landscape has fewer and smaller connected patches of habitat, as well as degraded water quality that stresses aquatic ecosystems. The land's capacity to sustain a diversity of plant, animal, and aquatic species is declining at an accelerating rate. Loss of biodiversity has become a national and global concern.

Land managers have turned to corridors to perform a more central role in the conservation of soil, water, fish, and wildlife in fragmented landscapes. The revitalization and linkage of the nation's landscape corridors is one way to help. Both natural and planted corridors, if managed properly, can yield significant benefits (value) to wildlife, the landowner, and society.

Riparian corridors are used by over 70 percent of all terrestrial wildlife species, including many threatened and endangered (T&E) species, during some part of their life cycle. Corridors provide food, nesting, brooding, loafing, and protective cover for game and non-game wildlife. They also afford wildlife relatively safe access to adjacent resources and serve as travel lanes for species dispersal and migration in our increasingly fragmented landscape.

The problem is that the quality and quantity of our nation's conservation corridors have been on the decline for the last several decades. Hundreds of miles of fence rows, windbreaks, and other planted corridors are removed annually to accommodate changing agricultural prac-

(See Corridors on page 6)

Inside This Issue

Working Trees for Wildlife Brochure and Display..page 2
Economic Potential of Wildlife.....page 3
Wildlife Habitat *and* A Living Snowfence.....page 4
Agroforestry Can Enhance Fish Habitat.....page 5

NAC Director's Corner

A commentary on the status of agroforestry
by Center Director, Dr. Greg Ruark

Wildlife in a Tame World

Once upon a time… settlers to this country were rightly concerned with taming the wild lands that stretched across the continent; land was abundant and people were few. Land, wildlife, and other natural resources provided the means to carve a livelihood and meet human aspirations.

"Apart from excavating a den
or weaving a nest,
most wildlife do not create their own habitat,
rather they make do
with what nature provides or,
increasingly, with what humans leave."

Now upon a tame… settlers and their ancestors were wildly successful in their efforts. With the exception of public lands that were set aside for wilderness, forests, grasslands, and parks, there is little left to tame. In many places, agricultural fields now spread from horizon to horizon, uninterrupted by a tree or shrubs. Ironically, in making the land simpler for people to manage, it has become too complex for most wildlife to endure.

Forest, range, pasture, and croplands across the nation are now being developed for commercial and residential use at an alarming rate. In response, people are increasingly expressing their concern over the disappearance of open/green space around and within the communities where they live. Linked to the issue of open/green space are wildlife species, many of which rely upon, or even require, forested habitat to provide food and cover. Apart from excavating a den or weaving a nest, most wildlife do not create their own habitat. Rather, they make do with what nature provides or, increasingly, with what humans leave.

In many places across the nation, agroforestry technologies can provide excellent ways to alleviate the simplification, fragmentation, and reduction of wildlife habitat. This is true in both rural agricultural landscapes and at the interface where expanding communities meet agricultural land. For example: windbreaks and alley cropping systems can be designed to provide travel corridors, while themselves providing beneficial habitat. Forested riparian buffers can provide high quality habitat for both terrestrial and aquatic wildlife while enhancing water quality. The forage beneath the trees in a silvopastoral system is favorable for many small mammals, deer, and game birds.

Whether the desire is to have wildlife for aesthetic, recreational, or ethical reasons or to allow for consumptive activities, like hunting or fishing, agroforestry practices can be designed to increase the habitat of many wildlife species. NAC

Working Trees for Wildlife Brochure and Display

Although providing quality habitat for wildlife in agricultural settings may be challenging, agroforestry offers unique opportunities for landowners.

Agroforestry practices are often designed with the assumption that they will be adequate for wildlife. Though they usually benefit wildlife, agroforestry practices often are designed far below their capability to provide the basic wildlife habitat needs of food, water, and cover.

Our new *Working Trees for Wildlife* brochure illustrates how agroforestry practices can be designed to specifically enhance wildlife habitat. To obtain this brochure or any of our other brochures, please e-mail Nancy at: *nhammond/rmrs_lincoln@fs.fed.us*.

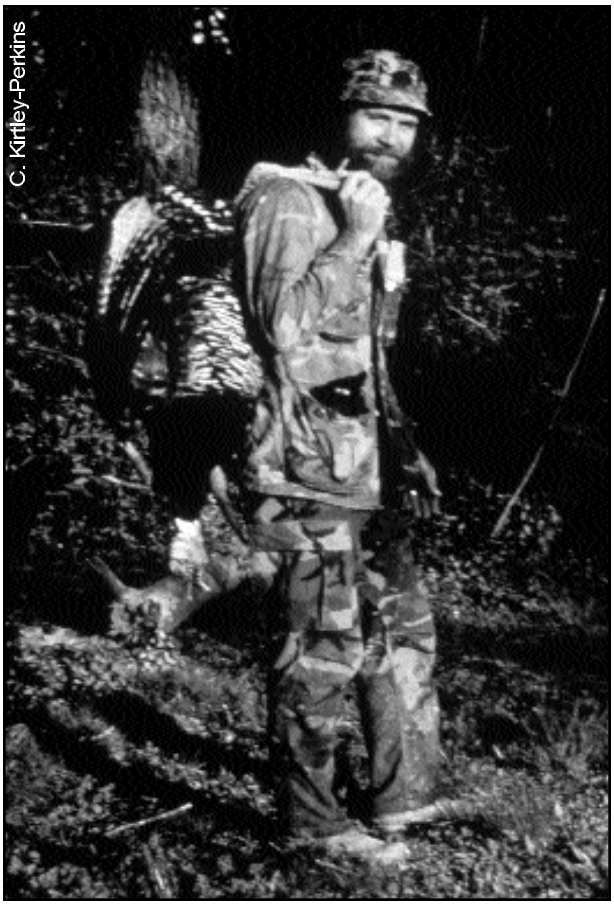
A coordinating *Working Trees for Wildlife* display will also be available for your use by late spring. To schedule the display for your event, or for more information about any of our Working Trees displays, contact Clover at 402-437-5178, ext. 14.

Visit our web site for a preview of any of these materials: *www.unl.edu/nac*. You can now access our publication list online and order any of our publication electronically. We've added a lot of new information to our site. Take a look and tell us what you think. NAC

The new Working Trees for Wildlife brochure is now available from the Center.

Wildlife Offers Economic Potential in Agroforestry Systems

by Amanda E. Latham and Stephen C. Grado, Department of Forestry, Forest and Wildlife Research Center, Mississippi State University, Starkville, Mississippi



An eastern wild turkey hunter in Mississippi takes advantage of agroforestry practices. Turkeys, as well as most wildlife, thrive in riparian areas and windbreaks.

Agroforestry systems are known to enhance wildlife habitats, subsequently increasing wildlife populations. The number of possible combinations of trees and other components in agroforestry systems is virtually infinite. Combinations are limited only by the landowner's objectives and by the land's characteristics. This variability makes agroforestry systems applicable over a wide range of land areas.

There are five major agroforestry practices currently in use in the United States. They are windbreaks, alley cropping, riparian buffer strips, forest farming, and silvopasture. Each of the five systems represents an alternative to single-use methods, while simultaneously providing both economic returns and wildlife habitat for landowners and communities. The economic and wildlife benefits can be considerable if landowners choose a system that will be the most productive and most compatible with their land.

Windbreaks use rows of trees or a combination of rows of trees and shrubs placed at right angles to the prevailing wind direction and scattered across an area to reduce wind speed and trap snow. In the U.S., they are employed most often in the Great Plains, the Midwest, the East, and the West and provide numerous benefits to both the landowner and wildlife. Windbreaks indirectly boost the landowner's income by increasing crop quality, improving pesticide application, facilitating better water and frost management, controlling soil erosion, reducing the incidence of plant disease, improving the efficiency of livestock production, and boosting the number of pollinating insects. The vegetation used within windbreaks can become an additional income source if fruit, timber, or nut-producing species are chosen. Wildlife populations benefit if the landowner employs windbreaks because they provide travel corridors, shelter, nesting and brood cover, and food for many small mammals, furbearers, game birds, and songbirds. This is advantageous to landowners who may want to enter into fee hunting arrangements. The enhanced habitat and increased wildlife populations can also accommodate the needs of other wildlife enthusiasts, such as wildlife photographers and bird watchers.

Alley cropping involves planting single or multiple rows of trees at wide spacings, thereby creating alleys for growing agricultural or horticultural crops. This system is applied most often in sub-humid regions, such as the northeastern, midwestern, and southern U.S. Economically, alley cropping creates cash flow from traditional agricultural crops while waiting for the trees to mature. This tree/crop arrangement produces greater yields than if the components were grown separately. Wildlife benefits associated with alley cropping systems include perches for insect eating birds, roosting and breeding areas for nesting birds, and protective cover for game birds and small mammals. With this increase in suitable habitat, small mammal and game bird populations increase, accentuating fee hunting and wildlife watching opportunities.

Riparian buffer strips combine a variety of tree, shrub, and grass species in plantings between cropland or other land uses and streams, lakes, wetlands, ponds, or drainage ditches. Riparian buffers help the landowner decrease the chance of future economic loss by reducing erosion, trapping sediment, stabilizing the stream banks, and slowing the peak flows of flood water. Wildlife and recreational opportunities are also created and enhanced by riparian buffer systems. The buffer provides homes for cavity-nesting birds, supplies shelter, food, cover, and water for small mammals, furbearers, and hoofed browsers, and returns nutrients to the stream for small organisms. The buffers also provide homes for amphibians and resting sites for neotropical migrants. Riparian buffers are made up of three zones, each of which has economic value. The upland zone can be planted in grass to serve as a surface water filter or a forage crop. Rows of trees and shrubs can be planted in the riparian middle zone and used for timber, nut, syrup, or fruit production. The aquatic zone contains native woodlands that can be used and maintained for hunting, hiking, and bird watching. The protection and enhancement of waterways within the buffer make opportunities available for recreational fishing and boating.

Forest farming involves creating microenvironments in forested areas by growing crops in addition to timber. Currently, forest farming is most prevalent in the Pacific Northwest, Northeast, Midwest, and Appalachian states. Forest

(See Potential on page 7)

Wildlife Habitat Functions as Living Snowfence Too

by Clover Shelton, Technology Transfer Assistant, NAC, Lincoln, Nebraska

Terry Wright's dedicated tree planting activities have improved wildlife habitat dramatically. Dan McCormick, South Dakota Division of Forestry says, "He is a leader of habitat development in South Dakota."

When the United States Army Corps of Engineers constructed four reservoirs along the Missouri River in South Datoka, the intention was to prevent recurrent floods, thereby saving lives and money and creating hydropower electricity and irrigation. An unintended effect of this construction was the depletion of hundreds of thousands of acres of wildlife habitat.

Terry Wright, Habitat Mitigation Coordinator for the South Dakota Game, Fish, and Parks is attempting a heroic rescue. With federal dollars, Wright is re-establishing wildlife habitat on Corps of Engineers land near two of the reservoirs, Lake Oahe and Lake Sharpe, known as the "take-lands."

With the help of two crews consisting of over ten permanent employees and over 40 seasonal workers, Wright has planted thousands of acres of wildlife habitat over the last 15 years with an annual budget of approximately $530,000.

These plantings are designed with one purpose in mind: establish adequate habitat. To accomplish this, Wright considers four essential practices:

- *Dense blocks of trees* – Blocks (10-15 acres and larger) of native trees and shrubs planted a minimum of 20 rows wide provide essential winter protection to resident wildlife. They provide a wide variety of nesting sites for neotropical and other migrants, excellent escape cover, and loafing cover during hot summer months for many species.
- *Dense nesting cover* – Cool season grasses and legumes provide valuable nesting and brood rearing habitat for game and nongame birds in addition to providing loafing cover and food for animals.
- *Native tallgrasses* - Warm season native tallgrasses provide winter cover for many purposes and offer a food source to many species.
- *Food plots* – Small acreages of cropland are left standing over the winter for wildlife. These plantings attract wildlife into good habitat areas where essential winter cover is adequate.

Without specifically designing an agroforestry practice, many related benefits result from Wright's wildlife habitat plantings. Some of these blocks serve as living snowfences, although denser and shorter than the traditional design. On the windward side, he plants strong, dense trees intended to trap snow and utilizes the leeward side to establish food plots and cover for wildlife.

"The winter of '96-'97 was pretty revealing," Wright said. "[Near one planting] there was a drift 30-foot high. Because we planted honey locust so close together, there was little tree damage. I know it works. I've seen it."

Dan McCormick, South Dakota Division of Forestry, applauds Wright's efforts. "Because of his dedicated activity, the area has been improved dramatically for the good of wildlife. He is a leader of habitat development in South Dakota."

"In 1987, Governor George Mickelson presented Terry an award for the millionth wildlife tree he had planted," McCormick said. "He is probably over two million by now!" NAC

Partially adapted from the article in South Dakota Conservation Digest, March/April, 1998: "Tough Struggle."

Tell us your success stories!

We are planning to devote a future issue of *Inside Agroforestry* (distributed to over 7500 locations) to progressive natural resources professionals just like you and innovative landowners that you work with. We want to know about successful agroforestry practices you have planted, designed, coordinated, and/or maintain. Please write a short description (one page) of your success story. Include:

- WHO: Who was involved? Whose land? Who funded it?
- WHAT: What practice(s) were planted? What resulted? What stage is it in now?
- WHEN: When was the practice planted? When was it initiated?
- WHERE: County or city and state? Proximity to a river, livestock, etc.?
- HOW: How was the practice(s) designed? How is it maintained? How does it function?
- WHY: Why was it planted? What need does it fill?

Send your story, along with a contact name and telephone number (and photograph or slide if possible) to: EDITOR-IA, National Agroforestry Center, UNL-East Campus, Lincoln, NE 68583-0822. Or, e-mail Kim Isaacson at: *kisaacson/rmrs_lincoln@fs.fed.us*

Agroforestry Can Help Fish Habitat

by Clover Shelton, Technology Transfer Assistant and Kim Isaacson, Technology Transfer Specialist, NAC, Lincoln, Nebraska

In early March, Americorp volunteers planted 155 acres of riparian buffers, the first major contract under the State of Oregon's Conservation Reserve Enhancement Program (CREP). The CREP was proposed by the Governor's Office, developed with the United States Department of Agriculture and stakeholders at the local, state, and federal level.

The CREP was designed to enhance riparian habitat on agricultural lands along streams that provide important habitat for endangered salmon and trout species in Oregon. Throughout Oregon, populations of the once abundant salmon have declined, face extinction, or have already become extinct. This problem is of enormous importance to the people of Oregon and the Pacific Northwest and has been identified as an issue of national scope by Congress. Restoration of riparian habitat is a key element in the overall recovery of these fish populations.

"...landowners are the key to the success of this program."
—Fred Ringer

Riparian forests and marshes filter pollutants from overland flow and subsurface flows. Removal or elimination of native riparian vegetation results in increases in water temperature and rates of sedimentation and changes in channel morphology. Trees provide shade to maintain cool water temperatures. Litter falls and insects drop from riparian vegetation to significantly contribute to the food supply of stream fish. When trees die and fall into the stream, they provide structure for pools creating channel complexity. Roots stabilize streambanks and protect them from chronic sediment loss.

The project area includes private agricultural lands along all streams in Oregon which provide habitat for nine species of salmon and two species of trout which are listed under the Federal Endangered Species Act. Since the CREP sign-up began in October, 1998, the state has received 60 offers including over 1700 acres from 13 counties. Of these proposals, 180 acres are currently approved for planting under CREP, and many more are expected to be approved.

In Oregon, up to 100,000 acres are expected to be enrolled under this program. Of the land enrolled, 95,000 acres are to be planted to riparian buffers and 5,000 acres will be used for wetland restoration. A total of 4,000 miles of important freshwater streams will be enhanced.

The CREP proposal is designed to address water quality degradation on private lands along freshwater streams. On a statewide basis, about 20 percent of the freshwater salmon streams on private lands pass through agricultural land use areas. Farming and ranching activities on these lands have led to removal or elimination of native riparian vegetation. Restoration of forest buffers along these salmon and trout streams will:

- provide shading of streams to reduce the rate of solar heating;
- contribute large woody debris to the streams which will help restore natural channel morphology;
- increase the production of food organisms beneficial to salmon species; and
- reduce sedimentation from sheet overflow and bank sloughing.

According to Fred Ringer, State Program Specialist for Oregon's Farm Service Agency, landowners are the key to the success of this program. "Landowners need to be given credit for their participation in conservation programs on their own. But now, because of the Endangered Species Act, it is important that we assist landowners."

Ringer is already calling the CREP a success. "In the two previous years, only 200 acres were proposed in continuous sign-up. Since the CREP enhanced sign-up in October, we've already had over 1700 acres offered." NAC

Adapted from: Oregon's Riparian Enhancement Initiative: A Conservation Reserve Enhancement Proposal for Restoring Endangered Salmon and Trout in Oregon." September, 1998.

International Links

by Sarah Workman, NAC International Coordinator

Throughout much of the world, integrated crop and tree combinations are considered normal farming systems. In these systems, trees can provide important habitat and food resources for a variety of wildlife, especially where intensive land use has influenced species composition through direct competition or predation (hunting/ poaching) and habitat modification. In an agricultural landscape where wildlife cover is fragmented, or minimal to begin with, trees enable forest animals to persist by functioning as islands of woody habitat and serving as 'stepping stones' across open fields or pastures. This is true whether we consider farmland in Tennessee, riparian buffers in the Midwest, hedgerows in Europe, or pasture lands in the tropics. Through maintenance of species and structural diversity in the landscape, agroforestry systems also help conserve local and regional biodiversity and increase the agroecosystem's resilience to disturbances. Where seasonal drought or temperature extremes occur, woody plant species provide critical sources of food and shelter for wildlife. An example is the savannas of Africa, where many ungulates would not survive without trees as a source of browse in the dry season. There are some problems when wildlife is attracted to what seems a favorable habitat, but becomes exposed to greater harm because of predator concentration or farming activities. Conflict between humans and wildlife can occur when animals 'raid' crops and cause yield losses - like deer in North America, chimps or monkeys in tropical forested areas, or elephants in savanna areas. Overall, when properly planned, agroforestry practices can be seen as effective tools to enhance wildlife habitat and other ecological benefits in agricultural landscapes. NAC

(Corridors from page 1)

tices and suburban sprawl. Long neglected windbreaks planted in the 1930s are dying out; few have been replaced. Many contour buffer strips, grassed waterways, and roadsides are planted in only one species of grass. Single-species stands of introduced grass provide few wildlife benefits and are of little value as winter cover. Untimely mowing, heavy grazing, repeated burning, and pesticide spraying further reduce their habitat value.

While corridors decline, remnant fragments or patches of relatively large undisturbed habitat are also becoming less common, smaller, and increasingly isolated. In some cases they are no longer capable of supporting viable populations of native plants or wildlife. The resulting threat to plant and wildlife species diversity in all regions of the country has become a national concern. Many ecologists believe that connecting remnant habitat patches with corridors should be one part of a comprehensive plan to address this growing problem.

Planning Area-Wide Solutions

How corridors are arranged and connected within the larger landscape context determine their wildlife value. It is the cumulative effect of corridor arrangement that influences wildlife population dynamics. Designing corridor systems is a task of creating strategic configurations across ownerships and land uses. The objective is to restore targeted ecological functions at area-wide scales.

Opportunities exist in every state to plan, design, and manage corridors, optimizing their multiple benefits. Thousands of acres of potential high quality habitat exist in roadsides, windbreaks, riparian areas, grassed waterways and other types of corridors. Implementing a successful system of integrated corridors will require the cooperation of private landowners, local governments, private non-profit conservation organizations, and state and federal agencies working at both landscape and site-specific scales.

Natural resource conservationists play an integral role in promoting area-wide planning and facilitating the planning process once it is initiated. Landowners, farmers, ranchers, partnering agency personnel, and other proponents all share in the work. The NRCS National Planning Procedures Handbook provides a structure within which these tasks can be completed in an orderly and efficient way. The forthcoming NRCS Conservation Corridors handbook has been designed for NRCS conservationists and other partners as a complement to the Procedures Handbook. It is a source of of information about conservation corridors and their benefits and a reference for use in the field.The handbook emphasizes planning, designing, and managing corridors to optimize wildlife habitat. It provides:

- a review of the causes and consequences of habitat fragmentation
- an overview of the types and ecological functions of corridors
- a summary of the benefits corridors provide landowners, communities, and the environment
- watershed scale wildlife corridor planning principles
- examples and case studies documenting the importance of planning systems of conservation corridors for wildlife at watershed scales
- illustrations and case studies showing how an individual farm, ranch, or community conservation corridor project can be knitted into an area-wide plan.

Corridors are only one piece of the conservation puzzle. The other important pieces are the various land management practices applied by farmers, ranchers, and communities to the natural resources on their land. The long-term value of corridors is highly dependent on the health of the adjacent landscape and large patches of native vegetation. Landowners and communities participating in land and water conservation programs using sustainable agricultural and other land use practices enhance habitat quality and quantity. The puzzle can be completed through public and private landowner partnerships, passing on to future generations the rich wildlife and scenic heritage our nation has come to cherish.

The Conservation Corridors handbook is available on the NRCS Watershed Science Institute's website at: *gneiss.geology.washington. edu/~nrcs-wsi/products.html.*

After it is printed, copies will be distributed to each NRCS State Office for use by field staff. NAC

Adapted from: NRCS Conservation Corridors Planning at the Landscape Level: Managing for Wildlife Habitat, Chapter 1.

NAC Website "Best of the Net"

The National Agroforestry Center's website was named one of the best forestry-related sites on the Internet by The Mining Co.

The Mining Co. *(home.miningco.com/)* is a "web guide," a site containing thousands of hyperlinks to web sites related to more than 600 topics. A company-certified specialist -- a real human being, not a computer -- chooses and then reviews the sites that are linked by the Mining Co.

Take a look at NAC's web site *(www.unl.edu/nac/).* It includes online versions of most of the informational and technical materials published by the Center, plus links to more resources. Now, visitors can also order NAC materials using an online form.

(Potential from page 3)

farming promotes biodiversity and diversifies the landowner's income on a single parcel of land. Forest farming is growing in popularity due to a decline in timber production and logging from public forestland and an increase in demand for alternative specialty crops. Such specialty products include ginseng and other medicinal plants, craft materials, floral products, Shiitake and other specialty mushrooms, and native fruits and nuts. All of these crops are compatible with the timber crops. An obvious *wildlife* benefit from this system is the production of honey from bees. Forest farms are also home to numerous species of migrant and resident birds, and they support game birds, hoofed browsers, small mammals, and furbearers. Stable wildlife populations from forest farming habitats contribute to the increase in recreation-based activities. Conversely, certain wildlife species can be "problem" wildlife too. Each situation needs to be evaluated for potential benefits and potential problems to the forest farming system.

"...restoring and connecting portions of the landscape to wildlife habitat will become increasingly important."

Silvopasture is a system that combines forage crops, trees, and livestock production. Its application is most prominent in the southern U.S. and the Pacific Northwest. Adding trees to forage systems creates additional income from timber products, pasture rents, Christmas trees, fruits, nuts, and syrup production. Silvopastoral systems may also be used for wildlife or recreational opportunities and furnish the landowner with additional cash flow from fee hunting. In the South, landowners lease many acres for hunting white-tailed deer, turkey, and quail. The forage crops beneath the trees in silvopastoral systems are home to numerous small mammals and gamebirds and provide food for furbearers and hoofed browsers.

Agroforestry systems are made less vulnerable to market fluctuations because they deliver more than one product from a single land area. For landowners, this is extremely important because it potentially gives them a steady, year-round source of income, regardless of the prevailing market. Wildlife-oriented recreational opportunities are one way in which this income can be increased. Agroforestry, on a broader scale, can be considered important because it potentially offers greater financial returns than unmodified agricultural ecosystems while introducing some of the environmental attributes of natural systems. As more land is converted to agriculture, the necessity of maintaining biodiversity and restoring and connecting portions of the landscape to wildlife habitat will become increasingly important. In turn, this will support those activities which generate economic benefits for landowners and communities.

Agroforestry is a partial solution to habitat and biodiversity loss. It is up to us to recognize and reap the benefits of these systems instead of ignoring them and allowing them to lie fallow. NAC

Source: Adapted from ``Agroforestry Systems" 31:117-132 and 35:303-321 and ``Agroforestry: An Integrated Land-use Management System for Production and Farmland Conservation" by H.E. Garrett.

Sixth Agroforestry Conference in 1999

Sustainable Land-Use Management for the 21st Century

June 12-16, 1999
Hot Springs, Arkansas

For more information and registration materials, contact:
Dr. Catalino Blanche
Dale Bumpers Small Farms Research Center
6883 South State Hwy 23
Booneville, Arkansas 72927-9214.
E-mail: *cblanche@yell.com*
Phone: 501-675-3839
Fax: 501-675-2940
For current information about the conference, visit the Association For Temperate Agroforestry website:
www.missouri.edu/~afta

Need Information About Plants for Your Agroforestry Planting?

A new website, Vegetative Practice Design Application (VegSpec), can actually help you design an agroforestry practice. This site, www.***plants.usda.gov/,*** provides practice design technology and automates design for tree planting, farmstead windbreaks, and field windbreaks as well as several grass practices. It can assist you with selection of plants that are suitable for a specific soil and climate. There is also plant attribute information that can assist you in selecting plants that are beneficial for wildlife. The web site requires a recent net browser. VegSpec is continuing to be developed and your suggestions would help the developers. It's worth checking out.

Economic Values of Wildlife Evaluated

Assessments need to be made on the economic values or benefits associated with wildlife in temperate agroforestry systems in the United States. Currently, there is a study being conducted by researchers in the Department of Forestry at Mississippi State University that will be addressing this topic. The investigation will consider several factors. For example, when determining the worth of specific agroforestry systems in particular locales it is imperative to include both marketable and non-marketable wildlife benefits. Each agroforestry system creates a unique habitat and set of associated wildlife species. Certain species may provide benefits to landowners and surrounding communities directly through such activities as the use of fee hunting leases, recreational fishing, or honey production. There are also non-use values placed on wildlife by landowners, communities, and other citizenry that need to be considered.

Upcoming Events

May 2-5, 1999
Sustainable America: A National Town Meeting. Detroit, MI. For more information, 1-888-333-6878 or *www.sustainableamerica.org.*

June 6-9, 1999
Keep America Growing: Balancing Working Lands and Development. Philadelphia, PA. For more information: 802-655-7215 or e-mail *delaney@together.net.*

June 12-16, 1999
Sixth Conference on Agroforestry in North America -- Sustainable Land-Use Management for the 21st Century, Hot Springs, AR. Contact, Dr. Catalino A. Blanche, 501-675-3834.

June 21-25, 1999
Plains & Prairie Forestry Association- "Snow Control" Short Course/Conf. Cheyenne, WY. Contact, Randy Moench, 970-491-8429.

September 9-11, 1999
Northeast Regional Agroforestry Conference, Portland, ME. Contact, Susan Lee, 207-622-7847 or e-mail: *timetide@me.nrcs.usda.gov.*

Looking for Information to Teach Kids About Conservation Trees?

NAC staff are developing a pilot packet of materials and projects for natural resource professionals to use to educate elementary school age children about working trees. For more information about the project and to offer suggestions or comments, please visit our web site at *www.unl.edu/nac* and click on "Tell us what you think" or call Clover Shelton at (402) 437-5178, ext. 14.

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Mission

The National Agroforestry Center (NAC) is a partnership of the USDA Forest Service, Research & Development (Rocky Mountain Research Station) and State & Private Forestry and the USDA Natural Resources Conservation Service. The Center's purpose is to accelerate the development and application of agroforestry technologies to attain more economically, environmentally, and socially sustainable land-use systems. To accomplish its mission, the Center interacts with a national network of partners and cooperators to conduct research, develop technologies and tools, establish demonstrations, and provide useful information to natural resource professionals.

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