The Temperate Agroforester

The newsletter of the Association For Temperate Agroforestry

Christof den Biggelaar, editor

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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 temperate agroforestry, with an emphasis on North America. Agroforestry draws upon, and synthesizes, ideas and techniques from agriculture, forestry, range management, environmental and social sciences. To foster integrated land management, the association intends to bridge existing gaps between these land use disciplines and organizations.

Goal

AFTA's goal is to catalyze technical innovation and adoption of agroforestry in the temperate zone through networking, information exchange, public education, and policy dialogue and development.

Objectives

- Develop a temperate-zone network of agroforestry practitioners, technical specialists, and researchers, through a newsletter, membership directory, and other information services.
- Promote applied interdisciplinary research to develop and test new or improved agroforestry technologies.
- Promote a policy environment conducive to agroforestry adoption.
- Sponsor a biennial North American conference on temperate agroforestry for practitioners, researchers and policymakers, as well as other meetings on regional and topical issues.
- Promote public awareness and education about agroforestry.

EDITORIAL

Michael A. Gold - President

The past few months have seen a great increase in the pace of activity in temperate agroforestry in the U.S. and abroad. Following publication of the SCS RCA agroforestry report last February, a workshop was held on June 29-30, 1994 in Nebraska City, Nebraska, at the National Arbor Day Foundation Lied Conference Center. The workshop built upon the recommendations in the RCA report and sought a broad consensus to further refine and address the unique needs and challenges of agroforestry. The workshop proved enormously productive and by late July a ten page "white paper" was produced (enclosed with this issue of the Temperate Agroforester) as the initial blueprint and guiding strategy for the further development and promotion of agroforestry in the U.S. Over 1,000 copies of the white paper have been distributed to a wide array of interest groups including all U.S. university forestry and agriculture department administrators, conservation organizations, sustainable agriculture organizations, USDA agencies, and a host of other organizations actively involved with land use management in one form or another. A special thank you to Gene Garrett and Bill Rietveld for organizing the workshop and synthesizing the outcome into a concise and readable document.

In the months following the workshop, AFTA has continued to move forward on a number of fronts. A special AFTA committee, an "Action Team" with representation from conservation and sustainable agriculture organizations, USDA agencies, and universities, has been formed to help develop a policy, strategy and action plan in order to attain more recognition and support for agroforestry in the 1995 Farm Bill. Additionally, AFTA is in the process of developing an Agroforestry Action Network, an expanding list of key individuals who have agreed to link their organization's efforts with those of AFTA.

AFTA's Steering Committee is now developing plans to convene additional regional workshops around the U.S. and Canada similar to the *Applied Agroforestry in the West* workshop held in Ft. Collins last August (see page 3 of this newsletter). The purpose of the regional workshops will be to further refine regional priorities, needs and opportunities of stakeholders with particular interests in agroforestry.

Bruce Wight, previously the National Windbreak Forester for the USDA Soil Conservation Service (SCS) is now officially the National Agroforester for the newly renamed Natural Resources Conservation Service (NRCS).

We were all greatly saddened by the sudden and unexpected death of Terry Johnson. Terry was the SCS National Forester and one of the driving forces working to further the development and use of agroforestry within the SCS, other USDA agencies and nationally. Terry provided both the request for, and financial support to, the writing of the RCA Agroforestry report. He attended and actively participated in the national agroforestry workshop in Nebraska City and was leading the efforts to get the SCS and US Forest Service to work cooperatively on behalf of agroforestry at the time of his death. He will be missed.

AFTA has received an exceptional vote of confidence in the form of a lifetime membership subscription. Roughly 60% of current AFTA members (120 of 190) have paid their dues for the 1994 calendar year. Your mailing label indicates whether or not you have paid through 1993 or 1994. We have been having difficulty cashing international checks unless they are in U.S. dollars, drawn on a U.S. bank. Please note

that in the future we are requesting that all checks be drawn as above, this will simplify our banking significantly. If you wish to continue to be a member of AFTA, receive this newsletter and other relevant publications, you must renew your modest dues as soon as possible.

NOTE: The Fourth North American Agroforestry Conference, *Growing a Sustainable Future*, will be held in Boise, Idaho, from July 23-26, 1995. Mark your calendars now for what is shaping up to be the largest North American Agroforestry Conference to date. More information and specific details will be forthcoming (see page 7 for contact persons).

ALSO NOTE: The XXth IUFRO World Congress will take place from August 6-12, 1995, Tampere, Finland. The Agroforestry Working Group P.1.15 has a full slate of presentations that will take place throughout the week-long congress.

For details contact:
IUFRO-95 Congress Secretariat
Finnish Forest Research Institute,
Unioninkatu 40 A
FIN-00170 Finland.
Tel: 358-0-857 051
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AGROFORESTRY FOR SUSTAINABLE DEVELOPMENT: A NATIONAL STRATEGY TO DEVELOP AND IMPLEMENT AGROFORESTRY

Executive Summary of the report of the workshop to "Develop a Framework for a Coordinated National Agroforestry Program", June 29-30, 1994, Nebraska City, Nebraska.

Agroforestry, the intentional integration of agricultural and forestry-based land-use systems, provides multiple benefits that collectively contribute to agroecosystem sustainability. Agroforestry addresses the nation's land stewardship needs by converting degraded lands, protecting sensitive lands, and diversifying farm production systems. As part of an ecologically-based land management system, agroforestry practices can maintain ecosystem diversity and processes that contribute to long-term sustainability and environmental quality.

This white paper identifies unique needs and recommends actions to develop and implement agroforestry nationally. The recommended actions for agroforestry are supported by a unified community of interest.

Although there is strong interest and potential for agroforestry to help achieve many sustainability goals, agroforestry development and implementation is impeded because it is non-traditional, lacks recognition, and cuts across agencies, programs, and disciplines. Present programs are neither designed nor funded sufficiently to deal with agroforestry. Specifically, getting agroforestry accepted and applied requires technology development and integration, application and decision-support tools, technology transfer to agriculture and natural resource professionals, and technical assistance to landowners. The immediate need is to get agroforestry on the ground through a concerted effort to get into practice what is already known and to coordinate and strengthen the development of new knowledge.

Recommendations for accomplishing these goals are: (1) Establish an agroforestry subtitle in the 1995 Farm Bill to address agroforestry's unique opportunities, needs and challenges; (2) Establish a USDA interagency coordinating committee and a national coordinator for agroforestry; (3) Establish regional agroforestry organizations to enhance linkages and information exchange; (4) Establish a national agroforestry advisory council; (5) Establish a national interagency agroforestry center and clearinghouse for agroforestry cooperation; (6) Provide focused funding for agroforestry research, development, applications, demonstrations, technology transfer, and training; (7) Increase emphasis on field and landscape buffer zones; and (8) Increase emphasis on international agroforestry technology exchange.

Agroforestry is an unprecedented opportunity for interagency cooperation. At this juncture, it is critical that national interagency leadership be provided from within USDA. A "Team USDA" effort is necessary for success.

REPORT ON THE AGROFORESTRY AND SUSTAINABLE SYSTEMS SYMPOSIUM

August 7-10, 1994
Fort Collins, Colorado

Judging from the broad-based attendance and enthusiasm, it is evident that agroforestry in the United States has developed and progressed a great deal in the past five years. Over 130 people, representing nearly every agency, institution, and organization interested in agroforestry attended the symposium, held August 7-10 in Fort Collins, Colorado. The symposium was jointly sponsored by the USDA Forest Service/Rocky Mountain Research Station/Agroforestry Center, USDA Soil Conservation Service, and over 50 endorsing co-sponsors. The program consisted of 30 invited speakers and approximately 35 poster papers reporting the state-of-the-art and special applications of agroforestry technologies, and the contributions of agroforestry to ecosystem sustainability. Workshops provided an overview of the Coordinated Resource Management process and an opportunity for conference participants to discuss agroforestry research, technology transfer, and education/training issues and needs. Other sessions explored barriers to agroforestry and visioned the future of agroforestry as an integral part of sustainable agricultural land-use systems.

The symposium was a huge success. There was strong consensus that agroforestry has much to contribute to an ecosystem-based, watershed/landscape approach to the attainment of sustainable agricultural land-use systems for the future. Copies of the Symposium Proceedings will be available after January, 1995.

For more information, contact:
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WEST ADVISORY GROUP FOR APPLIED AGROFORESTRY

Client/Partner Focus Meeting

August 10-11, 1994, Ft. Collins, Colorado

At the meeting, selected producers and representatives from partner organizations in the West interacted with Soil Conservation Service (SCS) conservationists and discipline specialists to explore better ways to work together to increase the use of agroforestry systems on cropland. The exchange began by formal presentations of the opportunities, needs and goals for agroforestry in the West. A facilitated session allowed the group to brainstorm, sort and rank ideas to accomplish needed change. The group's recommendations will be formally documented and distributed within SCS for consideration and action. Because of the crucial importance of agroforestry to sustainable agriculture, an annual reconvening of the advisory group will be pursued.

For more information, contact:

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AGROFORESTRY AND LAND USE CHANGE IN INDUSTRIALIZED NATIONS

Summary Report of an International Symposium

Berlin, May 30 - June 2, 1994

Dr. Felix Herzog
Centre for Environmental Research
Leipzig, Germany

Due to agricultural overproduction in industrialized nations, important areas of land are set aside. The scope of this symposium, which was attended by about 120 participants from 14 countries, was to investigate whether agroforestry can contribute to the management of these areas.

After an overview of the development of the science of agroforestry, which has mainly taken place in the tropics in the last two decades, the present role of agroforestry in industrialized nations was outlined. In Europe, agroforestry systems have a long history, but they have lost importance due to mechanization and rationalization of agricultural production. Also, forest laws instituted in the nineteenth century aimed at forest protection, and explicitly excluded agricultural practices from forests.

In Southern Europe, active agroforestry systems mainly consist of windbreaks with fast growing species (poplars and eucalypts), although research is underway to develop silvopastoral systems with high value timber trees such as walnut or cherries. In Northern Europe, the silvopastoral system of grazed fruit orchards is still widely practiced in certain regions. Windbreaks are also planted, while grazing in forests or open woodlands takes place in regions suited for livestock but not crop production (for example reindeer management in Scandinavia, and alpine pastures in mountainous regions).

An outstanding contribution came from the Czech Republic on the economic and social importance of non-timber forest products. Estimations show that the economic value of berries can exceed the value of the annual wood increment. Another contribution from a highly industrialized region of Switzerland focused on the aesthetic and symbolic value of fruit trees which may surpass by far their "classical" function of fruit production.

As the symposium was held in Berlin, special attention was given to the agroforestry systems of the new federal states of Germany. In these states, there are some remainders of agroforestry systems (orchards, fruit tree alleys) which have both a high aesthetic and symbolic value, which need to be preserved. In addition, new systems need to be developed or adapted from other regions to suit the local conditions. However, to do so, land tenure problems need to be resolved first. Experiences in the tropics provide a valuable lesson applicable everywhere in the world: If farmers are not certain that they or their children will profit from the long term investments of planting trees, agroforestry systems will not be an acceptable solution for them.

In North America, agroforestry has been developed in intensive agricultural regions to increase the buffering capacity of the agroecosystems and to protect the soils from erosion, and streams and rivers from agricultural chemicals and nutrients. For that purpose, mainly multispecies buffer strips are established on river banks and as windbreaks on field boundaries. In addition to environmental benefits, these systems can provide specialty products, energy and timber. An important argument for "selling trees to the farmer" is the increase of wildlife habitat. It was stressed repeatedly that agroforestry systems have to be designed in close cooperation with farmers; several examples of farmer innovations were shown. Some papers from North America also gave examples of non-timber forest products with important economic impacts.

In New Zealand and Australia, agroforestry is dominated by silvopastoral systems using high quality timber trees for shelter belts and shade trees on pasture. Soil conservation with trees (mainly pine) is also widely practiced. These plantings are done by the farmers themselves, in spite of the virtual absence of any subsidies for these measures.

Energy crops and biomass production were discussed in relation to global change and CO_2-sequestration. Industrialized nations have committed themselves to significantly reduce CO_2-emissions. Agroforestry systems have a potential to store carbon in their tree component. However, silvopastoral systems using ruminants are a source of other greenhouse gasses (such as CH_4). From a socioeconomic perspective, it is more profitable to use bioenergy as a substitute for fossil fuels than to store carbon in forests. Greater environmental and net energy benefits can be derived from woody energy cropping than from annual arable crops. It was stressed that large areas of land will be available for such

purposes because of surpluses in food production in the Northern hemisphere.

In conclusion, agroforestry seems to hold some prospects for set-aside land. But, when trying to transfer the concept of agroforestry from the tropics to temperate regions, one must be aware that the main benefit of agroforestry from the viewpoint of the developing nations--increased productivity compared to monocropping--has no importance in industrialized nations suffering from agricultural overproduction. However, agricultural production is only one goal among others such as ecological buffering and the maintenance of a cultural landscape. In this context, agroforestry systems are promising because trees provide ecological benefits and have a high aesthetic value. Combined with crops and/or animals, they can create attractive landscapes and contribute to sustainable landscape management.

THE SALATIN TREE FARM

Joel Salatin
Polyface, Inc., Swoope, Virginia

Polyface, "The Farm of Many Faces," consists of 450 acres of woodland and 100 acres of open land in the middle of Virginia's Shenandoah Valley. William and Lucille Salatin purchased the farm in 1961 and implemented extensive reforestation and conservation projects, receiving the Tree Farm certification in 1969. My wife, Teresa, son Daniel, 12, and daughter Rachel, 7, have been full-time on the farm, and earning our living solely from it, since Sept. 24, 1982.

The farm produces salad bar beef, pastured poultry, "Eggmobile" eggs, "Raken" house rabbit and "Pigaerator" pork, in addition to fuelwood and timber. But the focal point of the farm is nutrient cycling, and for that the forest plays a central role. The forest is our fertilizer factory. Trees are solar collectors, converting sun energy into biomass to run the decay cycle and maintain fertility. The goal is to make all the open land soil look like the woodland soil.

We have never used chemicals, preferring for economic as much as ecological reasons, to farm biologically. We fenced out all the woodland, running fences on the keylines (the break point between a valley/hillside or ridge/hillside). If it's too steep to feel comfortable driving on, it needs to be in trees. We practice management-intensive grazing, utilizing portable electric fencing and paddocks, moving the cattle every 24 hours to mimic density and duration traits of native herbivore herds. In winter, we feed in a pole hay shed. Hay is stored in the middle and cattle feed through a V-slotted feeder gate on the edges that can raise and lower to accommodate bedding buildup. An adjacent awning holds carbonaceous bedding: sawdust, wood chips, leaves and junk hay.

Each cow drops 17 cents worth of NPK per day. During the 100-day feeding period from Jan. 1 - April 10, any of those nutrients dropped out in the pasture are lost to leaching and vaporization. The ground is dormant and can't metabolize the nutrients. By utilizing biomass from our forest, we can tie down those soluble nutrients with carbon, in a molecular bond, to eliminate odors and wastage. Properly managed manure will never smell; the smell is ammonia vaporizing. Just envision dollar signs going off into the air. Of course, the more insidious leaching is harder to notice, but no less damaging and costly.

One ton, or 5 cubic yards, of chips will tie down 200 cow-days worth of manure and urine, to keep the carbon/nitrogen (C/N) ratio at 30/1, which is necessary for proper composting. Each day we put in fresh carbon as litter, and add some oats or corn. Since it's hard to get enough chips ourselves, we haul in leaves from the city leaf dump, purchase chips from tree trimming crews for $10 per load dumped at the farm, and let the city crews blow Christmas tree chips into our truck.

The bedding builds up, growing natural antibiotics on the molds and fungi that help keep the cattle healthy, and the warm fermenting "floor" increases cow comfort, reducing hay requirements. In the spring, we turn in a couple of pigs to aerate the bedding and induce aerobic composting. They eat the fermented grain and thoroughly stir the pile. Then we spread the compost on the fields. At a cost of $3 per sq. ft., a hay feeding shed like this will pay for itself in nutrient saving in 5 years; $4 in 7 years; $5 in 9 years. That's a quick way to buy a building. Integrating livestock and forestry biomass this way benefits both cows and trees, eliminates the fertilizer bill (a son could earn his way on the farm by running the fertilizer program) and promotes an earthworm-friendly fertility program. Chemical fertilizers discourage soil microbial life; compost feeds the natural life in the soil, from nitrogen-fixing azotobacter bacteria to actinomycetes.

Utilizing a commercial chipper, we can chip 15 cubic yards of chips in a couple of

hours. It takes some labor, but we don't have a fertilizer bill and we're improving the forest at the same time. When we do a timber stand improvement (TSI), we go in with a truck and a chain saw, cutting up everything where it falls rather than dragging tree-length material out to a landing. Then we go back in with the chipper and clean up all the branches. It's real pretty when we're done.

Of course, we can't get to every spot with the chipper. In those areas, we pile the branches for wildlife and let them decay. Small clearcuts are real useful too. You have to read the site and manage for what's best in that spot. By just using a farm tractor and chain saw, we can micromanage efficiently.

A neighbor's Wood-Mizer comes in handy for converting logs into boards. We sell unsplit 14-16 inch fuelwood for $75 per cord delivered in a 2-ton dump truck with a 15-foot steel bed or $30 per standard pickup load in a U-haul operation from a pile near the farmhouse. We gross about $3,000 per acre from our woods since we value add everything. Essentially, the woods are our fertilizer factory and all the wood products are byproducts. Imagine what it would mean to the forest industry if the millions spent on fertilizer could provide on-farm forestry-related jobs and nutrient programs? It would be a boon to both rural economies, farm families and forest health, because with increased value comes increased stewardship. Most farmers who have woodlots do not value them because their value is only determined by timber. If that woodlot were the farm's fertilizer factory, however, it would assume new husbandry priority.

In October, we operate a black walnut buying station for Hammonds Products Co. in Stockton, MO, utilizing the hulls as fertilizer. We just park the manure spreader under the hull conveyor and spread them on pasture at about 15 tons per acre. It really makes the grass grow.

In addition to grass-fattened beef, pork and forestry products, we produce, process and market 8,000 pastured broilers during the summer. The birds are housed in 120 sq. ft. floorless pens that we move daily to a new spot: the fleet of pens moves across the field like a flock of migrating geese. In addition, Daniel produces rabbit, grazing weanlings on pasture when the season permits. Underneath the rabbit cages, laying chickens scratch through deep bedding, stirring and aerating the droppings to stimulate composting (hence "Raken" house: rabbit plus chicken). A portable 240 sq. ft. henhouse follows the cattle and the birds scratch through cowpaddies, eating fly larvae and spreading nutrients. The birds also pick up crickets and grasshoppers, allowing eggs (a byproduct of pasture sanitation and cattle hygiene) to be produced for 25 cents per dozen.

A customer base of more than 400 provides a retail market for all the farm produces. We don't have any employees, and we don't have lights on our tractor. I'm just an orchestra conductor, making sure everything is in its right place at the right time. The animals and plants do all the work. It sure makes for a pleasant life in the country.

EXPLORING AGROFORESTRY ALTERNATIVES ON SMALL FARMS IN ITALY

Rand Burkert, Foligno (PG), Italy

We received the following letter from Mr. Burkert inquiring about names of Italian agroforesters, research done on Mediterranean permaculture and agroforestry systems, and information about AFTA. As some ideas expressed in his letter may be of interest to AFTA members, he agreed we publish excerpts of his letter in "The Temperate Agroforester."

I recently moved to Italy to start a community-supported farm on 6 hectares of land near Assisi, in the region of Umbria. The land is in the Umbrian plain, and was traditionally used to grow tobacco, grains, sunflowers or sugar beets. Though much of the surrounding land is already suburban, there are many interesting examples of small gardens (called campetti) of mixed use, including fruit trees and grape vines. Farm sizes average 5-10 hectares. These small farms are often cultivated as sharecroppers would have cultivated them 50 years ago--perhaps with a few pigs, chickens and one or two cows providing manure for the crops. Sometimes quite complex rotations are used to grow corn and other grains for the animals. The generally elderly men taking care of these fields enjoy and take pride in maintaining these nearly closed nutrient cycles. In commercial agriculture, such diversification has vanished. Although there is ample space and excellent weather and a great tradition of horticultural skills, local farmers are disappearing as they cannot compete with the larger, better organized and commercially oriented farms in Northern Europe. However, new "eco-compatible" rules coming down from the European Union in Brussels may give a new impetus to diversification by providing supplements to those who will enter "biological" agriculture, replant hedges for wildlife habitat, or plant orchards with local, endangered varieties of trees. In short, the political and economic climate appears ripe for agroforestry.

To preserve local farming, I believe that community-supported farming may provide a model for re-orienting efforts of Italian small holders. Agroforestry, as an important component of the small farm, could reduce production costs, diversify output, and more importantly, stagger that output with the seasons. Presently, farmers in the campetti use straight rows of dwarf or semi-dwarf trees interspersed with perennials such as artichokes. I would like to start an experimental block on my farm using hazelnuts, herbs, currants, etc. in an effort to let the natural synergies of a forest garden develop over time. But, I have as yet not found any local models using such interplantings. Nor have I heard of local experiments interplanting orchards with nitrogen-fixing trees.

Rand would greatly appreciate any help regarding the use of agroforestry of permaculture in the Mediterranean which may be suitable for the Umbria region. You may write Rand at the following address: Via Fabio Filzi 6, Foligno (PG) 06034, Italy.

PUBLICATIONS

The following three papers were presented at the 34th Seminar of the European Association of Agricultural Economists (EAAE) at CIHEAM, Mediterranean Agronomic Institute, Zaragoza (Spain), February 7-9, 1994, entitled "Environmental and land use issues in the Mediterranean basin: An economic perspective." These three papers deal with the economic aspects of the "dehesa" agroforestry system typical of Spain and Portugal.

Campos Palacin, Pablo. 1994. *Conserving commercial and environmental benefits in the Western Mediterranean forest: Theory and practice.*

Guijarro, Pietro A. 1994. *Analysis of the technical and economic management of the "dehesa" system in the border region between Spain and Portugal.*

Calvo Calvo, J.C., J.D. Vargas Giraldo, and M.A. Aparicio Tovar. 1994. *The dehesa as a productive system generator of fertile soil.*

Selected papers will be published as a proceedings of the 34th EAAE seminar.
For more information, contact:
Wissenschaftsverlag Vauk Kiel AG
Postfach 4403
D-24043 Kiel
Germany
Fax: (49) 431 880 1397

O'Keefe, Philip. 1994. *The New Forester.* Rugby, UK: Intermediate Technology Development Group. **To order, contact:**
WOMEN, INK
777 United Nations Plaza, Third Floor
New York, NY 10017
Phone: 212 687-8633
Fax: 212 661-2704

Race, Digby. 1994. *Agroforestry: Trees for Productive Farming.* East Melbourne, VIC: AGMEDIA, Department of Agriculture, and Conservation and Natural Resources. ISBN 0-7306-2947-3.

Agroforestry, the integration of trees into farming systems, can take many different forms: shelterbelts, wide-spaced plantings, clumps and woodlots. Each design is likely to have a different impact on total farm production. The aim of this book is to provide the best and latest information on agroforestry in south-eastern Australia. It is practical, so that farmers may better plan and manage their agroforests. However, there is still much to be learned, and new information will come with more farmers adopting agroforestry and sharing their experiences, together with a greater research commitment. Contributors represent a wealth of skills and experience in agroforestry; they include farmers, industry professionals and scientists, who envisage that this book will be a useful text for all farmers considering agroforestry.
For more information, contact:
AGMEDIA
P.O.Box 258
East Melbourne, VIC 3002
Australia

PROCEEDINGS

NOW AVAILABLE:
Schultz, Richard C. and Joe P. Colletti, eds. 1994. *Opportunities for Agroforestry in the Temperate Zone Worldwide.* Proceedings of the Third North American Agroforestry Conference, August 15-18, 1993, Ames Iowa. Price US$25.
To order, contact:
Ms. Linda Claussen
Department of Forestry
251 Bessey Hall
Iowa State University
Ames, Iowa 50011-1021
Phone: (1) 515-294-1166

Proceedings, Focus on Farm Forestry Workshop - Management, Markets and Money, Hamilton, 15-16 March 1994.
For more information, contact:
Cathy Todd
Department of Agriculture
Private Bag 105
Hamilton 3300
Australia

Faces of Farm Forestry. Proceedings of the Australian Forest Growers Biennial Conference, Launceston, Tasmania, May 1994. **For more information, contact:**
John Smith
North Forest Products
P.O.Box 1025
Launceston, Tasmania 7250
Australia

Riparian Ecosystems in the Humid U.S.: Functions, Values and Management. Proceedings of a conference held at the Sheraton Colony Square, Atlanta, Georgia, March 15-18, 1993.
For more information, contact:
National Association of Conservation Districts (NACD)
509 Capitol Court, NE
Washington DC 20002
PH: 202-547-6223

Montoya, Luciano J. and Moacir J.S. Medrado. 1994. Agroforestry Systems and Sustainable Development. Proceedings of the First Brazilian Congress on Agroforestry Systems and the First Meeting on Agroforestry Systems of the Southern Cone Countries, Porto Velho, 3-7 July 1994. Volume II: Voluntary contributions. (Sistemas Agroflorestais no Desenvolvimento Sustentável. I Congreso Brasileiro Sobre Sistemas Agroflorestais, I Encontro Sobre Sistemas Agroflorestais nos Pais do Mercosul, Porto Velho, 03-07 de julho de 1994. V.2: Tabalhos Voluntários). Colombo, Brasil: Empraba-CNPF. Volume I (Invited Papers) with be published in the near future.

Proceedings, First Seminar on Agroforestry Systems for the Southern Region (I Seminarío Sobre Sistemas Agroforestais Na Região Sul).
To order or for more information on both of the above two publications, contact:
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Fax: +55 41 359-2276

JOURNAL ARTICLES

Brownlow, Mark J.C. 1992. Acorns and swine: Historical lessons for modern agroforestry. *The Quarterly Journal of Forestry* 86 (July): 181-190.

Lelle, M. and M.A. Gold. 1994. Agroforestry Systems for Temperate Climates: Lessons from Roman Italy. *Forest and Conservation History* 38(3):118-126.

Eastham, J., Scott, P.R., and Steckis, R. 1994. Components of the Water Balance for Tree Species Under Evaluation for Agroforestry to Control Salinity in the Wheatbelt of Western Australia. Agroforestry Systems 28(3):157-170.

NEWSLETTERS AND JOURNALS

International Tree Crops. Quarterly newsletter of the International Tree Crops Institute. ITCI aims to further develop and promote multipurpose trees for food, fodder, fuelwood, fibre, feedstocks, pharmaceuticals, flowers, seeds, essential oils, and timber, plus shade, shelter, plant nutrient recycling and control of soil erosion and other land degradation. ITCI promotes agroforestry and other farm tree systems for sustainable land use.
For more information, contact:
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Fax: +61 7 849 2247

In North America, contact:
Mr. Miles Merwin
P.O.Box 4460
Davis CA 95617
USA
Phone and fax: 916 753-4535

Root & Branch. The Badgersett Research Farm Newsletter. The Badgersett Farm is a family business involved in hazelnut and chestnut research and development for Midwestern conditions.
For more information, contact:
Mr. Philip A. Rutter
Badgersett Research Farm
RR 1, Box 141
Canton Minnesota 55922
Phone: 507 743-8570

HRG (Honeylocust Research Group) Newsletter. An article featuring the Springtree Agroforestry Project was published in the previous issue of "The Temperate Agroforester." **For more information, contact:**
Mr. Andy Wilson
Springtree Agroforestry Project
Rt. 2, Box 89
Scottsville Virginia 24590
Phone: 804 286-3466
Fax: 804 286-4744

Conservation trees for your farm, family and future. This booklet (free copy enclosed with this newsletter for AFTA members) is part of a multi-organization effort to help farmers and ranchers make trees an integral part of sustainable agriculture. The Conservation Trees booklet includes features outlining 12 productive uses of trees: Riparian filter strips; alley cropping; tree plantations; wildlife habitat; living snow fences; trees for livestock; farmstead windbreaks; woodlot management; field windbreaks; specialty crops; trees for recreation areas; and multipurpose plantings.

This booklet was published by the Arbor Day Foundation in cooperation with the National Association of Conservation Districts, National Association of State Foresters, and the USDA Agriculture Research Service, Agricultural Stabilization and Conservation Service, Extension Service, Forest Service and Soil Conservation Service.
For more information about the Arbor Day Foundation and to order copies of the booklet, contact:
John Rosenow, Executive Director
The National Arbor Day Foundation
100 Arbor Drive
Nebraska City NE 68410
Phone: 402 474-5655

RECENT MEETINGS

First Congress of the Spanish Society for Ecological Agriculture, Toledo, Spain, 28-30 September 1994. A session on agroforestry systems was held on September 29.
For more information, contact:
Sociedad Española de Agricultura Ecológica
Apdo. 60134
28040 Madrid
Spain

Third Annual Paulownia Conference, October 14, 1994, Hagerstown, Maryland. **For more information, contact:**
David Sutton, Past President
American Paulownia Association, Inc.
2975 Salem Road
Parrottsville, TN 37843
Phone: 615 625-1362

UPCOMING EVENTS

The Fourth North American Agroforestry Conference

GROWING A SUSTAINABLE FUTURE

July 23-26, 1995
Red Lion Inn - Riverside
Boise, Idaho 83714

For more information, contact:
Linda Hardesty, Program Chair
Dept of Natural Resource Sciences
Washington State University
Pullman, WA 99164-6410
Phone: +1 509-335-6632

John Ehrenreich, Conference Chair
College of Forestry, Wildlife and Range Sciences
Moscow, ID 83843
Phone: +1 208-885-7600

1996. A joint conference between the Walnut Council and AFTA is being planned for the summer of 1996. Details to follow.

NETWORKING

LATIN AMERICAN NETWORK FOR TECHNICAL COOPERATION IN AGROFORESTRY SYSTEMS (Red Latinoamericana de Cooperacion Tecnica en Sistemas Agroforestales)
For more information, contact:
Coordinador Regional
Corporacion Nacional de Investigacion y Fomento Forestal (CONIF)
Apartado Aéreo 09153
Bogota, D.E., Colombia
Phone: +57 1 221-8624
Fax: +57 1 221-3473

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Dr. Michael A. Gold, President
AFTA
Department of Forestry
Michigan State University
East Lansing, MI 48824-1222

Phone: 517/353-4751
Fax: 517/432-1143 (new!)
E-mail: MGOLD@MSU.EDU

Name: _____

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Telephone: _____ Fax: _____ E-Mail: _____

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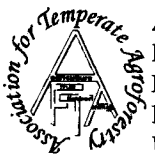

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