



The **Temperate Agroforester**

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Members and Directors Gather in Columbia for Annual Meeting

AFTA's 1998 annual meeting of members was held July 25 in its "hometown" of Columbia, Missouri. The event was hosted by the University of Missouri Center for Agroforestry and the Horticulture and Agroforestry Research Center farm. Everyone participating had a fun and informative time, thanks largely to the efforts of the principal event organizer, AFTA Secretary Sandy Hodge.

Directors Meeting

The AFTA Board of Directors held a regular meeting in the morning on the UMC campus. Most of the meeting was devoted to a strategic planning session (see separate article). Among other business, the Directors reviewed preparations for the 1999 North American Agroforestry Conference in Hot Springs, Arkansas.

Catalino Blanche, scientist with the USDA Agricultural Research Service in Booneville, AR and one of the principal organizers, gave Directors preliminary details on plans for the meeting. Two half-day training sessions will be held at the start of the conference, he said, on the evaluation of agroforestry options and web site development. Directors approved a motion to make a non-interest bearing loan of \$1500 for expenses related to organizing the conference, to be repaid before the end of 1999.

The Board also discussed progress on the three current contracts with the USDA National Agroforestry Center. Miles Merwin reported that the first project,

compilation of a database of institutional agroforestry activities and creation of web pages, was almost complete. AFTA President Joe Colletti said that graduate students at Iowa State University would work on the

second contract, compilation of a database of agroforestry demonstration sites. Regarding the third contract, to develop a strategic plan for agroforestry in the US, Joe said that a selected consultative group would be convened before expected completion in October 1999.



Jeff Lehmkuhler describes his silvopastoral research project to participants in the AFTA annual meeting during their tour of the HARC farm at New Franklin, MO. (Photo: M. Merwin)

Arrow Rock Tour

The members' annual meeting began with a bus trip to the historic town of Arrow Rock, about 40 miles west of Columbia. Situated on the banks of the Missouri River, Arrow Rock was an important commercial and trading center in the 19th century. After viewing the historical museum, participants toured some of the buildings that have been restored, including the original inn which still functions as a restaurant, a private home and a rifle maker's shop.

Research Center Trials

Proceeding on to New Franklin, Missouri, members then toured the University's 500-acre Horticulture and Agroforestry Research Center (HARC) farm.

► **Annual Meeting, p.9**

The Temperate Agroforester

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Mission Statement

The mission of AFTA is to advance the knowledge and application of agroforestry as an integrated land use approach to simultaneously meet economic, social and environmental needs. AFTA focuses on agroforestry in temperate zones, with an emphasis on North America. AFTA pursues its mission through networking, information exchange, public education, and policy development.

AFTA Membership Dues and Subscriptions

Regular: 1 year \$25, 2 years \$45, 3 years \$60;
Student \$10; Sustaining \$50; Lifetime \$300.

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The Temperate Agroforester

Editor: Miles Merwin

Contributions related to agroforestry are welcome.

Please submit items either on PC-formatted diskette, via e-mail, or typewritten. Deadlines for submissions are the 15th of March, June, September and December. Address all items to: Miles Merwin,

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Editorial

Agroforestry Certification?

By Miles Merwin, Editor

Forest products certification and food “eco-labeling” are parallel efforts which seek to create economic, market-based incentives for forest landowners and farmers to transition to more sustainable land management practices. How might agroforestry fit in with these programs?

Forest certification is well developed in Europe, but has been relatively slow to catch on in the US. Perhaps the best known certification scheme in the US is administered by the Forest Stewardship Council, which acts through regional organizations, such as “SmartWood”, that have been accredited to certify the management activities of landowners and foresters. Two other competing certification programs are being offered by the National Forestry Association (“Green Tag”) and the American Forest and Paper Association (Sustainable Forestry Initiative).

However, forest certification remains a controversial subject among professional foresters and forest landowners, and has yet to make a significant impact in the marketplace. A study conducted last year by Oregon State University found that certified products comprise only one half of one percent of the total forest products market. Certified products are currently available in only very limited quantities and due to a lack of consumer recognition have not always sold for higher prices in retail markets, the study concluded.

In a parallel effort in the farm sector, several regional “eco-label” programs have started with the goal of increasing market demand, and thus retail prices, for food products grown using sustainable practices. Programs such as Food Alliance and Salmon Safe in the Northwest, and Partners with Nature and CORE Values in the Northeast, are working with growers, wholesalers, supermarkets, and consumers to promote eco-labeled products. As with forest certification, the challenge will be to increase market demand which results in higher prices actually being paid to growers.

Could certification or eco-labeling also help promote agroforestry practices? Because they strive to combine elements of both production and conservation (reduced soil erosion, improved water quality, more wildlife habitat), agroforestry practices would seem to be complementary to the goals of certification

► ***Certification, p. 12***

Directors Start Planning Process to Chart AFTA's Future

During their regular meeting held July 25, 1998 at the University of Missouri in Columbia, the AFTA Board of Directors conducted a strategic planning session to help plan for the organization's future. Directors discussed AFTA's mission, the intended audience it seeks to reach and their perceived needs, what allies and partners can assist AFTA with its mission, and ideas for specific programs. They worked from a questionnaire that was circulated earlier to all members of the Board and Regional Council. The Board felt that strategic planning will help AFTA better serve its members and the public in the future. The following is a summary of their first planning session.

Our Mission

Although the Directors did not reformulate AFTA's mission statement during their meeting (see page 2 of this newsletter), they did reaffirm that the basic purpose of the organization is to conduct educational activities related to agroforestry. Publishing and disseminating information, and holding conferences, workshops and training sessions will be the primary activities. Directors also some involvement in public policy issues, but only within restrictions placed on such activities by the IRS for nonprofit organizations.

Future Customers and Allies

Directors identified extension agents, policy makers, resource professionals, public agency personnel, consultants, commodity groups, landowner associations and nonprofits as the primary targets for AFTA's mission. This goal to "train the trainers" about agroforestry would have a multiplier effect when these individuals and groups in turn pass on agroforestry information to their own clients: private landowners involved in agriculture, forestry and conservation.

Nevertheless, individuals and families will still be welcome as AFTA members, and the Directors recognized the need to involve the agroforestry innovators among private landowners. Reviewing a long list of other public and private organizations working in agriculture, forestry, conservation and related fields, it was agreed that AFTA could benefit by forming ad hoc partnerships to conduct specific programs and activities with any of these groups.

Customer Needs

Given the target audience that AFTA seeks to reach with its mission, the Directors offered their percep-

tions of the needs of that target audience related to agroforestry. Technical information was identified as the primary need, including economic cost/benefits, products and marketing, and non-economic benefits. Other important needs identified were technical training, networking and sharing research results.

Program Activities

The Directors then discussed the specific elements of AFTA's educational programs. Following is a list of some current and future program activities (not in prioritized order) that were suggested during the planning session.

Information and Publications

- produce a quarterly newsletter and technical publications
- maintain a web site and discussion group
- maintain a database of agroforestry activities and an agroforestry information clearinghouse
- organize a speakers bureau
- compile regional or national directories of agroforestry expertise
- develop regional design templates for agroforestry practices and demonstration plantings
- develop guidelines and help set priorities for agroforestry research

Conferences and Training

- sponsor conferences, e.g. the North American Agroforestry Conference series
- conduct training courses and workshops, including national a agroforestry training course and professional agroforester certification course
- convene a conference on research methodologies for agroforestry researchers
- develop college course curricula and collect course syllabi & reading lists

Current Organizational Needs

The concluding portion of the strategic planning session focused on setting priorities for AFTA in the next few years. With an initial list of goals and ideas, the Directors considered the practical steps that AFTA must take in order to realize them. The top priority identified was to apply for and achieve 501(c)(3) status from the IRS as a nonprofit organization.

➤ **Strategic Planning, p.12**

Thinking about Agroforestry: Multi-Disciplinary Approaches

By Kenneth Tourjee, University of Missouri, Columbia

Thought experiments can provide insight into complicated systems. This one may provide an interesting way of looking at agroforestry research. Imagine three groups of researchers: the first is composed entirely of horticulturists specializing in tree crops (A), the second of silviculturists (F), and the last a mixture of individuals from both groups (AF). All individuals in the experiment are selected for their ability to collaborate - both across and within professions. We give each of the three groups the identical assignment of constructing a cropping system. The *only* rules for constructing the cropping system are that it must consist of a mixture of tree and non-tree crops and that it is integrated, intensive, intentional and interactive (the four *I*'s of agroforestry). We then replicate the experiment many times. That is, we maintain the A, F, and AF groupings, keep the same assignment, but use new personnel with each replication.

The important questions to ask about this thought experiment are:

- 1) What criteria should be used to compare the cropping systems developed by each group?
- 2) Is there a similarity in the cropping systems constructed from within a group?
- 3) Conversely, can we detect meaningful between-group differences in the cropping systems constructed?

System Designs

Cropping system differences may be found in the type of agroforestry (e.g., alley cropping, forest farming, etc.), the choice of crops, the complexity of the system, and the reliance on external inputs. For example, we may find that the A group hesitates to consider using forest species such as oaks, pines or black walnut. Perhaps, they would intercrop a vegetable or hay crop within a traditional orchard crop (almond, apple, peach, etc.) and try to reduce the competition effects between these crops through irrigation, fertilization and spacing.

The F group may be more willing to use nontraditional crops (e.g., ginseng) and look to species like oaks, pines or black walnut. They may be more likely to reduce competition between crops by choosing crops that occupy different ecological niches or that interact positively *before* relying on supplemental inputs as a remedy.

If we answer questions 2 and 3 positively then we are postulating that the cropping systems are not samples from a single population. That is, we are expecting the groups to produce different cropping systems and therefore we should not pool them together. However, if we maintain that we should answer questions 2 and 3 negatively then our expectation is that they are samples from a single population.

Interdisciplinary Work

If we believe important differences in the cropping systems constructed would exist, then we need to decide whether the cropping systems from each group should be considered agroforestry. Also, our description of agroforestry research should make these potential differences apparent.

In particular, how does the placement of *both* horticulturists and silviculturists within the same group affect the cropping system constructed? And, do these cropping systems have attributes that make them more desirable than those constructed by the other two groups? If so, then we are inferring that agroforestry is an integration of professions as much as it is an integration of plant species. Perhaps it is time to consider the nature of the working relationships between these two professions in developing agroforestry.

Thought experiments are necessarily speculative and they generate no data. However, they do provide a good means of checking our logic for internal inconsistencies, developing hypotheses, and suggesting strategy. As in real experiments, worthwhile thought experiments require skill to conduct. In our experiment we examine the roles of horticulturists and silviculturists in agroforestry, therefore the minimum required skills are expertise in our own field and the ability to dialog meaningfully with those in other fields. Each of these professions has its own philosophy for managing plant productivity. Recognizing professional differences is the first step toward working together for a common cause.

An excellent way to begin the dialog is to encourage horticulturists to join AFTA and for silviculturists interested in agroforestry to join the *American Society for Horticultural Science* and establish an agroforestry working group within this organization. □

Preview: Agroforestry in Sustainable Agricultural Systems

Agroforestry in Sustainable Agricultural Systems, edited by Louise E. Buck, James P. Lassoie and Erick C.M. Fernandes of Cornell University, examines the environmental and social conditions that affect the roles and performance of trees in field- and forest-based agricultural production systems. Various types of ecological settings for agroforestry are analyzed within temperate and tropical regions. The roles of soil, water, light, nutrient and pest management in mixed, annual, woody perennial and livestock systems are discussed. Important new case studies from around the world offer innovative strategies that have been used successfully in raising forests and tree products on a sustainable basis for commercial harvesting and for providing other environmental services in land conservation and watershed management.

This book provides forestry and natural resources management professionals with a better understanding of the newest strategies for growing and maintaining commercial tree species in a more "sustainable" fashion, relying less on agrochemical input and mechanical intervention, while still maintaining acceptable levels of profitability. These strategies include: new ways of incorporating the practices of agroforestry into traditional forestry land-use patterns; a better understanding of the economics of non-traditional tree cultivation; and less dependence on environmentally disruptive forestry practices.

Features

- Examines all facets of agroforestry, from social and political factors to regional climate variations, soil conditions, and biological controls
- Provides a better understanding of the ecological interrelationships among forests, soils, and root and water systems
- Shows how agroforestry can be managed within the larger context of sustainable livestock and crop management
- Offers unique new studies on the economics of agroforestry and interrelationships between and among the traditional forest industry, government policies, and formal and informal property rights

Contents

- Foreword, P Sanchez (Director General, ICRAF)
- Trees in Managed Landscapes: Factors in Farmer Decision Making, *J.E.M. Arnold and PA. Dewees*

- Ethnobotanical Perspectives of Agroforestry, *D.M. Bates*
- Contemporary Uses of Tree Tenure, *J. Bruce and L. Fortmann*
- Pest Management in Energy- and Labor-Intensive Agroforestry Systems, *M.E. Dix, B. Bishaw, S.W. Workman, M.R. Barnhart, N.B. Klopfenstein, and A.M. Dix*
- The Science and Practice of Black Walnut Agroforestry in Missouri (U.S.A.): A Temperate Zone Assessment, *H.E. Garrett and L.S. Harper*
- Sustainable Mulch-Based Cropping Systems with Trees, *D.C.L. Kass, H.D. Thurston, and K. Schlather*
- Domestication of Tropical Trees: From Biology to Economics and Policy, *R.R.B. Leakey and T.P. Tomich*
- Agro-Forests: Incorporating a Forest Vision in Agroforestry, *G. Michon and H. de Foresta*
- Asexual Propagation of Multipurpose and Fruit Trees Used in Agroforestry, *K. W. Mudge and E.B. Brennan*
- Nutrient Cycling in Tropical Agroforestry Systems: Myths and Science, *P.K.R. Nair, R.J. Buresh, D.N. Mugendi, and C.R. Latt*
- Animals and Agroforestry in the Tropics, *A.N. Pell*
- Economic and Environmental Benefits of Agroforestry in Food and Fuelwood Production, *D. Pimentel and A. Wightman*
- Water Management with Hedgerow Agroforestry Systems, *S.J. Riha and B.D. McIntyre*
- Confronting Complexity, Dealing with Difference: Social Context, Content, and Practice in Agroforestry, *D. Rocheleau*
- Silvopastoralism: Competition and Facilitation Between Trees, Livestock, and Improved Grass-Clover Pastures on Temperate Rainfed Lands, *S.H. Sharrow*
- A Utilitarian Approach to the Incorporation of Local Knowledge in Agroforestry Research and Extension, *F.L. Sinclair and D.H. Walker*
- Managing Ground Cover Heterogeneity in Coffee (*Coffea arabica* L.) Under Managed Tree Shade: From Replicated Plots to Farmer Practice, *C. Staver*.

Agroforestry in Sustainable Agricultural Systems. Catalog no. L1294, December 1998, c. 400 pp., ISBN: 1-56670-294-1, \$69.95 + \$8.95 shipping. Available for 30-day examination. Order from CRC Press, 2000 Corporate Blvd., Boca Raton, FL 33431, Tel. 800-272-7737, Fax (800) 374-3401, www.crcpress.com. □

Introducing Greg Ruark, National Agroforestry Center Director

(The Temperate Agroforester invited Greg Ruark, who was recently appointed as the new Director of the USDA National Agroforestry Center (NAC), to answer a series of questions asking for his views on some of the challenges and opportunities for agroforestry in the U.S.)

TA: Before you joined NAC, what were your perceptions of agroforestry?

GR: Prior to joining NAC I worked for the Forest Service in Washington D.C. and North Carolina. Some of my assignments included the White House Office of Science and Technology Policy, the President's Council on Sustainable Development (PCSD), and two inter-agency working groups on sustainable agriculture and agroforestry. All of these efforts afforded me an opportunity to examine natural resource from a broad perspective. From this vantage point I came to feel that agroforestry was a key area of research and technology for keeping landscapes intact, while also offering landowners and communities a balance of social, economic, and environmental benefits. I sensed that the time was ripe for a major expansion of agroforestry since much of what the public is demanding stems from agroforestry practices.

TA: To what economic, environmental and/or social problems do you think agroforestry could be part of a meaningful solution?

GR: There are many roles that agroforestry can serve in helping farmers, ranchers, and rural communities meet their social, economic, and environmental objectives. However, I would like to highlight one area in particular, that of small farms. The USDA Commission on Small Farms Report, released in January 1998, specifically lists four recommendations to expand the practice of agroforestry. These recommendations are a direct response to a national dialogue with limited-resource producers who are looking for new economic alternatives. Many are frantically trying to make ends meet and do not have the luxury of stopping what they

are doing in order to change over to a different approach. Rather they are caught up in an economic race and need to find ways to retie their shoes while continuing to run. In this regard, the ease with which many agroforestry practices can be integrated into existing farm operations affords ways to diversify small farm production and create economic opportunities.

TA: What does the agroforestry community need to do to attract the attention of public policy makers and hopefully win their support (i.e. funding) ?

GR: The types of objectives that can be accomplished with agroforestry technologies already have the support of public policy-makers but most of them don't understand the role of agroforestry in helping to meet these objectives. Therefore, the agroforestry community needs to do a better job of drawing these linkages. Policy-makers need to be clear on the relationship between agroforestry and key issues like water quality, wildlife habitat, soil conservation, alternative crop production, small farm economics, and rural community socioeconomics.



Greg Ruark moved from Washington, DC in June 1998 to join the National Agroforestry as its new Director. (Photo: G. Ruark)

TA: How can awareness and understanding of agroforestry be increased within USDA and among other government agencies?

GR: In a similar vein, agroforestry is very relevant to many agencies but they often do not understand the connection. If you examine the mission and goals of many USDA agencies as well as many other government agencies you will see much commonality. There is often a shared concern for water quality and aquatic habitat, for wildlife and biological diversity, and for the overall conservation of natural resources. General recognition exists of the need to accomplish environmental goals in ways that are socially desirable and compatible with economic prosperity. What society is ultimately concerned with is ensuring that the goods and service

that it derives from its natural resources are sustained through time. In many cases there is simply no way to find workable solutions at the landscape and watershed scales without closely integrating agricultural and forestry activity. This suggests a natural fit for agroforestry.

TA: What are the greatest challenges to, and opportunities for, achieving greater adoption of agroforestry practices among private farmers and woodland owners?

GR: It's the economics. For the great majority of farmers and ranchers agroforestry has to pay its way. We can document all the noble things that agroforestry can accomplish, but unless a government program, citizen groups, or the market place is willing to pay, most producers simply cannot afford to be noble on their own.

In many instances the economic return from trees will necessarily remain a long-term proposition, such as with alley cropping of black walnuts, but in other cases, like riparian buffers, the benefits can begin to be documented within a few years. We also see an increased interest in growing short rotation tree species (e.g., hybrid poplars) along the outer fringe of riparian buffers or as "harvestable windbreaks". Many producers will continue to be concerned with realizing a quicker return on their investment. Therefore, we need to develop a larger portfolio of agroforestry practices that can be installed by working backwards from an existing forest situation. We already have successful examples of this with silvopasture systems and forest farming.

TA: To increase awareness of agroforestry in both public and private sectors, what groups need to become more involved?"

GR: I think agroforestry efforts have been targeting the right groups but it just takes time to be heard and understood. It has been said that "if the only tool you have is a hammer, the whole world looks like a nail." The initial focus has been to connect with resource professionals so that they can include agroforestry technologies in the set of options they present the public. This is beginning to happen with increasing frequency but is still done mainly in an informational awareness mode.

The next step is providing resource professionals with enough technical training on the various agroforestry practices that they will feel comfortable helping landowners and rural communities design and

implement specific projects. Workshops, field demonstrations, and technical materials are being used to accomplish this but the limited funding of agroforestry nationally has greatly constrained progress.

TA: What are your institutional priorities for NAC in the next 5-10 years?

GR: My vision is for the NAC to serve as a USDA Center. Landowners and communities are not much interested in which government agency is in charge. Rather they are more concerned with the seamless delivery of program and resources. Currently the NAC is a partnership of the USDA Forest Service and the USDA Natural Resource Conservation Service. I am exploring the expansion of the existing partnership as well as the participation by other USDA Agencies, such as the Agricultural Research Service (ARS), the Cooperative States Research, Education, and Extension Service (CSREES), and Rural Development (RD).

We also need to evolve to where the NAC truly functions as a USDA national center. In this regard we are working closely with organizations like the National Association of Resource Conservation and Development (RC&D) Councils and the National Association of Conservation Districts (NACD) to identify ways to redeem this responsibility.

TA: What role do you foresee AFTA and other non-profit groups playing in trying to promote agroforestry?

GR: AFTA is the voice of agroforestry. It is essential and important for advancing the investment in agroforestry research and the development of improved technologies. AFTA is the network for all those working in the temperate agroforestry arena. It provides a mechanism for bringing together researchers, resource professional, students, landowners and others. It affords a way to distill priorities and articulate our message.

Federal, state, and local funding for natural resources will likely be tight for many years - that's a given. But yet if society is to invest in what will best meet its needs there must be a continuous realignment of funding to those things which are perceived to be of highest value. I feel agroforestry has the potential to be viewed in that light. So much of what society values can be advanced by the greater adoption of agroforestry, but the agroforestry community must make its case. For this, AFTA can be the point. □

State Policy Provides Incentives for Agroforestry Practices

By Agus I. Rahmadi, University of Missouri, Columbia

A nationwide survey of natural resource professionals was conducted in 1995 to determine state legislation and programs directly or indirectly pertaining to agroforestry. The study was based on the premise that the challenges of agroforestry adoption in the United States are linked to the necessity of sound policy.

Twenty states were found to have some type of agroforestry legislation - nine states have direct legislation, the remaining 11 states have indirect legislation. *Direct legislation* means there is a law or section of law that specifically relates to agroforestry practices; *indirect legislation* means that the state has a law or section of law that can be related to agroforestry but it does not address specific practices.

Direct legislation

Nine states have enacted direct agroforestry legislation (Table 1). Practices included under direct legislation are windbreaks/shelterbelts, strip cropping/alley cropping, silvopasture, vegetative buffer strips and forest farming; provisions include technical assistance and education, cost-sharing and tax reduction. Other practices that may be considered agroforestry, such as field border and critical area planting, were also included in some legislation. Windbreak or shelterbelt development is the most popular practice to be adopted, followed by alley-cropping, silvopasture, and vegetative buffer strips.

A cost-share program is utilized by some state governments to encourage landowners to adopt agrofor-

Table 1. Description of state laws directly related to agroforestry practices.

State	Title of Law	Approved Practices*	Provisions
HI	Forest Stewardship Act	WB	Cost-sharing (up to 50%) for approved management practices including agroforestry
IN	Classified Field Windbreak	WB	Property tax reduction; windbreak is assessed at \$1/ac
IA	Resource Enhancement and Protection Rules	WB, AC, SP, VBS, CAP, FB	Cost-sharing (up to 75%), not to exceed \$365 per acre
MD	Cost Sharing Water Pollution Control	WB, AC, VBS, CAP, FB	Cost-sharing (up to 87.5%) not to exceed \$10,000 per project or \$20,000 per BMP under pooling agreement
MN	Reinvest in Minnesota Resources Law	WB, SP, VBS	Cost-sharing (up to 75%) not to exceed \$75 \$300/acre, varies with kind of practice
MO	Missouri Economic Diversification and Afforestation Act	WB, AC, SP, FF	Cost-sharing (up to 75%) and annual payment
NE (1)	Soil and Water Conservation Act	WB	Cost-sharing (up to 75%)
NE (2)	Erosion and Sediment Control Act	WB, AC, CAP	Cost-sharing (90%)
SD (1)	Shelterbelts Development Act	WB	Annual payment \$5 per acre for certified shelterbelts
SD (2)	Pheasants for Everyone Tree Cultivation Guidelines	WB	Cost-sharing (\$50-\$125 per acre) varying with planting length and number of rows
VA	Soil and Water Conservation Law	AC, SP, VBS, FF	Cost-sharing (75%) and annual payment \$15-\$100/acre varying with kind of practice

*AC=strip cropping/alley cropping, CAP=critical area planting, FB=field border, FF=forest farming, SP=silvopasture, VBS=vegetative buffer strip, WB=windbreaks/shelterbelts

estry practices. Eight states employ cost-share programs: Hawaii, Iowa, Maryland, Missouri, Minnesota, Nebraska, South Dakota and Virginia. Annual payments is another incentive available to landowners in the states of Missouri and South Dakota. Only Indiana, which has direct agroforestry legislation, employs tax reduction. All states may provide technical assistance, education, or extension as a basic provision to landowners.

Indirect legislation

Eleven states have enacted indirect agroforestry legislation. Provisions included under indirect legislation include technical assistance and education, cost-sharing, tax reduction, and loan financing.

States with indirect agroforestry legislation might also have agroforestry practices through interpretation of certain chapters or sections in that indirect legislation or implementation of federal law relating to

agroforestry, e.g., the Conservation Reserve Program (CRP) or the Forest Stewardship Program (FSP); examples are New Mexico and Utah. Even states which do not have any agroforestry legislation possibly encourage agroforestry practices through implementation of such federal legislation as CRP and FSP.

Most of the states having indirect agroforestry legislation have utilized tax reduction to promote tree planting. There are five states that employ such an incentive: Delaware, Michigan, New Jersey, North Dakota, and Wisconsin. Cost-sharing also is used by some states to encourage landowners to plant trees on their lands. A cost-share program is employed by four states: Illinois, Mississippi, New Mexico, and Utah. Seedling assistance is provided by New Mexico and North Dakota. Two states, New York and Washington, do not provide any form of incentive, rather they utilize established regulations to enforce their programs. □

► Annual Meeting

Graduate students and faculty members told the group about their research projects currently underway at the farm. UMC grad student Dean Gray discussed his doctoral research on two species of *Echinacea* that are used for medicinal purposes and which could be grown as alley crops or in buffer strips. One objective of his research is to develop management recommendations that will help growers increase the concentration of medicinally and economically-valuable compounds in the plant.

Professor Bob McGraw is conducting a field screening trial of native legume species collected from around the state for their agronomic potential, both for livestock forage and wildlife. Some species such as *Desmodium* are very shade tolerant, he said, and will be tested in the future as understory plants in agroforestry plantings.

Grad student Chung-Ho Lin is working on a lysimeter study of 31 shade-tolerant grass and legume species to test their bio-remediation capacity. He is evaluating the plants' ability to absorb both nitrates and common herbicides such as atrazine, and thus their potential for use in filter strips and riparian buffers along crop lands.

Ken Hunt introduced the collection of nut tree cultivars at the farm, which includes black walnut, carpathian walnut, chestnut, pecan, butternut, hickory and several hybrids. The collection is used, he said,

both as a source of germplasm for tree improvement, and for cultivar identification and verification.

Sandy Hodge described a study comparing propagation methods in 11 nut-producing hardwood species to determine if seedlings grown in "RPM" containers that air-prune their roots have better survival after planting and come into bearing earlier compared to conventional bareroot seedlings. She also showed the group an agroforestry trial which combines black walnut, hybrid pine, forage grasses and pine straw production. Different tree spacings are being tested so that the pine will help train the black walnut to form straighter stems for better timber production. She said that pine straw production starts in the 8th year, yielding 100-150 40-pound bales per acre of straw for landscaping mulch.

Jeff Lehmkuhler is working on a silvopasture trial to compare different levels of grazing by cattle and dairy heifers on pasture production underneath four hardwood species (oaks, black walnut, pecan, and locust). Participants also saw a bio-terracing demonstration where ash, oaks and basswood are planted along the contour with forages between the rows for both production and soil conservation.

After the tour, members enjoyed an outdoor steak barbecue and good company to end the day's activities. The barbecue was held adjacent to the original homesteader's cottage (circa 1818) which is now being restored by the University. □



Institutional Agroforestry Activities

www.missouri.edu/~c648324/NAC/afdbhome2.htm

A compendium of institutional agroforestry activities is now available to the public on the World Wide Web. The listings are based on a survey originally conducted by the USDA National Agroforestry Center (NAC) in 1996, with current updates. About 300 activities at universities and government agencies in the US are initially included.

Each institution has its own page describing its educational, research, extension and international activities related to agroforestry. Web users can either select individual pages from a list of all participating institutions, or they can search for pages that match keywords they select. Links from the AFTA and NAC home pages will also take you to these new pages. AFTA will maintain the compendium and encourage participating institutions to keep their listings complete and up-to-date.

Northwest Mail Lists

Two new mail lists of interest to agroforesters in the Pacific Northwest and western Canada have been launched by from British Columbia.

The Northwest Agroforestry list will cover forest farming, alley cropping, fiber farming, riparian buffers, windbreaks, silvopasture, and related topics such as land use planning, economics and community development. To subscribe, send a message (no subject or signature) to mailserv@cariboo.bc.ca with the text: `subscribe NWAgroforestry Firstname Lastname`.

The Northwest Non-Timber Forest Products list will focus on wild harvesting, processing and marketing of native plants for non-timber forest products. To subscribe, send a message (no subject or signature) to maiser@hds.uvic.ca with the text: `sub nontimber-L`. Forest farming activities will be covered in the Northwest Agroforestry list above.

Great Plains Windbreaks in Need of Renovation Now

By Jon Wilson, Nebraska Forest Service, North Platte

This past June, the Plains & Prairie Forestry Association (PPFA) held its annual meeting in North Platte, Nebraska. The PPFA was organized in 1996 to provide a forum for natural resource professionals and landowners to address the challenges of planting trees in a prairie ecosystem. The week long meeting started with a two day technical session on windbreak renovation.

A majority of the windbreaks in the Great Plains are reaching the end of their effective life-span and are rapidly deteriorating in health. Estimates indicate that between 50 to 75% of the windbreaks throughout the Plains are in need of some level of renovation. The number one problem in these windbreaks is the lack of or loss of density. Landowners need to establish their next generation windbreak *now* to ensure continuous resource protection and renovation is one way to accomplish this. Unfortunately, less than 10% of these windbreaks have been renovated. Failure to act by landowners will result in either the loss of the windbreak or an extended period of time without protection if trees aren't planted in a timely manner. Ob-

stacles to renovation include lack of recognition of a problem in the windbreak, cost, reduced cost-share programs, lack of promotion, and lack of technical assistance.

Over 60 individuals from across the Great Plains attended the session. The workshop focused on the need for renovation, how to get started, and renovation techniques for completing a successful renovation. Techniques discussed included supplemental planting, tree row removal and replacement, thinning, managing natural regeneration, and removal of competing vegetation (cool-season grasses). The workshop concluded with a field trip to inspect several completed renovations and a practical exercise.

This fall, a new publication on windbreak renovation will be available from the University of Nebraska and National Agroforestry Center. Please contact Dr. Jim Brandle at f0fw084@unlvm.unl.edu, Tel. 402-472-6626, or Jon Wilson at f0fw075@unlvm.unl.edu, Tel. 308-532-3611 ext 139, for more information on windbreak renovation or to join the PPFA organization.



Agroforestry for Soil Management

This extensively revised, second edition provides background and detailed techniques for soil management through agroforestry. First published in 1989, this new edition by Anthony Young provides a new synthesis, drawing on over 700 published sources, dating mostly from the 1990's. These include both results of field trials of agronomic practices, and research on plant-soil processes. Although based primarily on research and practice in the developing-world, the principles discussed will also be useful to researchers in the temperate zone.

Contents include the following chapters: Agroforestry, soil management and sustainability; Effects of trees on soils; Soil and water conservation; Soil water management; Soil organic matter and physical properties; Nutrient cycling and nutrient use efficiency; Role of roots; Agroforestry systems for soil management; Modelling; Research; Agroforestry, land use and the environment; and Conclusions.

Agroforestry for Soil Management, 2nd Edition, 1997, \$45. Order from Oxford University Press, 2001 Evans Rd., Cary, NC 27513, Tel. (800) 451-7556.

Agroforestry in Minnesota

The *Agroforestry Advantage* is Minnesota's first statewide newsletter dedicated to agroforestry. It will be produced quarterly by the Center for Integrated Natural Resources and Agricultural Management (CINRAM) and the University of Minnesota Extension Service. Regular features will include Agroforestry Tools (how-to info), Agroforestry Innovator interviews, Organization Profile, Help File and On the Horizon. To join the mailing list, write to CINRAM,

University of Minnesota, 115 Green Hall, 1530 N. Cleveland Ave., St. Paul, MN 55108.

Internet Agricultural Information

The Sustainable Agriculture Research and Education Program at UC Davis has published a new guide to finding agricultural information on the Net. In addition to listings of useful sites, it also includes basic information about how to use email, to get answers from email discussion groups, and to search and retrieve information from the World Wide Web. Real life examples are given of how farmers and marketers have profited from going online.

How to Find Agricultural Information on the Internet, 1997. To order, send a check payable to UC Regents for \$15 (add \$0.99 sales tax in CA) to UC DANR Communications, 6701 San Pablo Ave., Oakland, CA 94608-1239 or call (800) 994-8849.

Australian Agroforestry Publications

Rural Industries Research and Development Corporation (RIRDC) offers books and reports on a wide range of topics related to agriculture in Australia, including temperate agroforestry. Some current titles about agroforestry include: *Alley Farming in Australia*, *Agroforestry and Hydrology*, *Australian Agroforestry - Setting the Scene for Future Research*, *Commercial Farm Forestry in Australia*, *Fodder Crops Workshop Proceedings*, and *Low Rainfall Agroforestry*. Publications can be ordered via fax with a credit card. For a publications list and pricing, contact RIRDC, PO Box 4776, Kingston, ACT 2604, Australia, fax 011-612-6272-5877. □



Mark Your Calendar

Southern Agroforestry Conference, October 19-21, Huntsville, Alabama. "Exploring agroforestry opportunities in the South." For information, contact Phil Cannon, Tel. 256-858-4190.

Sixth Conference on Agroforestry in North America, June 12-16, 1999, Hot Springs, Arkansas. The theme will be "Sustainable Land-Use Management for the 21st Century." For information contact, Dr. Catalino A. Blanche, Dale Bumpers Small Farms Research Center, 6883 South State Hwy 23, Booneville, AR 72927-9214, Tel. (501) 675-3834, email cblanche@yell.com. □



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► **Certification**

and eco-labeling programs. Adopting an agroforestry practice might be one way that a landowner could meet the standards for product certification. However, the necessary prerequisite would be to inform those agencies that administer the certification and eco-labeling programs about agroforestry and to seek their “buy-in” to include it among their approved land management practices.

A larger question may also be posed: what market incentives could be created that would give an advantage to products produced using agroforestry? For example, would consumers be willing to pay a premium

for certified woods-grown ginseng, alley-cropped black walnut timber, or silvopasture-raised beef, compared to competing products produced by conventional means? Could there be a special certification program for the products of agroforestry, or should they be part of an existing forest certification or food eco-labeling scheme?

Answers to these questions need to be explored. To achieve greater acceptance, product-driven agroforestry practices must provide an economic advantage to producers compared with alternative means of growing that same product, either through lower costs or greater returns. □

The opinions expressed herein are not necessarily those of AFTA. Short opinion pieces on topics related to agroforestry are welcome.

► **Strategic Planning**

Once this status is achieved, then fund raising to support the organization’s administration and programs will be needed. The Directors agreed upon the need to raise funds to enable AFTA to contract or hire a part-time executive secretary or director at its home base in Columbia. Other administrative needs include the development of ad hoc partnerships with other or-

ganizations, energizing the Regional Council to sponsor local events and networking, and expansion of the size and production staff for the newsletter.

Recognizing the importance of members to AFTA, the Directors foresaw the need to increase member participation and numbers, particularly among its target audience groups. It was also suggested that the current dues structure for membership will need future review. □