# Inside Agroforestry

Forest Service, Rocky Mountain Research Station Natural Resources Conservation Service

## We're Finally On-Line!

Visit the National Agroforestry Center's new web site! **The address is: http://www.unl.edu/nac** 

The site is still being developed but is fully functional and currently contains an overview of agroforestry and the Center's programs. Eventually it will contain a comprehensive collection of agroforestry information, news, literature, reference material, etc. Bookmark it...we'll be adding and updating frequently.

## We're Updating Our Database

A purge is necessary to keep our

Inside Agroforestry mailing list current and accurate. Soon a postcard will be sent to every address on our database. YOU MUST FILL OUT THE CARD TO REMAIN ON OUR MAILING LIST FOR INSIDE AGROFORESTRY AND AF NOTES. Make any address or name corrections and mail the card to the Center or fax both sides to 402-437-5712. If you are receiving multiple copies, return every postcard, letting us know which addresses to

Ultimately, this purge should ensure that you receive your newsletter in a timely manner. We hope that you enjoy *Inside Agroforestry* and thank you in advance for your cooperation in helping the Center conserve paper, postage, and time.

delete and which to keep.

Direct any questions concerning the mailing list or this purge to Clover Shelton, 402-437-5178, ext. 14.

## Resolving Land-Use Conflicts At The Agriculture/Community Interface —

Harrison, Nebraska residents realized that they had a real problem after the blizzard of March, 1988. They now have a living snowfence planted around the north and west sides of town to help control fierce Great Plains snow storms.

Finding solutions to problems at the agriculture/community interface builds working relationships among grassroots, state, and federal representatives.

Every community has problems and issues to deal with. But, in March of 1988, the town of Harrison, Nebraska realized it had a problem of disastrous proportions.

Nebraska's northwesternmost community, surrounded by open rangeland, seemed to be the target of every Great Plains blizzard, shutting down Harrison's primary artery, US-20, and isolating the 291 residents often for days at a time. This spring snowstorm had finally gotten the best of the town, blowing the highway shut for almost a week and covering homes with 30-foot drifts, making conventional snowblowers worthless.

The community finally decided that a solution must be found for their recurring problem. The residents of Harrison spearheaded a project to plant a living snowfence around the town's northwest corner, with cooperation from local agencies, organizations and individuals and

(See Solutions on page 2)

## Inside This Issue

- Conservation Buffers for Communities...page 2
- Working Trees Pay Their Own Way...page 3
- Buffers at the Interface...page 4
- Midwest Agroforestry Workshop...page 6

### **Message From the Manager**

A commentary on the status of agroforestry as reported by Program Manager, Bill Rietveld

### **Conservation Buffers For Communities**

The theme of this issue of *IA* is applications of agroforestry technologies in the agriculture/community interface -- where agriculture and urban land uses meet, and often conflict. Over the past few years, the Center and its partners have provided information and helped to support demonstrations of "Working Trees for Communities" to show how tree-based buffer practices, like windbreaks and riparian buffer strips, can be applied in and near communities.

"Conservation buffers for Communities" is a bit broader, but the same concept. In the future, the Center will be working with partners to demonstrate how tree-based buffers can be combined with other buffer practices (like grass-based buffers, bioengineering practices, and constructed wetlands) to attain landscape-level buffer systems that provide multiple benefits. The focus will be on small communities in agriculture-dominated landscapes, and mitigating the environmental impacts that agriculture can have on small communities, and vice-versa. However, the concept applies to communities of all sizes.

Small communities in agriculture-dominated landscapes are especially vulnerable to the impacts of wind, dust, noise, odors, snow-drifting, sedimentation, runoff and flooding, and water contamination from agricultural sources. Conservation buffers is

the strategic placement of permanent vegetation to moderate those problems, and at the same time enhance landscape diversity and wildlife. Examples in the interface are community windbreaks, riparian buffer strips to intercept sediments and pollutants and retard flooding, and establishment of "cottage industries" that are protected by trees and maintain access to critical facilities (hospitals, fire stations, schools). Communities are also part of watersheds, and need to be responsible environmental stewards within organized watershed-based programs. Examples are land disposal of municipal sewage sludge and wastewater on tree plantations, and stabilization of landfills with tree cover. Tree-based buffers (agroforestry technologies) are some of the most effective "tools" in the "conservation toolbox" that we have available to help harmonize land uses.

We feel that a focus on "Conservation Buffers for Communities" is an excellent opportunity to foster partnerships and cooperation between rural- and community-based organizations to address shared problems, and at the same time enhance awareness of the need for sustainable land use. Everyone lives in a watershed, and should be aware of, and responsive to, the need for land stewardship. That is what collaborative stewardship is all about.

(Solutions from page 1) -

assistance from state and federal agencies. Local residents planted 11 rows of trees in the half mile project. By 1993 the living snowfence was already beginning to reduce the impacts of severe weather.

Doak Nickerson, a District and Extension Forester in Scottsbluff, Nebraska has been assisting the residents of Harrison with the living snowfence project.

"A few people were pioneers, leaders, and hard-drivers, who got to work finding the resources," Nickerson said. "The key to the success of the Harrison project was that it was created by the community, not mandated from above."

All over the United States, communities and agricultural land-owners are dealing with other problems at the interface. As communities get larger, rural land-owners find themselves farming land next to communities, making the town residents and the farmers butt heads on issues

such as aerial-applicated pesticide/herbicide drift, dust storms, soil erosion, water and air pollution from city industries, noise, odors, insects, stray pets and livestock, etc. As these issues arise, the rural landowners advocate zoning and pollution regulations for the town while the community works to make regulations tougher on the rural landowner. Neither group of individuals is wrong to feel so strongly about these issues.

Agroforestry could hold an easy, longlasting, environmentally stable answer. Buffer strips of trees and shrubs can be strategically planted between one land use and another. Like Harrison's living snowfence, these buffers help control conflicting land-use problems such as airborne pollutants, dust, odor, and noise while increasing the value of the land and providing habitat for wildlife and an outdoor classroom for local school children.

Landowners and local officials are not

the only people who get involved with local problems. Take for example what the multi-county area of the Prairie Country Resource Conservation & Development (RC&D) Council has done. The Council's Forestry Committee saw a need to plant windbreaks around rural communities, which are mostly surrounded by large expanses of cropland. "We're just taking traditional rural applications of windbreaks and applying them to communities," says Randy Nelson, Coordinator for Prairie Country RC&D, in Willmar, Minnesota. "Picture a small rural community located in the middle of corn and soybean country. Adjacent farmers generally farm right up to the edge of town. Once crops are harvested and the ground tilled, large expanses of barren ground remain. Oftentimes the first obstacle encountered by wind and windblown snow is the unprotected community."

- (See Solutions on page 6)

## Working Trees for Communities: They Pay Their Own Way

by Jerry Bratton, National Agroforestry Center, Lincoln, Nebraska

"The wind blasted though here like it was straight out of Siberia. With the wind came snow that piled up completely over the tops of our cars."

"The blowing snow was so bad we couldn't even get out of our houses. If we'd had to get to a hospital or needed a fire truck, there was no way we could get out, or they could get in."

Comments like these were common in communities in North and South Dakota and Minnesota last winter. These folks needed protection from wind and blowing snow that wasn't there, but could be!

"We're tired of dust on our cars and muddy creeks caused by nearby farming."

"Don't those city folks understand that we *can't avoid* making some dust when we farm?"

"I hate to think that those chemicals that farmers use are blowing or washing into our community."

"You know what? The water that comes out of towns contains more insecticides and fertilizers than we farmers put in the water!"

This is a conversation one might hear from community dwellers and their farming neighbors. It involves problems that arise in the agriculture/community interface — where farming "meets" town and conflicting interests are common.

Actually, there are no rights or wrongs in this scenario. Both the town and the farms are essential. Whether the problems are real or perceived does not matter. The conflict is real. What is needed is a mutually acceptable solution. One solution might involve strategically placed agroforestry practices around and near the communities to buffer the concern.

The National Agroforestry Center has a project called "Working Trees for Communities" (WTC) that uses agroforestry practices targeted to benefit rural communities and farmers in the agriculture/community interface. These practices can solve local natural resource problems like those mentioned in the above scenarios. WTC applies rural agroforestry practices near rural communities. The WTC project is patterned after the successful Working Trees for Agriculture (WTA)

project that is designed to assist the sustainable agriculture movement. The only difference between the projects is that WTC practices are altered to meet the special needs of rural towns to make the

"Working trees will work for only room and board.

In fact, most working trees pay their own way. They just require a little space, some light maintennance, and a little water and nutrients."

—Jerry Bratton



Working trees have soil to protect, wildlife to house, water and air to cool and clean, snow to control, wind to moderate, and energy to conserve.

practices more "community friendly."

Working trees are more than "just another pretty face." Although they do add beauty, working trees have a job to do. There are many opportunities for putting trees to work. They have soil to protect, wildlife to shelter, water and air

to cool and clean, snow to control, wind to moderate, and energy to conserve. Working trees will work for only room and board. In fact, most working trees pay their own way. They just require a little space, some light maintenance, and a little water and nutrients. Properly designed and located, working tree practices will give many years of faithful service.

Working trees can heal natural resource disorders associated with community environments. They can be a front line defense, cushioning problems between communities and associated agricultural enterprises. And, they can be the last line of defense, keeping pollutants from entering streams and rivers. Properly designed and located, working tree practices can:

Manage blowing snow. Living snowfences (LSF) can be designed to protect entrances and exits to communities. They can be located at the fringes of small towns to protect entire communities. Of major importance, LSF's can provide protection to roads leading to and from emergency services such as hospitals, fire houses, and police stations.

Filter water. Riparian buffer strips should be located along waterways so that the tree root systems can help filter pollutants from water before they reach the stream or lake. They can also be placed near well heads to protect both surface and ground water.

Moderate both hot summer or cold winter winds. Community windbreaks can be designed to protect entire communities or individual activity areas (ball fields, golf courses, shopping centers, etc.) from adverse winds.

Control dust and noise. Tree buffers can be used to control dust along roads or near farm fields. They also provide protection from excess noise. Up to a tendecibel decrease in noise levels can be realized from properly designed noise buffers.

Heal eroding streambanks.

Streambank bioengineering practices can be applied to stabilize eroding stream-

- (See Communities on page 6)

## Applying Buffers at the Agriculture/Community Interface

Trees located in between a community and adjacent agricultural lands, the agriculture/community interface, play an increasingly important role as rural farmlands and ranches are encroached upon by expanding urban populations for housing, business, and industrial construction. These strategically located "working trees" serve as a "living buffer," the front-line defense for both rural and urban residents against contaminated water and air, blowing snow and dust, noise, and wind. They also help to reduce flood damage, decrease nonpoint source pollution, and reduce problems associated with municipal landfills.

The goal is to protect natural resources and at the same time make communities productive, profitable, stable, and sustainable for future generations. Working tree technologies appropriate for the agricultural/community interface include windbreaks, plantations for municipal wastewater disposal, living snowfences for snow management, windbreaks for schools and recreational areas, and riparian buffers/soil bioengineering to stabilize streambanks and reduce flood damage. Other practices include sound

In 1993, a struggling two-row windbreak around Woodward State Hospital and School in Woodward, lowa was expanded into five rows. The windbreak stretches for 2 1/2 miles, protecting the entire facility, which is like a community within a community.

Hybrid poplars are used to treat wastewater at the Woodburn, Oregon sewage treatment plant. The purpose is to apply an economical alternative to prevent summer discharge into the nearby Pudding River.

barriers, landfill cover, visual screening, and wildlife habitat.

As funding grows ever more competitive, shade and beauty alone are not enough to justify the planting and care of community trees. Trees and shrubs must be put to work and pay their way -- by providing economic, conservation, environmental, and social services to create more sustainable communities. As we do this, it could mean a whole new cadre of support for community forestry. Each of the technologies previously mentioned is discussed more thoroughly in the following examples.

#### **Community Windbreaks**

Rows of trees improve community environments for both work and play. Windspeed can be reduced by more than 50 percent, making being outdoors more comfortable. Windbreaks can buffer both cold winter winds and hot summer winds. They can modify environments around hospitals, schools, homes, recreation areas, parking lots, and industrial parks, creating more pleasant living and working areas.

Take for example, Woodward State Hospital and School in Woodward, Iowa. Over 362 full-time mentally and physically handicapped residents and about 800 full-time local employees have benefitted from the renovation and expansion of a declining two-row windbreak around their facility.

The hospital is located on 80+ acres of ground and is the largest employer in the area. It contains local industry, classrooms, and living quarters for employees and patients. In 1993, a struggling two-row honeysuckle windbreak was expanded. Two rows of eastern red cedar and one row of a norway spruce/white pine combination were added.

One of the things that John Walkowiak, Urban Forester with the Iowa Department of Natural Resources, really likes about the project is its large size. He says that the grounds are like a community within a community and in order to expand the windbreak, the facility gave up approximately 11 acres of high-quality farmground. The break now stretches 2 1/2 miles around the entire facility and added much needed density and height to the existing windbreak.

The windbreak provides wind and snow protection, beautifies the landscape, and increases wildlife habitat for the hospital. It aids in reducing utility bills, conserving energy, and lowering snow removal costs. The maintenance is primarily supplied by the normal grounds crew but involves some of the residents that are physically capable of volunteering.

#### **Municipal Wastewater Disposal**

Strategically located blocks of trees near wastewater treatment facilities can replace traditional, costly treatment plants. The trees, usually hybrid poplar, are treated with sprinkler-irrigated wastewater. Poplars are used because of their fast uptake ability. The soil is monitored for moisture level to make sure that the trees take up all of the moisture and that no leaching into ground water occurs. The cost of establishing the tree system

will be offset by harvesting wood products on a six- to ten-year rotation.

At the Woodburn, Oregon sewage treatment plant, hybrid poplars will be used to treat wastewater. Jeff Nuss, CH2M Hill engineer assisting with the project, said "The initial phase will involve planting 70 acres of poplar in 1998 with a projected 300-400 acres of poplar to handle full-scale wastewater flows by 2020." He said the purpose was to apply an economical alternative to prevent summer discharge into the nearby Pudding River. Complying with regulatory discharge restrictions was the first priority. "Using hybrid poplar gives added benefits of producing revenue to offset costs and an aesthetic setting of trees around the treatment plant" Nuss added. The trees will be harvested on a 10-year rotation for both chips and solid wood products.

In Montesano, Washington, 25 acres of hybrid poplar were recently planted adjacent to the city's sewage treatment plant. Although not currently planned for applying wastewater, this planting will serve as a backup if summer wastewater flows become excessive. The treatment plant is adjacent to a tributary stream of the Chehalis River. Dick Molton, agriculture consultant and member of the Columbia-Pacific RC&D says "This hybrid poplar planting and surrounding private poplar acreage could provide excellent research opportunities on wastewater treatment."

#### **Snow Management**

Rows of trees and/or shrubs near access roads and emergency routes reduce dangerous crosswinds, trap blowing snow, lower snow removal costs, and increase driving safety. Living snowfences can also be designed to provide and enhance recreational opportunities. For example, hiking and biking trails can be incorporated in between rows of trees, and berry-producing shrubs added to the design will improve songbird and wildlife habitat.

The winter of 1996-97 will be remembered for a long time in North Dakota. Some of the statistics include: seven deaths attributed to winter conditions; \$4.7 million federal dollars were spent on snow removal on state roads; \$1.2 million was spent by the National Guard opening county roads; parts of the interstate system was blocked on seven occasions for a total of 2-3 weeks. According to Ed Ryen, Assistant Maintenance Engineer for the North Dakota department of Transportation, just east of Bismarck are two interchanges that remained open all winter "only normal snow plowing was needed to get a clear road surface." In each of these instances, just northwest of the interchange was a quarter section of cropland that was protected with a series of single-row field windbreaks oriented in a north-south direction. Any drifts created by the trees were held in the fields where they caused no problems for the roads. In the eastern part of the state there are many miles of mature multiple row windbreaks. According to Ryen, these windbreaks provided "an oasis of clear road in the midst of blinding ground blizzards. It was obvious when one drove out from behind the windbreak; it was impossible to see the road."

#### **Schools and Recreational Areas**

Working trees planted around recreation areas like parks, picnic areas, ball fields, and golf courses, block the wind and provide shade, helping to create a more pleasant atmosphere. This naturally improves wildlife habitat and adds recreational opportunities such as birdwatching, hiking, biking, and nature walks. Working trees in this setting also provide perfect environmental education sites!

Conrad, Montana grade school students have a windbreak planted around their school that doubles as an outdoor laboratory. In the spring of 1993 students were involved with the development, budget, choosing tree species, landscape design, and planting. They continue to maintain the windbreak. When mature, the windbreak will not only protect the schoolgrounds and foster environmental education but will lower fuel costs and serve as a home for wildlife.

Ruth Carlstrom, Coordinator of Programs for the Gifted and Talented at the Conrad School District said that "the kids contin-

(See Benefits on page 7)

Field windbreaks on the windward side of roads, like this example, help keep roadways clear from drifting snow.

Windbreaks around schools and recreational areas like this high school in Merna, Nebraska block cold wind in the winter and provide shade in the summer. They naturally provide wildlife habitat and add recreational and educational opportunities. Nelson says that basically these windbreaks, usually on the north and west sides of town, protect the community in much the same way a field windbreak protects a crop or pasture or a farmstead windbreak protects a homestead." This example illustrates a real need for buffers in the agriculture/community interface.

Natural resources professionals from state and national levels are working just as hard to deal with the interface problems too.

Greg Sundstrom, a state staff forester in Colorado agrees that issues of the interface are best addressed locally, but that assistance and cooperation through all levels is necessary to support grassroots efforts.

"There are instances where public health and safety or other impacts are huge enough that those directly involved do not have the resources to deal with the need, issue, or problem," Sundstrom said, noting that convincing landowners that there is a solution is often times difficult to do.

"Regulations involving pesticides and trash dumping are examples of outside involvement. Cost-share programs are often necessary to implement practices which are for the common good.

"There are also some communities so large that the agricultural sector has a very small voice within them," Sundstrom said. "Higher level groups representing agricultural interests are often needed to speak for agriculture in more urban settings."

Debra Bogar, the northeastern representative of the National Association of Conservation Districts (NACD) agrees that her work is most effective when the landowners and communities get involved.

"There are all types of issues in the urban-agricultural interface and just as many ways to address them," Bogar said. "That's why we believe they are best addressed locally with public and private assistance."

It is apparent that realizing problems at the agriculture/community interface is mostly in the hands of local residents. Ultimately, cooperation between these local residents and agencies at all levels is the key to finding solutions. banks. The erosion from communities is often intensified by excessive runoff from acres of paved roads, parking lots, and roof tops. Bioengineering works well in combination with riparian buffer strips.

Buffer agriculture/community interface. All of the buffers listed above can be located between communities and nearby agricultural activities to cushion noise, dust, chemical use, etc. problems between conflicting land uses. They can be designed to protect both the community and/or agricultural land use.

By the year 2,000, it's projected that more than 80 percent of Americans will live in urban environments. Because land in these communities will be in great demand, these environments will probably place a higher value on land economics than on natural resource management. The result in these urbanized areas is that: 1) natural systems will have difficulty maintaining ecological functions that are essential to society; 2) there will be a greater need to carefully plan natural resource management activities than ever before; 3) it will be important to consider the impact of adjacent land use on communities and conversely, community land uses on adjacent lands; and 4) communities will need to look beyond their immediate borders and consider watershed or landscape-level management opportunities, thereby becoming involved with rural land management counterparts.

The main idea behind WTC is to provide cost-effective, environmentally-friendly, aesthetically-pleasing, working tree practices that promote natural resource conservation, encourage sustainable communities, enhance natural and human environments, and catalyze cooperation. The WTC concept is even more applicable when one looks at opportunities from the watershed or landscape level. WTC practices fit well into watershed-level land management systems that promote natural resource conservation.

For agencies, groups, or individuals looking for an answer to healing natural resource wounds, preventing future problems, and creating goodwill between community and rural land managers, developing a WTC project may just be the answer.

## Midwest Agroforestry Workshop

Visioning, information, sharing, communication, understanding, challenging, dreaming are all terms that describe the Midwest Agroforestry Workshop. Nearly 80 people from Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin gathered June 11-13 at Purdue University in West Lafayette, Indiana. The participant's goals were to increase their level of understanding of the economic and environmental benefits of agroforestry, and to begin networking to facilitate agroforestry technology development and transfer in the Midwest.

The workshop presentations focused on five areas: definition, why we are interested, history, current examples, and future directions.

Dr. Gene Garrett, University of Missouri, covered the principles of agroforestry: that it is intentional, intensive, integrated, and interactive. As practiced in the US today, agroforestry can be categorized into five types of practices: windbreaks, alley cropping, silvopasture, riparian buffer strips, and forest farming.

Garrett also said that in 1975 no one listened to agroforestry concepts. It was like playing the "stupid song" trying to sell agroforestry to farmers. By 1997 we've progressed light years.

As we produce more research, we need to engage in technology transfer. Sandra Hodge, University of Missouri, encouraged participants to form partnerships. Agroforestry development doesn't stop with knowing the practices, she said. We need technology transfer to get people to use them.

Agroforestry has the potential to revolutionize American agriculture. The Midwest Agroforestry Workshop was a step forward into a future that will change agriculture economically, ue to be proud to be a part of improving their school grounds and the environment as a whole." Besides the fact that the school is located near a farming community and the windbreak is almost a necessity because of fierce Montana winds, she is excited about the hands-on experience that the outdoor lab gives the children.

#### **Landfill Stabilization**

The goal of landfill stabilization practices is to grow a renewable crop, such as poplar fiber for paper production or fuel, while at the same time sustain an ecosystem that stabilizes soil, provides wildlife habitat, uptakes nitrates and phosphorus, reduces wind velocities, and contributes to local aesthetics.

The Lakeside Reclamation Landfill, near Beaverton, Oregon, borders the Tualatin River. The landfill has been receiving attention lately due to conflicting requirements among agriculture, industry, potable water, and wildlife interests. The landfill occupies approximately 60 acres and is designated as a limited use landfill. Wastes buried at this site are not putrescible nor are they listed on the EPA hazardous substances list.

A concept called the Ecolotree Buffer Strip was selected as a management technique for the landfill. Approximately 7,000 five-foot cuttings from selected poplar hybrids were planted in three-foot deep trenches. The tree planting area is covered with a thick mulch of recycled shredded yard debris. Moisture percolating through the landfill will be minimized by the high water uptake rate of the deep-rooted trees. Soil moisture that might leave the site will have to pass through the high-density root mass and receive biofiltration of nutrients and organic compounds. Meters were installed to collect water samples and measure water content in the soils.

The Ecolotree buffer strip has elicited many favorable reactions from the owner, regulators, and the consultant. The Oregon Department of Environmental Quality will be monitoring data collected from the cover cap prototype area to determine whether it is environmentally sound to have a living treatment system on a closed landfill. Howard Grabhorn, Lakeside's owner says "growing renewable resources with agriculture on a landfill cap is better for the environment than permanently removing this 60 acres from production by covering it with a synthetic membrane. The membrane leaches but requires considerable nonrenewable resources to manufacture and is nonbiodegradable. A tree farm of high-density, deep-rooted, fast-growing poplars also minimizes keachate but produces fuel, fiber, and oxygen on a sustainable basis."

## Riparian Zone Management and Soil Bioengineering

Natural or re-established streamside forests comprised of trees, shrubs, and grasses filter surface and shallow subsurface water pollutants before they enter streams and rivers. Riparian zones also help control bank erosion, protect and enhance aquatic environments, provide wildlife habitat and recreational sites, and increase biodiversity.

When a streambank is caving in, soil bioengineering techniques may be used to repair it. Bioengineering creates a stable streambank covered with tree/shrub/grass plantings, and is an effective alternative to structures. It is often used in combination with riparian buffer strips alongside the streambank to provide an effective and attractive streamside buffer zone.

A streambank stabilization demonstration project was installed along Sny Magill Creek in Northeast Iowa in the spring of 1995. Sny Magill is managed as a trout stream by the Iowa Department of Natural Resources and soil bioengineering was an appropriate alternative to stabilize the banks, reducing the sediment load in the stream, and provide shade and wildlife habitat. Even though the site was hit by a grasshopper infestation and some beaver activity, it is still functioning as designed.

After installing a soil bioengineering streambank protection demonstration project on Sny Magill Creek, many landowners and agency personnel have become aware and interested in implementing this environmentally sensitive alternative.

Jeff Tisl, Sny Magill HUA Project Coordinator in Elkader, Iowa, says "there is a lot of excitement from landowners about soil bioengineering stabilization. They look at it as something they can do themselves to help solve problems. They don't need big budgets or help from the government." However, Jeff cautions that maintenance is the key. If the landowner isn't willing to maintain the plantings after establishment they shouldn't

When a streambank is severly eroded, soil bioengineering techniques can be used to repair it. Here a six-month old bruslayer/geogrid planting is established. Bioengineering is often used in combination with riparian buffer strips which provides an effective and attractive streamside buffer zone.

#### **Upcoming Events**

#### September 13-14, 1997

Ginseng Growing Workshop, Ithaca, NY. Contact, Steve Roth, 607-326-3234.

#### September 17-20

Working Trees for Communities Workshop, National Urban Forestry Conference, Atlanta, Ga., contact Kim Isaacson, 402-437-5178 ext. 13.

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#### November 2-5, 1997

National Urban Conservation Conference, Columbus, Ohio, contact: Karl Otte, 703-440-8611.

#### January 26-28, 1998

Conservation Buffers Technology Conference, San Antonio, TX. Contact Lyn Kirschner, 765-494-1827.

#### We Need Your Help...

The National Arbor Day Foundation has asked for our help in nominating outstanding landowners who do an exceptional job of carrying out the practices we recommend, from windbreaks to forest farming. These folks will be considered for NADF's Stewardship Award, to be presented next April. Please contact us for a copy of the NADF Awards brochure containing information for the submission of nominations. Thanks!

#### Mission

The National Agroforestry Center (NAC) is a partnership of the USDA Forest Service 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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