

SUSTAINING THE PACIFIC NORTHWEST

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Buy Local
Washington - Oregon
Farm Finder

Forest Certification in North America

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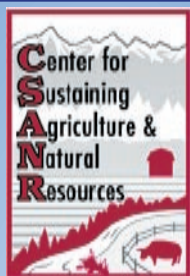
Forest certification (or, as it is sometimes called, green certification) aims to identify forestland managed to meet agreed-upon standards and, sometimes, to label products originating from those forests. The underlying goal of forest certification is to promote forest practices that are environmentally, socially, and economically sustainable over the long term. However, because of disagreement and uncertainty about the meaning of sustainability, most certification systems make more modest claims.

Certification of public and private forests is an issue that goes beyond our local forests and even beyond the confines of North America. It is a major topic of discussion in forestry worldwide and perspectives vary widely. Environmental nongovernmental organizations (ENGOS) see it as a way to verify a landowner's or firm's commitment to sustainable forestry. Industrial forest companies and some government agencies hope to use their certification to gain the public's recognition of the quality of their forest management. Wood products companies hope to capture new markets and gain market advantage by communicating their good environmental performance through using eco-labels to identify wood products coming from their certified forests.

Whatever the reason, forest certification involves an "independent" verification that forests are being managed and products are being produced in ways that minimize, or avoid, harm to the natural forests and the human systems that they support.

Owing to the highly politicized and evolving claims as to what constitutes sustainable forestry, new certification systems are developing, and older ones are constantly adapting. Companies, landowner groups, ENGOS, and others are lining up behind their preferred systems. Only time will tell which systems survive and what form they take. Certification of

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Sustaining the Pacific Northwest Food, Farm, & Natural Resource Systems

This quarterly newsletter provides a discussion forum for people working towards community-based sustainable food, farm, and natural resource systems using interdisciplinary oriented research and practitioner knowledge.

This is a joint newsletter of the WSU [Center for Sustaining Agriculture & Natural Resources](#), the [WSU Small Farms Team](#), the [WSU Small Farms Program](#) and the [Water Quality Management Team](#).

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some sort, however, arguably will be with us for some time to come.

Worldwide Growth and Evolution

Though development of most current certification systems can be traced back to the early 1990s, the idea of certifying and publicly advertising a well-managed forest in the United States goes back to 1941 when the American Tree Farm System was created. (See Table 1 for an overview of the major certification systems.) Tree Farm, now sponsored by the American Forest Foundation (AFF), was created to draw public attention to active management and investments being made in private forests. The original American Tree Farm certification program was based on a set of forest management principles and required an on-the-ground inspection of forest practices every five years. While these elements of the original Tree Farm system are echoed in the forest certification systems of today, newer systems evolved in a very different way.

The creation of the Forest Stewardship Council (FSC) in 1993 marked a new, global-scale step in the development of current-day forest certification. The FSC, spearheaded by the Worldwide Fund for Nature (WWF) and supported by other ENGOs, social activists, and select retailers and producers, was established to prevent forest deterioration globally. Many of the FSC founders were focused primarily, though not exclusively, on rapid deforestation of tropical forests. The FSC hoped that it could help tropical timber producers avoid environmental boycotts and meet demand from importing countries for environmentally sensitive wood products from well-managed forests.

During the early 1990s, the U.S.-based American Forest & Paper Association (AF&PA), an industry trade group, responded to the creation of the FSC by initiating their own certification system to address public concerns about forest sustainability. Transforming the Sustainable Forestry Initiative (SFI), which was originally an industry self-regulation program, the AF&PA added an optional third-

party auditing component, whose policies and procedures are now formally housed in a body outside the auspices of the industry association.

Similarly, Canadian forest industry companies asked the Canadian Standards Association (CSA) to develop a sustainable forest management program. A 32-member, multi-interest technical committee established and coordinated by the CSA completed the standard in 1996; it was updated in 2002. The SFI recognizes the CSA system as the functional equivalent of the SFI system.

Nonindustrial private forest owners in the United States have additional options, though most remain undecided or noncommittal. A few are opting for the FSC system. More are involved through Tree Farm, which like the SFI, was reworked to more closely reflect a modern forest certification system. The National Forestry Association (NFA) has developed a system, called Green Tag, for woodland owners, but it currently has limited scope.

Forest owners in Europe created yet another alternative to the FSC. Originally known as the Pan European Forest Certification scheme (PEFC), in 2003 it was renamed the Programme for the Endorsement of Forest Certification schemes. It is currently the largest in the world in terms of certified area. As of December 2005, it included nearly 450 million acres of certified forestland in 20 countries. In March 2005, PEFC officially endorsed the CSA system, thereby allowing CSA-certified operators to use the PEFC label. Similarly, in December 2005, SFI received PEFC endorsement.

Trends outside forestry also have encouraged the creation of certification systems. Large corporations' move to standardize management systems led to the 1994 adoption of the International Organization for Standardization (ISO) 14001 Environmental Management Standard. While not specific to forestry, forestry operations can, and sometimes do, use its environmental management system framework as a foundation upon which to

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Table 1: Major Third-Party Forest & Wood Product Certification Systems for North America

General Features	American Tree Farm System (ATFS)	Forest Stewardship Council (FSC)	Sustainable Forestry Initiative (SFI)	Canadian Standards Association (CSA)	International Organization for Standardization (ISO 14001)	Programme for the Endorsement of Forest Certification (PEFC)
Sponsor	American Forest Foundation	Forest Stewardship Council	Original: American Forest & Paper Association; current: Sustainable Forestry Board	Canadian Standards Association	International Organization for Standardization	Independent, nonprofit, nongovernmental organization
Primary scope	USA	Worldwide	USA & Canada	Canada	Worldwide	Worldwide
Year forestry standard established	1941	1993	1995	1996	1994 (not forestry specific)	1999
Standard development	Internal	Committees of stakeholders with public input	Sustainable Forestry Board with public input	CSA multi-interest Technical Committee (with broad stakeholder involvement)	Internal	Certification organizations within countries and regions that seek PEFC endorsement
Eco-label	No	Yes	Yes	Yes	No	Yes
Chain of custody	No	Yes	Yes	Yes	No	Yes
Total certified acres (in millions December 2005)	35	169	130	171	NA	444 in 20 countries
Websites	http://www.affoundation.org/	www.fsc.org www.fscus.org	www.aboutsfi.org	http://www.csa-international.org	www.iso.org	http://www.pefc.org/

implement a forest management standard. Currently, the U.S. Forest Service is developing a certification system for national forests in the United States that is based loosely on the ISO process but also is being assessed for its conformity to SFI and FSC certification systems.

There are many examples of country-based certification systems. For example, Finland was an early entrant into certification when it created its own system and was one of the first such systems to be recognized by PEFC. Indonesia, Brazil, Malaysia, and many other countries also have created their own country-specific systems.

Two Approaches to Certification

Because the intent of certification is to verify good performance, a system's perceived objectivity and credibility are affected by who sets the performance standards and assessment procedures for the system. Under systems-based certification such as ISO 14001, the organization or individual seeking certification identifies its own environmental aspects and impacts, sets its own goals and

targets, and devises an environmental management system to address them. This allows landowners to tailor the system to their own objectives and situation but does not demand that any particular performance level be attained.

Under performance-based systems, the certifying organization sets most or all performance criteria and oversees the assessment process to ensure conformance. The performance criteria specify certain actions or practices as acceptable or unacceptable. For example, the use of herbicides or the size of clearcuts may be limited. In the case of the SFI and Tree Farm systems, many performance criteria point to a process that must be in place rather than a specific practice that must be evaluated.

Performance-based systems vary considerably in the degree of performance specified and in the types of criteria. Tree Farm, for example, has nine broad-based "standards," 14 performance measures, and 23 specific practice or process indicators. FSC and SFI require verified conformance with 50 or more specific practice or process indicators. System specifications

for process or practice conformance can result in very different "on-the-ground" requirements. For example, many performance requirements often require initiating policies or processes, but give limited direction about what on-the-ground practice might look like, leaving this up to the judgment of the assessment team.

Many people familiar with certification systems view FSC as designed and supported by several major international ENGOs. Tree Farm, PEFC, and SFI are considered more aligned with landowners and the forest industry. ISO and CSA are perceived to be somewhat different since they originated from within standards organizations. Standards organizations are designed to support industry and trade, and as a result these systems have been criticized by ENGOs.

How Credible is Your Claim? Developing an Independent Standard

In a world filled with advertising claims, the assumption is that standards set internally are not as

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credible as ones set independently. Independence can be demonstrated by standards development and by the mechanism for assessing conformance with the standard. Certification systems attempt to gain credibility by independently setting standards and by being transparent to public view. Third-party assessment (i.e., independently verified performance) has become the standard approach for most certification systems.

Each system tends to take on the flavor of its primary constituents. The FSC is a “tripartite” form of governance in which environmental, social, and economic actors work together. The aim of this structure is to ensure that no one group can dominate policy making.

The SFI’s standards are developed by the Sustainable Forestry Board, of which one-third are AF&PA members and two-thirds are nonmembers. Changes in the SFI Standard are the result of broad consultation and are widely circulated for public input. SC selects regional committees which devise its specific indicators, then seek input from many outside stakeholders including environmentalists, landowners, industry, civic groups, state and federal agencies, and interested individuals. To be approved for use, the standard must be reviewed and adopted by the international FSC organization. ISO also has a public input process for standards development. CSA includes an extensive public review process for standards development and for review of certifications. Tree Farm standards are set internally by committees empowered by the certifying

organization, with review by outside stakeholders.

A number of studies have examined the differences between SFI and FSC standards. These studies generally have found many similarities, some important differences, and, interestingly, that competition among systems over time has made them more similar.

An Oregon State University study, released in December 2001, compared the SFI and FSC systems with Oregon’s extensive legal forestry practices code. FSC had extensive requirements regarding management plans, social criteria, and restoring natural systems, while SFI included more significant detail about training, visual management, and communication. For the timber-rich Pacific Coast region, FSC rules were much more prescriptive than SFI on issues such as use of chemicals, clearcutting, and maintenance of old forest structure. A Yale University study also found a similar pattern, with FSC providing more prescriptive requirements than other systems when it came to riparian management practices.

The OSU study also pointed out that Oregon forestry laws exceeded either certification system for detail in a few areas. Because both systems require compliance with all laws, this extra detail will mean that landowners in states such as Oregon, Washington, and California will be held to more detailed criteria than certified landowners under the same system in states or countries with less specific laws, creating a bit of an unequal application of the certification standard. The concept of certification should be more attractive to landowners in areas with these stricter laws, however, because it may force competitors in other regions to certify also and thus incur some of the costs of environmental laws in more regulated areas.

How Credible is Your Claim? Verification Process Oversight

Verification (sometimes referred to as an assessment, inspection, or audit) is

the comparison of a forestry operation to the certification system’s standard. In the FSC system, certifiers accredited by the FSC conduct certification assessments. FSC plays the role of system-wide police by ensuring the consistent application of its system. In the Tree Farm system, the certifying organization directly oversees certification inspections. SFI, CSA, and ISO follow well-established procedures in determining who is qualified to do certification audits and in stipulating the independent auditing process.

Certification Process Steps

Exact steps to become certified differ by system, but the process generally has four stages: preliminary discussions or pre-assessment; field verification report; certification declaration; and follow-up audits.

The more complex the system, the more time each step takes. A Tree Farm verification typically is done on small acreages (less than 500 acres), so it generally takes a day or less. An ISO, FSC, or SFI verification may span hundreds of thousands or even millions of acres and may take a week or more. Some certification systems also provide for chain-of-custody and eco-labeling of wood products as a part of the verification process.

The purpose of verification is to see whether the candidate’s operation conforms to the certification standards. In an ISO verification, for example, auditors attempt to determine whether the organization is successfully implementing an environmental management system with self-set performance targets. FSC, SFI, CSA, and Tree Farm verifications measure conformance to the various performance criteria specified by their system.

At first glance, it may appear certification is a yes-or-no decision, but in practice it often involves significant discussion of facts and issues. Some major issues prevent certification from happening (thus constituting a fatal flaw), while minor issues result in changes that must be

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made during the certification period. For example, a certification may be awarded on the condition that the landowner adopts a new practice, such as designated skid trails during harvest operations. The idea is to identify where an operation may fall short of the standard and to ensure that steps are taken to gain conformance as a condition of gaining and holding certified status.

Forest Certification in Perspective

Certification offers certain opportunities and currently faces several limitations. A landowner looking at one or more systems should consider both sides of the equation.

Opportunities

Image. Certification can serve to enhance how ENGOs and the public view a landowner's management activities or a company's business practices.

Credibility. Certification can add credibility to environmental claims.

Risk Reduction. Related to image and credibility, certification can reduce risks of environmental noncompliance. This aspect is especially attractive to boards of directors, shareholders, regulators, analysts, bankers, etc.

Premiums. Certified products at any stage of the value chain can potentially obtain price premiums from buyers. Anecdotal evidence suggests that when premiums are obtained, they typically are short lived.

Market Access. Certification can maintain or create access to markets that favor certified products; for example, to LEED-standard buildings (discussed later under *Markets*) and certain retailers. For forest landowners, it also can ensure market access to mills in their area that participate in a particular certification program.

Market Share. Related to market access, certification may help in gaining share in specific markets.

Improved Decision-Making and Profitability. Some view the certification process as only a cost for the landowner, but there is evidence

to the contrary. Inspections by outside parties provide a fresh perspective and can reveal opportunities for cost savings and needed organizational changes. In addition, the extra record keeping required for certification may provide managers with more and better information for decision making. One certified forest company has reported a \$1 million cost savings in its manufacturing processes because of new programs initiated through the certification process.

Limitations

Limited Demand. At this point, the certified-products market is a small, but growing, part of the overall wood products market.

Chain of Custody. To reap the returns of potential premiums or market access, chain of custody must be maintained from the forest to the customer. This can be challenging. Each system has developed rules to facilitate use of mixed raw-material sources as well as to avoid illegal or controversial sources.

Changing Standards. As certification systems evolve and change, the general pattern has been for more prescriptive standards, which reduce flexibility for auditors, forest managers, and landowners.

Confusion. Various groups have a vested interest in the different certification systems. This creates both a political and competitive atmosphere among the systems and results in conflicts and claims among supporters of various systems.

Costs

Direct costs of certification vary widely. An FSC or SFI field assessment might cost less than 10¢ an acre for large landowners. The owner of a small parcel (10–40 acres) will find, however, that the minimum cost to certify his or her individual property under FSC might be well over \$5,000. Normally, these properties are certified under resource manager or group certifications (see below), and the cost to each landowner may be only a few hundred dollars. Tree Farm inspections currently are free to the

landowner. Overall, the more detailed the system, the more certification will cost; and the larger the land area, the lower the cost on a per-acre basis.

To make certification economically accessible to the more than nine million family forest owners in the United States, many certification systems allow for certification of a group of small owners. By grouping several small owners together in one assessment, costs are greatly reduced and the procedure simplified. In the case of FSC, this commonly is done when a consulting forester goes through an assessment to become a certified resource manager. There are also examples of NGOs, co-ops, and landowner associations administering group FSC certifications. The assessment team inspects a sample of the lands under management by the resource manager, much the same way that a sample of lands is inspected for large owners during an assessment. Once certified status is granted, all



qualified lands under management by this consultant are certified, without having to do an audit of each one. For the Tree Farm program, group certification often comes through an established group such as a landowner association or an industrial landowner assistance program. PEFC uses an umbrella certification in which a standard is set for entire regions, and all land within that region can be considered certified if a sample is meeting the standard. Thus in some cases a landowner may be certified without requesting or even knowing about it. In addition to these group options, the FSC also has a special program for small private owners (SLIMF). Standards are appropriate for the small ownership scale, and

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certification is much cheaper than if small landowners had to meet the standard for large industrial owners.

For initial certifications, on-site inspection costs usually include time and travel expenses for one to three professionals for a 1- to 3-day field visit. Costs also include their time for pre- and post-visit activities such as reviewing plans, developing recommendations, and writing reports. The certification system might retain a portion of the fee to cover expenses such as maintaining records.

Indirect costs to establish and maintain certification can be very significant. They might include inventory or monitoring requirements and forestland set-asides for nontimber uses. Indirect costs easily can surpass direct costs of the initial verification.

Chain-of-custody certification for wood products processors and members of the distribution channel can range from several hundred to several thousand dollars, depending on the operation's size and complexity.

U.S. Certification in Perspective

Costs, credibility, and benefits of certification will be evaluated quite differently depending on the type of forestland ownership. The U.S. Forest Service is now, after a long moratorium, considering how it might approach certification of federal forestlands. Millions of acres of state, county, and municipal forests have been certified under different systems. Public land managers are less interested in market opportunities associated with certification. Instead, they value the outside verification of their land management practices, which can buffer criticism from a divided public.

Industrial forest products firms, Timber Investment Management Organizations (TIMOs), and Real Estate Investment Trusts (REITs) may seek a variety of benefits from certification but mainly wish to avoid environmental controversy about how they grow and manage forests. Firms are also under immense pressure from stockholders to make an adequate

return on investment. If certification can enhance or protect the bottom line (through new niche markets, price premiums, greater market share, or improved public image), industrial owners will seek green certification under the system that best meets their internal needs and their customers' requirements.

Private individuals and families who own relatively small forest parcels are, collectively, the major source of wood for forest products in the United States. Unlike industrial owners, more than 80 percent of individual and family forest owners are not motivated to produce only timber. Instead, they manage for a variety of nontimber benefits. They do sell timber occasionally, but without log markets' clear demands for certification they find it difficult to justify much investment in certification. In addition, the relatively small size and limited growing-stock value of most small private forests may make the cost of certification prohibitive in view of potential gains. Although certification systems are addressing this via group certification (FSC & Tree Farm), umbrella certification (PEFC), and having work done by a certified logger (SFI), to date individual small owners are not flocking to sign up for these programs, and it is unlikely they will do so in the near future. Clearly this remains a major challenge for certification in the United States.

Certification in the Near Future Systems

Today, it seems that organizations and geographic areas are entrenched in their divergent positions and are set on creating and promoting their own certification systems. However, four important forces work to effectively change systems over time: proliferation, competition, evolution, and convergence (harmonization).

Proliferation. Although most in the marketplace would prefer to have a single certification system and label to avoid confusing consumers, new systems continue to emerge from all over the world (e.g., Japan recently created its own system). The tremendous diversity of forest

conditions and markets makes it difficult to design one system that fits well everywhere. As the market for certified products continues to develop, various groups will design new certification systems either to capitalize on market demand or to avoid being left out of the marketplace. In the short term, there will likely be more systems before the weaker ones fall aside.

Competition. Competition is strong between FSC and other systems. FSC and SFI continue to compete actively for the U.S. market, while the FSC and PEFC compete strongly in Europe. Each system continues to adjust itself to remain competitive. PEFC recently began to expand internationally and, as of 2005, had 22 member countries (including the United States and Canada), most of which have an approved national standard. PEFC uses its "umbrella" certification process to bring together various nationally developed systems under the approved PEFC standard.

Evolution. Competition and the need to develop the marketplace clearly have resulted in an evolution of systems over time. At first, FSC did not allow its eco-label to be used on products such as particleboard or furniture that contained both certified and non-certified materials. Marketplace realities soon changed this, and FSC developed a policy to allow percentage-based claims. Similarly, SFI originally did not include a third-party verification option. However, as time passed, some members needed that option to validate their performance claims more objectively. Companies now can choose to have their lands independently verified for conformity with the SFI system.

Tree Farm recently adopted mandatory performance measures and now requires a written management plan for new and continuing membership. In addition, Tree Farm inspectors now must complete a formal-assessment training course before they are allowed to do inspections. In addition, Tree Farm has begun to do group certifications. Several large groups

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were added during the past year including a June 2005 certification in Wisconsin that included 29,000 landowners and 1.9 million acres of forest. The Wisconsin group is tied to the Wisconsin Managed Forest Law program, a public incentive program designed to promote stewardship of Wisconsin's forests.

Convergence and Harmonization. Competition in the certification marketplace is making the systems more similar over time (Table 2). As this continues, pressure from the marketplace is likely to eliminate confusion resulting from multiple eco-labels. This pressure is fostering some harmonization and recognition

among the systems. For example, PEFC's recognition of CSA will allow Canadian companies to market products in Europe with a PEFC label.

The most important mutual recognition development to date for U.S. family forest owners is the mutual recognition between the SFI and Tree Farm programs, announced in July 2000. This is particularly significant because most small private owners in the United States sell their logs to SFI companies, so those landowners still can access the marketplace while avoiding the high cost of other systems. PEFC's recognition of the SFI standard, in December 2005,

also might play an important role in international trade of forest products. In contrast to these developments, however, are strongly entrenched differences which have continued to separate FSC from other systems.

Markets

The marketplace's overall acceptance is a critical factor in the future of certification. To date, consumers' purchase decisions have not significantly affected the development of certification, and none of the current evidence, anecdotal or research based, suggests that they will in the near term.

Table 2: Major North American Forest Certification Program Standards *

Management Aspect	FSC ¹	CSA ²	SFI ³	ATFS ⁴
Plantations	Specific details limiting: 1) Representation on landscape 2) Date of establishment 3) Specific characteristics of management blocks; e.g., require diversity in tree species, genetic foundation, and stand structure	No specific policy. Plantations not defined or regulated.	No specific policy. Plantations not defined or regulated.	No specific policy. Plantations not defined or regulated.
Chemicals	Require minimizing use; prefer IPM5 approach. Require documentation, strict monitoring, and control. Ban certain chemicals; e.g., World Health Organization (WHO) types 1a and 1b.	No specific policy beyond government regulations.	Require minimizing use given management objectives; promote IPM where feasible.	Require minimizing use; prefer IPM approach.
Clearcuts	Restrict size and location (varies among national and regional standards).	No specific policy beyond following government regulations.	Average of 120 acres; exceptions for forest health emergencies and natural catastrophes.	No specific policy. Conserve biodiversity and maintain habitats.
Genetically modified organisms (GMOs)	Prohibited.	Guided to address their use through consultation with public advisory group.	Require adherence to government regulations and international protocols. Use governed by scientifically sound methods.	No specific policy.
Exotics⁶	Permitted but not promoted. Require careful monitoring to avoid adverse environmental impacts.	No specific policy beyond following government regulations.	Minimize use. Research documentation available and indicates exotics pose minimal risk.	No specific policy. Forest management places "emphasis" on "natural" plant and animal communities.
Reserves	Require conservation zones to protect rare, threatened, and endangered species. Representative samples of ecosystems on landscape mapped and protected. Require maintaining and enhancing attributes of High Conservation Value Forests.	Respect government-protected areas. Determine existence of underprotected ecosystems (at the landscape level) in defined forest area and ensure their protection.	Require identification and management of sites with ecological, geological, historical, or cultural significance. Manager has discretion on how best to manage these sites.	Require identification of historical, biological, archaeological, cultural, and geological sites of special interest. Manager has discretion on how best to manage these sites.

* Source: Cashore, Benjamin, Graeme Auld, and Deanna Newsom. 2004. *Governing Through Markets: Forest Certification and the Emergence of Non-state Authority*. New Haven: Yale University Press.

¹ The FSC requirements covered in this table, unless otherwise indicated, are those contained in the FSC's international Principles and Criteria, April 2004 version. These international standards apply to all FSC-accredited assessments worldwide. Additional requirements may apply in those countries and regions where FSC national and/or regional standards have been developed.

² CSA source: the 2002 Sustainable Forest Management: Requirements and Guidance Document (CAN/CSA-Z809-2002)

³ SFI source: the 2005–2009 version of the SFI Standard

⁴ TFS source: the 2004–2008 version of the ATFS Standard

⁵ IPM, Integrated Pest Management, is an approach to pest control that seeks to minimize chemical use through the use of alternative prevention and biological control techniques.

⁶ Species not endemic to the location.

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Demand for certified products in today's marketplace comes from large corporations that wish to avoid the risk of damaging their brand image. That damage can come from the company's buying products that do not have the approval of powerful ENGOs which have a history of influencing corporate behavior through protests and other elements of what they call "market mechanisms." For example, Nike made major changes in its contract shoe manufacturing due to protests about labor conditions in foreign factories producing Nike shoes. In the wood arena, The Home Depot, a national chain of home improvement stores, was heavily targeted in the late 1990s regarding its wood purchases. As a result, The Home Depot committed to new purchasing policies that included preferences for certified wood. Major competitors followed suit. ENGOs went on to similar success in the homebuilding industry, office supply retailing, financial institutions, and most recently with the catalog industry.

The most important driver of demand for FSC-certified products is construction of commercial buildings to the Leadership in Energy and Environmental Design (LEED) standard. The LEED for New Construction standard is the most recognized certification for environmentally friendly commercial building practices. One point (of 69 potential points) in the LEED system can be gained by using FSC-certified wood. The LEED standard was recently reviewed and updated. Despite criticism from the AF&PA, the new standard recognizes only FSC as an acceptable forest certification system.

Green building is gaining in residential construction as well. A new LEED standard is being developed for residential construction, and the National Association of Homebuilders has a set of green building guidelines that prefer certified wood from the SFI, AFTS, CSA, FSC, and PEFC systems. Until the LEED standard changes, the U.S. industry has been promoting the Green Globe program which recognizes all the main North American forest

certification systems as meeting its standard, a stand strongly criticized by leading environmental groups.

Considering all the factors in the current marketplace, there is considerable potential for growth in the demand for certified products. The United States has a significant supply of products originating from certified land, but only a very small percentage of them carry an eco-label showing that they came from a certified forest.

From a market perspective, certification poses a dilemma: the standard cannot be so high that it renders firms uncompetitive if they adopt certification, yet the standard must be high enough to meet demands of stakeholders and customers. Moreover, as markets for certified products institutionalize, we would expect certification systems to be increasingly effective in addressing environmental problems and social issues alongside economic objectives.

Conclusion

What might happen next with certification? Will it continue to be a growing trend in forestry? We expect growth in mutual recognition among the systems other than FSC and continued competition between FSC and others in the next few years. This competition will put pressure on systems to become more similar over time. An important unknown is the future actions of ENGOs and the companies and sectors they choose to target or other strategies they employ.

One big challenge in the United States is how to include the millions of small private landowners in certification. This issue is being addressed through group certification and other strategies but is far from resolved. Certification is an economic reality for large companies and landowners but does not yet look very attractive to small owners.

To date, certification also has been mostly a northern hemisphere reality and has not gained significant traction

in tropical forests, the area of most concern to ENGOs in calling for certification in the past and today. There is some evidence that today ENGOs are more concerned about dealing directly with illegal logging in tropical forests than about ensuring certification happens immediately. One problem in the tropics has been extensive clearing for agriculture, without a connection to the forest products industry. This is not a very good situation in which to try to implement certification. Some ENGOs have taken an active role to help countries implement sustainable, forestry-based businesses in these areas rather than continue with shifting agriculture. As these businesses are established, they can be linked to certification if the costs of implementation are not too great.

Scientists are working to determine overall environmental impacts of various building products through a process called life cycle analysis. The future likely will see "life-cycle" certification that covers all aspects of a product (manufacturing, distribution, use, and disposal), rather than a single aspect of the process as in present-day forest certification.

For more information

For more information on sustainability and forest certification in general, contact:

[The Sustainable Forestry Partnership Sustainable Forestry and Certification Watch](#)

[National Association of Homebuilders Model Green Homebuilding Guidelines](#)

[U.S. Green Building Council LEED standard](#)

[Canada Green Building Council Green Globes](#)

[Metafore \(formerly the Certified Forest Products Council\)](#)

[Certification Canada](#)



Developing Quality Seed: Seedfolks Celebrate Successes at 4th Organic Seed Grower's Conference

Scott Vlaun, co-founder of
Moose Pond Arts+Ecology

Twenty years ago, chances are you could have fit all the organic seed grown in the U.S. in the back of a pickup truck. Organic agriculture was in its infancy, being led by a burgeoning back-to-the-land organic gardening movement, and there were probably more organic seeds bartered than sold. Today, organic agriculture is a billion dollar business, organic seeds are housed in large climate controlled warehouses, and sales are in the millions, both through colorful racks in a wide range of outlets, as well as catalog and web-based sales. But while it is certainly a burgeoning movement, the "organic seed industry" is still dwarfed by its "conventional" counterpart.



Hot water seed treatment demonstration.

The growth in the organic seed movement has come from three basic sources. Many of the early "grass-roots" seed-savers matured into serious producers of high quality organic seed for the market, often involving themselves in a variety of improvement projects, and selling to more than one seed company, and/or through their own businesses. Growth also came from the top down, as large commercial

seed companies, spurred on by a USDA ruling, delve into the organic market, bringing with them their expertise in quality control, hybridization, and mechanization. The third source is the public sector, as universities begin to show interest in working with the organic seed movement to identify crop improvement strategies and non-profit and grass-roots organizations form to facilitate such collaboration.

The 2006 biennial Organic Seed Growers Conference, hosted by the Organic Seed Alliance (OSA) and Washington and Oregon State Universities (WSU, OSU), was attended by a sold-out crowd and was truly a convergence and collaboration of these three once disparate entities: microbus meets late-model diesel pick-up meets Toyota Prius. The historic and intimate McMenamen's Edgefield Resort in Troutdale, Oregon, provided a perfect setting for the two-day event preceded by a well attended, one-day "Seed Biology Short Course."

Over 220 people attended the two events. Even more extraordinary than the representatives from various entities convening to share information was the respect and admiration they showed for each other and the genuine interest in further developing a rigorously informed organic seed movement, dedicated to producing the highest quality seed for organic gardeners and farmers.

The conference theme, seed quality, was pervasive throughout the presentations and eloquently set forth by conference coordinator Micaela Colley in her opening address. Seed quality, she pointed out, is "vital not only to the future of organic seed producers, but to the whole of agriculture." While seed quality encompasses a broad range of characteristics, such as vigor, purity, and uniform genetics, Colley also reminded us that, especially for organic agriculture, "...seed quality

means maintaining the genetic diversity necessary for adapting to a constantly changing eco-system."

Seed We Need

Over the course of the two-day conference, nowhere was the efficacy of utilizing genetic diversity more apparent than in the work of the first presenter, David Christensen. After leading the group in some spirited gospel singing to get everyone's attention, David shared the story of how he developed his extraordinary "Painted Mountain" corn by combining a wide array of genetics from stress-enduring corns and selecting the strongest survivors. The result of over three decades of work, his short-season, cold- and altitude-adapted corn survives where others fail, is extremely adaptable, and shows higher levels of protein and anthocyanins than most commercial corn varieties. David's talk set an inspiring tone for the conference and filled the crowd with a sense of possibility of what can be achieved with vision, perseverance, and limited resources. His project, dubbed "Seed We Need" has supplied seed to indigenous people from Siberia to North Korea where the results have been more than promising.

Universities Join the Party

If one man can develop corn to feed a hungry world, imagine what progress can be achieved when university scientists work with farmers to develop vigorous, disease resistant crops specifically tailored for organic production. While university research in agriculture has been more than dominated by the needs of a chemical-based food system and the high economic stakes of genetic engineering, conference attendees clearly see times are changing. Nearly half of the presentations were, either wholly or in part, from university researchers, addressing many important issues for organic producers.

These presentations covered a broad range of topics, often integrating practical information, leaving the audience not only enlightened about

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important issues, but armed with techniques to improve the quality of their seed. One example of this synergy was the presentation entitled "Management of Black Rot of Crucifers from Seed to Seed." Ken Johnson of OSU, Robin Ludy of the Oregon Department of Agriculture, Jodi Lew Smith of High Mowing Seeds, and Alex Stone, of OSU joined forces to give a compelling presentation covering everything from identifying and controlling the disease in the field, to a hands-on demonstration on treating contaminated seed with carefully controlled hot water baths. Along these lines, another important University-based research report came from WSU's Lindsay du Toit, whose *Seed Borne Diseases: An Overview* was a hit with conference attendees, addressing an area of critical importance to the organic seed industry.

Many in the crowd were also delighted about the attention given to nutrition and organics. Alyson Mitchell, University of California at Davis, presented research that is beginning to confirm what many of us have always suspected: organically produced food can be more nutritious. While not conclusive, the Davis study did show higher levels of many nutrients in organic fields versus their conventional counterparts, especially in tomatoes. Other presentations focusing on nutrition included Shree P. Singh and Dale T. Westerman's compelling study on the Effect of High- and Low-Input Organic and Conventional Production Systems on Dry Bean Nutrients and Phillip W. Simon's (USDA/University of Wisconsin, Madison) colorful presentation on Breeding Carrots for Improved Nutritional Value. Simon challenged our carrot preconceptions with his research into increased phytonutrient levels of yellow, red, and purple carrots.

Setting the tone for all of these university presentations and for the conference in general, was a presentation by George Moriarty, standing in for Molly Jahns of Cornell



Demonstrating seed cleaning equipment.

University. George and Molly's research program houses the Organic Seed Partnership, which facilitates the collaboration of public and private plant breeders, non-profit organizations, seed companies, and farmers, in developing vegetable varieties for the organic market. For many attendees, the involvement of farmers in seed research hit close to home. It is central to the work of conference host, Organic Seed Alliance, and the breadth of knowledge seed farmers bring to the movement was apparent in many presentations.

Don Tipping, Nash Huber, Fred Brossy, and Frank Morton, all veteran seed growers involved with participatory breeding projects, shared their own experiences with integrating seed production into their varied farming operations. There was plenty of inspiration as well as detailed information to go around as they extolled the virtues of integrated approaches: Don's extremely diverse, small-scale, permaculture-inspired farm, Fred's and Nash's larger scale production systems, and Frank's highly evolved yet human scale operation.

In addition to the personal perspectives of the farmers, the seed industry perspective was shared by Tom Stearns of Highmowing Seeds and Joel Reiten from Bejo Seeds. Coming from opposite ends of the spectrum, (Highmowing, a small, family-owned, organic-only enterprise and Bejo, an international seed giant with a commitment to organics), Joel and Tom shared unique and varied insights into the economics of the organic seed

business, not to mention a few good laughs. Added to the industry perspective, David DeCou of the Organic Materials Review Institute proposed the idea of an organic seeds database and solicited ideas as to how this might work to connect organic growers with seed company offerings. Many constructive ideas ensued from the discussion and hopefully a much-needed database of available organic seed varieties will be a reality in the near future.

If there is one person who epitomizes the organic seed movement, it has to be John Navazio. His career as a seedsman, researcher, and educator has crossed over into all segments of the industry, and few in the business have not benefited from his expertise. His discussion of the Environmental Challenges of Raising Organic Vegetable Seed West of the Cascades demonstrated and effectively shared his broad knowledge, especially of "cool season, dry seeded, vegetable crops" which he has affectionately dubbed CSDSVC. While we all appreciated his discourse on establishment of adequate photosynthetic area and day-length sensitivity of angiosperms, nothing compared to seeing him wailing on his guitar and belting out some Johnny Cash at the previous night's social gathering.

I think anyone who attended the 2006 Organic Seed Growers Conference couldn't help but come away a little smarter and a little more inspired. From the insightful presentations, seed cleaning demos, seed swap, resource center, and late night conversations about storage onions and lettuce diseases, there was a sense that an industry, fueled by passion and commitment, is finally coming of age and is well on its way toward what OSA director Matthew Dillon described in his emotion-filled closing remarks as "an essential step in fulfilling the spirit of organics."

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Conference Proceedings



For those who could not attend the conference, you can read the presentations in the Conference Proceedings compiled by Carol Miles at Washington State University and posted on the [Organic Seed Alliance web site](#). Or send a \$13.00 payment to OSA, Box 772, Port Townsend, WA 98368 to receive a paper copy.

Scott Vlaun is a regular contributor to garden publications including Mother Earth News and the Seeds of Change Cutting Edge Newsletter.



Initial Trials Using Native Grass Plugs with a Biodegradable Weed Film

Jim Hanson, Landscape Contract Manager, Caltrans Bay Area District 4

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Summary

Small, isolated sections in two coastal upland project sites were to be replanted with perennial native grasses, but there was insufficient time to establish grass cover from seed. Therefore, a "cover-and-plug" method was developed using native grass plugs with a biodegradable weed film. A high percentage of native grass cover and

a very low percentage of weed cover are evident one year after planting. Further investigation is needed to determine if the native grass cover persists in following years, if there are benefits from a thicker, longer-lasting film, and when to use this method despite high initial installation costs. The use of plugs with a biodegradable weed film can be considered a cost-effective alternative for small-scale projects where typically less-expensive means of weed management, such as grazing, tractor mowing, and herbicide applications, cannot be used.

Too Many Weeds, So Little Time

The trial sites are part of a Caltrans revegetation program along Interstates 80 and 580 adjacent to remnant pickleweed salt marsh surrounding San Francisco Bay. The project area had been characterized by weedy annual grasses and broadleaf weeds, scattered coyote brush (*Baccharis pilularis*), industrial debris, and urban trash. Soils were drastically disturbed and had not been de-compacted following previous construction work. Over a period of five years, contractors removed debris, and the entire area was successfully replanted to a native coastal scrub plant community. At the end of this period, some relatively small and isolated areas that were initially hydroseeded with native grasses needed replanting. The replanting work had to be completed within the remaining project time, leaving only a 6-month winter season to establish the replacement grass planting.

One trial site lies in the salt marsh upland next to Highway 80 near Emeryville. The reintroduced plant community is characterized by groups of coyote brush, mugwort (*Artemisia douglasii*) California blackberry (*Rubus ursinus*), bush monkey flower (*Mimulus aurantiacus*), and a variety of native perennial grasses, including Molate fescue (*Festuca rubra* "molate") and blue wildrye (*E. trachycaulus*). A three-foot-wide native grass strip totaling 5,000 ft² needed to be replanted with native grasses and would serve to filter and slow stormwater runoff from the adjacent roadway.

The other trial site is adjacent to a bike path access point along the recently completed San Francisco Bay Trail in Albany, near Central Avenue and Highway 580. Characterized by the same reintroduced plant community species at Emeryville, this site required replanting native grasses in a 1,000 ft² area.

Simply put, there were too many weeds and insufficient time to reseed the planting areas with native grasses



*Molate fescue planted above high tide line
- Emeryville, March 2005*

and expect successful cover. Typically, native grass establishment from seed on disturbed sites with no soil development requires at least one to two years of post-seeding weed control (Stromberg and Kephart 1996; Wrynski 2002; Anderson 2002; Amme 2003).

When there is insufficient time to reduce weed competition, past experience shows better grass establishment from plugs than from seed. Nevertheless, efficient weed suppression would still be necessary to provide maximum light, soil, water, and nutrients to the developing grass plugs.

Weed Control Options with Grass Plugs

Several weed control options were considered. Wood-chip mulch has proven effective in controlling most weeds on other native revegetation sites, but labor cost is a factor when wood chips must be manually carted

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Spring growth of Molate fescue plugs planted degraded weed film with mulch cover - Emeryville, March 2003

to isolated locations. Also, special care is necessary to prevent burying the small perennial grass plugs with the wood chips. Plastic weed covers are impractical to use with perennial grasses because of the extra effort and time necessary to remove the plastic from around the closely planted grasses. Preemergent herbicide is an option with grass plugs, but preemergents must be applied according to specified conditions and time constraints to be effective. The planting locations were close to the bay, so herbicide drift and runoff were considerations.

A Web search turned up two biodegradable weed cover options: a biodegradable paper weed cover, Planters Paper (Ken-Bar, Reading, Mass.), and a cornstarch-based weed film, Garden Bio-Film (BIOgroupUSA, Inc., Palm Harbor, Fla.) The paper and the cornstarch film both decompose within one year. The paper is produced in four foot wide rolls of varying lengths weighing approximately 2 lb/100 ft². The film retails in tinfoil-sized cartons and unfolds to 5 ft X 30 ft sheets weighing approximately 0.5 lb/100 ft². One organic farm supplier listed small-quantity prices at approximately \$5.00/100 ft² for the paper, and \$6.00/100 ft² for the cornstarch-based film. Large, lower-priced agricultural rolls are also available for each product. Both materials may be laid out manually or by tractor. The paper and the film are normally secured by burying the edges

in soil or by adding mulch or other objects to weigh them down. The small, irregular, and isolated nature of the planting sites required that all materials be manually transported and installed. The film, lighter and condensed in small cartons, appeared well suited to the isolated planting sites.

A "Cover-and-Plug" Method

The Emeryville trial site was planted in November 2003, and the Albany bike entrance was planted in January 2005. The sites were planted once rainfall moistened the soil to a depth of 6 inches. The following planting method was used for each site:

Perennial and rhizomatous weeds were killed with glyphosate, and weed biomass was cut flush to the ground with a weed whipper. The 5 ft X 30 ft sheets of cornstarch weed film were rolled out, loosely placed on the ground, and secured by wrapping the ends around thin, 3 ft long bamboo or wood survey stakes stapled to the ground. Adjoining film sheet edges were overlapped by 6 inches and a thin layer of wood-chip mulch was spread across the film to weight it down. The film was pierced every 18 inches with a metal bar for planting holes. The native perennial grass plugs were then dipped in a commercial mycorrhizal inoculant and planted in the holes by pushing soil against the rootball. The native grasses planted at the Emeryville site included Molate fescue, blue wildrye, and purple needlegrass (*Nassella pulchra*). The Albany site was planted to purple needlegrass and creeping wildrye (*Leymus triticoides*). The sites were occasionally monitored for sufficient soil moisture during dry periods and irrigated if necessary.

Results: Good, So Far

The cover-and-plug method met the objective of providing sufficient native grass cover over one growing season. At both sites, the grass plants sent up seed inflorescences and grew to full height within 9 months. The Emeryville site was planted first in fall 2003 and a healthy native grass cover, with little weed cover, can be observed 21 months later.

Some annual grass (*Bermuda grass* - *Cynodon dactylon*) and thistle weeds came up in the weed film openings immediately surrounding the grass plugs. Some weeds also appeared where there was insufficient overlap between the film sheets. Overall, very little post-planting weeding was required. However, when pulling weeds around the plant plug openings, care had to be taken to avoid uprooting the grass plants. The film was laid loosely on the ground and could be walked on. However, occasional tears would develop from sharp rocks or from upright weed stubble left after weed whipping.



Left half: Degraded cornstarch weed film and bare soil between purple needlegrass plants eight months after planting. Left half: without weed film.

Weeds controlled by the film cover included Kikuyu grass (*Pennisetum clandestinum*), Bermuda grass, bristly ox-tongue (*Picris echioides*), Italian thistle (*Carduus pycnocephalus*), Bermuda buttercup (*Oxalis pes-caprae*), slender oats (*Avena barbata*), and ripgut brome (*B. rigidus*). English Plantain (*Plantago lanceolata*) was able to break through the weed film, which may be acceptable because it does not appear to competitively displace the native grass plants.

Bare soil appeared around the grass plants as the film degraded in late spring. The soil is bare at the same time the seeds of the grass plants ripen and fall. The planting sites will be checked informally during spring 2006 for weeds and any new native grass plants.

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Further Questions

This cover-and-plug method solved a particular planting problem and met the immediate objective, but raised other questions. For instance, after 21 months, the native grass plants at the Emeryville site appear to have reached some level of equilibrium with a Molate fescue system dominating the usual array of weedy grasses and broadleaf weeds. In the first growing season, some spot weeding was done around the grass plugs at the openings of the film. However, as the film degrades, what would be the optimum (or minimal) frequency and type of weed management required to maintain a predominantly native grass system using this method?

As the weed cover degrades, exploiting the bare soil to restore forb species poses another interesting topic needing further experimentation. Adding forbs would enhance habitat value and likely increase public aesthetic appreciation of the grassland.

Another question is whether a thicker weed film would enhance results by increasing the durability and integrity of the weed cover. Film durability, or the length of time before the film degrades, is affected by exposure to sunlight. One simple way to extend film durability is to completely cover the film with a wood-chip mulch. Would a thicker degradable film offer more tear resistance in the harsh



Molate fescue plants 21 months after planting. Note completely degraded cornstarch weed film.

planting conditions often found on revegetation projects? And, would adding a wood-chip mulch cover over a thicker film provide an additional season of weed suppression?

Potential Uses

Depending on results of further trials, a cover-and-plug approach should be a viable option for short-term, small-scale grassland revegetation, restoration, and landscaping projects. The use of relatively economical pre-and post-seeding weed control using grazing, tractor-mowing, and equipment-delivered herbicide applications makes seeding possible in large-scale native grass projects. On small-scale revegetation or landscaping projects, such as these trials, mowing and herbicide applications are carried out by personnel on foot, resulting in higher labor cost per acre for weed management. A cover-and-plug approach significantly reduces labor time normally required for pre-and post-planting weed control and therefore may be cost-effective in small-scale projects. Project sites separated into numerous, small parcels or by long travel distances, may also be appropriate for this method.

Plastic weed covers have been used extensively by agriculture because they suppress weeds, increase plant growth, and shorten time to harvest. However, disposal issues with plastic are driving development of biodegradable alternatives. Research is underway in the agricultural sector on different formulations for biodegradable weed covers. Researchers at Washington State University (Miles et al. 2003, 2004) evaluated how biodegradable alternatives (including the cornstarch-based weed cover used in these trials) compare to plastic in row crop production. Further field trials by revegetation and restoration project planners, aided by ongoing agricultural research and development, will help discern under what situations a cover-and-plug method becomes another tool to reclaim sites to native perennial grassland.

Jim Hanson is a licensed landscape contractor and administers mitigation and highway planting contracts for

Caltrans Bay Area District 4. He would appreciate hearing about any results using plugs with degradable weed covers.

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Washington's Statewide Agricultural Employment Mediation Program

Meggan Stein, Coordinator



Operating under the administration of the Washington State Grange, the Agricultural Employment Mediation Program offers free mediation services to Washington's agricultural community. The program provides agricultural employers and employees an alternative to litigation that is free, voluntary, confidential and effective.

For the most part, information exchanged during mediation cannot be later used in litigation since confidentiality and trust serve as cornerstones of mediation. Resolving

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disputes depends on participants feeling comfortable enough to communicate openly without fear what they say could later be used against them. Once the parties openly make their interests known, working together toward agreements becomes much more likely.

The mediator helps each side better understand the other's point of view, focuses the participants on their interests, and facilitates reaching a mutually acceptable solution. The mediator does not act as an advocate or a judge, does not offer legal advice, and will not try to force an agreement.

Once agreement is reached, the terms of the agreement will be put in writing, signed, and become a binding contract. Almost any agricultural employment dispute that might otherwise be resolved in the courts would be appropriate for mediation through the Agricultural Employment Mediation Program.

There is no risk involved in attempting to mediate a dispute since mediation does not affect the participants' legal rights. In the event that an agreement cannot be reached during mediation, all other legal options remain available. Zero-risk, combined with fast, free and effective service, makes mediation an attractive alternative to the drawn-out, expensive, stressful nature of litigation.

One recent participant in a successful mediation stated, "I thank you for providing a service that is greatly needed in the agricultural business." All of the program's agricultural mediation participants indicated they would use mediation again, if necessary, and they would also encourage other people to use mediation to resolve their disputes.

"This program can provide more prompt and creative resolution to farm labor disputes than our crowded courts could accomplish, at no cost to participants," said Terry Hunt, President of the Washington State Grange. "The Grange has a long history of bringing fresh perspectives and new ideas to problems facing

farmers and those involved in the agricultural industry. We have a responsibility to find ways to identify disputes early on and get them resolved in a fair and efficient manner."

The Agricultural Employment Mediation Program began in October, 2004, with funding from a state grant from the Office of Civil Legal Aid. For more information about the Agricultural Employment Mediation Program, contact Meggan Stein at 360-943-5406, or toll free at 1-877-943-2700.



Sustainability at Washington State University Dining Services

Gina Murray, Marketing
Coordinator, WSU Dining Services

Dining Services at Washington State University (WSU) supports sustainability as a priority departmental goal. Lamar Patterson, Director of Dining Services, leads an on-going major renovation to the student dining facilities transforming the space from cafeteria style service to platform cooking using high quality, fresh ingredients cooked to order. This has been enthusiastically received by guests.

Dining Services' philosophy towards dining includes supporting sustainability by recycling, using locally grown products, and selling Fair Trade Coffee. The opportunity to raise awareness and educate a captive audience of 18,000 students was too great to pass up. Dining Services strongly promotes the use of eco-friendly, local products in our recipes. In response to student suggestions, Dining Services added a line of organic foods. If a strong consumer demand arises, organic foods will be added to



all markets. Menu boards, posters, and bookmarks all contain information about sustainability and explain its' importance to future generations. Making conscious choices can and does make a difference.

WSU Department of Crops and Soil Sciences worked with Palouse area farmers to develop a special seed stock for no till wheat which is used in all pizza dough and other baked goods on campus. Dining Services General Manager, Jeff Wold and Executive



Chef, Doug Murray, established relationships with local farmers to purchase wheat, garbanzos, and lentils from Shepherd's Grain, their farm co-op. Lentil Chocolate Cake and Lemon Garbanzo Cake are moist and tasty favorites with more protein and less fat.

With vendors (Thomas Hammer, Seattle's Best, and Starbucks) providing information and free samples, Dining Services recently switched all dining facilities, markets, and espresso bars to Fair Trade Coffee. Coffee farmers must meet strict requirements to qualify as Fair Trade farmers, but receive a higher price per pound, enabling them to increase their quality of life while also practicing eco-friendly farming techniques.

WSU dining facilities recycle and most dish rooms mulch food waste. The WSU composting facility uses the mulched waste which constitutes 1% of all compost. WSU then sells the compost at local nurseries.

WSU Dining Services is proud of these accomplishments and aspires to become a national leader in university dining trends.



Events

WSU Summer Field Course – Organic Farming & Gardening

Sign up for Practicum in Organic Agriculture (Soils 480) taught by Brad Jaeckel on a 3-acre organic teaching farm at the Tukey Orchard on the WSU campus in Pullman, WA. This field course offers students a hands-on educational experience in the practice of organic agriculture. Participants will learn:

To develop the production skills needed to manage an organic market garden or farm

To understand the applied science of an agriculture operation

To recognize the ecological interactions between plants, soils, insects, pests, and climate

To appreciate the value and importance of the local food system and food security

To enhance critical thinking and leadership skills

To participate in the marketing of Certified Organic fruit, vegetables, herbs, and flowers for a 100 member CSA and local food banks.

Appropriate for upper-level students who have some basic gardening or farming experience, the work is both physically and academically rigorous and requires commitment. Participants can earn 3-6 credits or Continuing Education Units (CEUs). In-person interviews with the instructor are required. For information on how to sign up, contact: [Brad Jaeckel](#) at 509-335-3661

3rd North American Lavender Conference

Join lavender growers and enthusiasts from across the country and around the world at the 3rd [North American Lavender Conference](#) in Sequim, Washington on July 17-19, 2006. The conference is co-sponsored by Washington State University Extension and the Sequim Lavender Growers Association. If you're interested in growing lavender, distilling lavender oil, making lavender products, marketing lavender, or simply utilizing

this amazing, fragrant herb in your home, garden, or otherwise, you don't want to miss this conference.

Featured speakers include: Virginia McNaughton, international lavender authority, author of the book, *Lavender: The Grower's Guide*, and operator of Lavender Downs, a lavender farm in New Zealand; Brian Lawrence, a world-renowned expert on lavender oil and other essential oils; Ellen Spector Platt, author of numerous books on herbs, including the book, *Lavender: How to Grow and Use the Fragrant Herb*; and Andy Van Hevelingen, author, lavender breeder and operator of a wholesale lavender nursery in Oregon.

In addition to these speakers, the conference will feature numerous workshops on practical aspects of growing, utilizing, marketing, and appreciating lavender, as well as guided tours of lavender farms. For information, contact [Dr. Curtis Beus](#) at 877-681-3035.

AFT's 2006 National Conference Call for Proposals



Farming on the Edge: The Next Generation, AFT's fourth national conference, will be held November 13-15 in Newark, Delaware. The 2006 conference will explore the future of agriculture: the next generation of national farm policies, farmland protection programs, community planning, agricultural production practices and markets, and farmers themselves. AFT is currently accepting [presentation proposals](#) for the conference; the deadline is April 15. For more information e-mail [Doris Mittasch](#).

Sustainable Rural Enterprises-Multi-Species Grazing Conference

May 23-24, Ritzville, Washington. Dr. An Peischel, Tennessee State University, will set the tone as keynote speaker, discussing livestock grazing behavior in relation to invasive vegetation management, creating niche markets and enterprise development. Rural

Enterprise Producers including Dave Billingsley and Chuck Perry, Country Natural Beef; Joel Huesby, Thundering Hooves; Craig Madsen, Healing Hooves; and Julie and Dave Dashiell will discuss marketing, sustainability and the holistic nature of their operations. For more information, please contact Andrea Mann, Big Bend RC&D at (509)754-2463, ext.115 or Don Nelson, Washington State University at (509)335-2922.

Visions of the Federal Farm Bill

The American Farmland Trust (AFT) will host a forum on the 2007 Farm Bill Thursday, April 20, at Big Bend Community college in Moses Lake. Speakers and participants in this event will include: experts in agriculture and U.S. farm policy, congressional members and their staffs, political leaders and activists on farm issues, agencies that implement farm programs, and organizations working to influence the next farm bill. To register, [email Sara Nikolic](#) (206-226-1914) or direct other questions to [Don Stuart](#) (253-446-9384).

Tidbits

The Science and Practice of Ecology and Society Award

[The Science and Practice of Ecology & Society Award](#) is an annual award given to the individual or organization that is the most effective in bringing transdisciplinary science of the interactions of ecology and society into practice. 2006 will be the inauguration of this award. Examples of possible winners include, a high school teacher who develops a special curriculum, a mayor with initiatives and actions for her/his town based on scientific concepts, a journalist who brings scientific insights to a broader audience, or a NGO group who facilitates local knowledge production in rural communities.

This award recognizes the importance of practitioners who translate the scientific findings and insights of the scholarly community to practical applications. We want to identify

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innovative practitioners so that their story can be an example for others.

The Award. The award consists of 1000 Euro and an article in *Ecology and Society* devoted to this person or organization, and written by those who send in the nomination.

Who can be nominated? A person or organization that has succeeded in translating transdisciplinary science theory into practice.

Who nominates? Any academic scholar or group of academic scholars can nominate a person or organization. An accompanying letter will argue why this person or organization is an exemplary example of the interface of practice and science in the domain of ecology and society.

Where to submit nominations?

The deadline for nominations will be July 1, 2006. Nomination letters can be sent, preferably electronically, to [Dr. Marco Janssen](#), or, School of Human Evolution and Social Change, Arizona State University, Box 872402, Tempe, AZ 85287-2402.

Persistent Pesticides Found in Organic Vegetables

ATTRA - When an undergraduate chemistry student recently tested bunches of organic and non-organic retail carrots, she found pesticide residues in both, reports [Science News](#). The results mirrored those of a study done by another student on potatoes. The students theorize that pesticides that take decades to break down may be lingering in soil that is now certified as organic. All the carrots tested in the study showed a breakdown product of DDT, and many also showed the pesticide chlordane. Some also showed heptachlor. The pesticides were present in trace amounts, with higher concentrations in the skin of the vegetables than in the flesh.

Biofuel Imports Raise Concerns

ATTRA - A growing enthusiasm over biofuels has led to increased development of domestic processing capacity and legislation that provides incentives for biofuel production and use. However, when a ship loaded with South American biodiesel

recently arrived in the U.S. and qualified for a new federal tax break, both farmers and lawmakers were upset, says an article in St. Paul Pioneer Press. Both the biodiesel and ethanol industries, upon which many farmers were pinning their hopes for an economic boom, are now facing competition from imports, according to the [article](#).

New Study Detects Antibiotics in Vegetables Grown in Soil Treated with Manure

A recent study in the *Journal of Environmental Quality* points out the potential human health risks associated with eating fresh vegetables grown in soil that has been amended with manure that contains antibiotics. Antibiotics are frequently added to conventional animal feed as a supplement, and any antibiotics that are not absorbed in the gut end up in manure. Researchers conducted greenhouse studies on three test crops: green onions, corn, and cabbage. All three crops absorbed small concentrations of the antibiotic chlortetracycline, but not tylosin. The study authors warned that risks may be greatest for people who are allergic to antibiotics. The article was published in the October 12 online edition of the journal, and the abstract is [available online](#).

Central Coast Vineyards Reduce Pesticide Use

ATTRA - A team of farmers, researchers and agricultural consultants in Monterey, San Luis Obispo and Santa Barbara counties has been awarded a U.S. Environmental Protection Agency (EPA) award for reducing pollution and pesticides and promoting biologically integrated farming practices in winegrape vineyards. EPA officials recognized the Central Coast Vineyard Team as a 2005 Pesticide Environmental Stewardship Champion for helping farmers reduce pollution by using sustainable practices and for the team's ability to track that success. The wine grape group uses the Biologically Integrated Farming Systems (BIFS) extension model that includes a team approach to project management,

monitoring of key biological and economic variables, and farmer-to-farmer information flow.

United Plant Savers Encourages Herb Cultivation

AFTA - [United Plant Savers \(UpS\)](#), a nonprofit group based in Vermont, dedicates itself to the conservation of native medicinal plants, with priority given to 20 species most at risk from over-harvesting in the wild, including American ginseng and goldenseal. The group actively promotes cultivation of native woodland herbs as an alternative to wild-crafting and its website includes information about cultural practices that are relevant to forest farming.



USDA Report Concludes More Control Over GE Crops Needed

ATTRA - The Office of Inspector General of the U.S. Department of Agriculture (USDA) completed an internal audit of the Animal and Plant Health Inspection Service (APHIS) in December 2005 that examined APHIS' controls over the issuance of genetically engineered (GE) organism release permits. The report concluded that APHIS needs to improve accountability for GE crops, improve inspections and enforcement, and provide better guidance to prevent the persistence of GE crops outside of field test sites. [The report's recommendations](#) include requiring more information prior to and during field tests, formalizing the inspection process, and developing guidelines that address devitalization deadlines and edible crops.

Hispanic Scientist Returns to Roots to Help Protect Farm Workers

ATTRA - The Seattle Times recently profiled Gloria Coronado, an epidemiologist with the Fred Hutchinson Cancer Research Center, and her work with Latino farm workers in eastern Washington. Coronado, of hispanic descent and raised in eastern Washington, uses her expertise to

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document the impact of pesticides on the state's farm workers and to educate workers and their families about pesticides and how to protect themselves. Coronado also seeks to mentor other Hispanic scholars, including some who, like her, grew up in eastern Washington's agricultural communities.

Agriculture on the Web: Current Situation and Prospects for Web-based Commerce and Services

This Agricultural Marketing Resource Center [article](#) outlines the history and current usage of e-commerce for agricultural marketing purposes. According to the most recent data (NASS 2005), 58 percent of U.S. farms have computer access and about half of all farms have Internet access. However, farmers are still shy e-commerce users. About 9 percent of farms reported purchasing agricultural inputs over the Internet in the 2005 survey (up from 8 percent in 2003) and 9 percent conduct agricultural marketing activities over the Internet.

Market Incentives Could Promote Better Nutrition Among Food Stamp Recipients

ATTRA - At a time when obesity, diabetes and other diet-related diseases are epidemic, the U.S. government should retool subsidy programs to encourage healthy diets, says policy expert Josh Miner in the [January-March 2006 issue](#) of the University of California's California Agriculture research journal. In a [peer-reviewed research perspective](#), Miner proposes policy changes for two agencies within the U.S. Department of Agriculture: the Food Stamp Program and the Farm Services Agency.

Miner lays out a proposal to reduce payments for large-scale commodities such as corn, soybeans and rice, and replace them with a compensation system for retailers who sell fruits, vegetables and other nutritious products to low-income consumers at reduced prices. "By linking incentives directly to products that have health benefits, there is a high likelihood that

these redirected subsidies would result in additional future cost savings, in the form of improved health, increased productivity, and other economic and social benefits," Miner writes.

Green Roof Agriculture

Alex Dominguez, Associated Press, writes in [U.S. Greenhouse Operators Find Green Roof Niche](#) about this interesting development. A family farm in Maryland, now dedicates itself to researching, growing, and selling plants ideal for making a roof "green."

Grass-Fed Cows

A new publication by the Union of Concerned Scientists, [Greener Pastures](#) (3.6 MB), confirms that meat and the milk from cows fed only grass possess higher levels of omega-3's, beneficial fatty acids, than from cows raised on grain. The report also discusses environmental benefits from raising animals on grass: less use of fertilizers and pesticides, less soil erosion, and improved water quality.

WSU CSANR Receives Funding

The Washington State House and Senate reached a compromise to appropriate \$400,000 for the Center for Sustaining Agriculture and Natural Resources (CSANR) at Washington State University to create a biologically intensive and organic agriculture program (BIOag). Visit the [CSANR web page](#) to see more about BIOag.

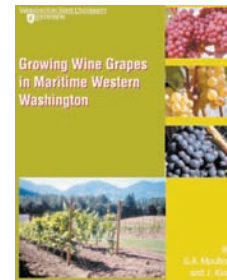
Resources

Sustainable Agriculture's Class Issue

ATTRA - Writing for [Grist's blog](#), Tom Philpott argues the sustainable agriculture movement suffers from a class problem, noting that products from small sustainable farms are often available only to the economic elite rather than the mid- to low-income masses. Philpott cites his own enterprise, Maverick Farms, as an example. The farm asks \$40 a head for farm dinner fundraisers and charges \$20 a pound for restaurant-ready salad greens, hardly prices that the average American consumer can afford. Small farms are labor-intensive, points out

Philpott, and can't compete with the economies of scale afforded by industrial agriculture. There has been a backlash against industrial agriculture, but the high cost of land near population centers is a limiting factor for sustainable agriculture's future, argues Philpott.

Growing Wine Grapes in Western Washington



[This guide](#) includes detailed information on variety selection for this region, as well as site selection, rootstocks, trellis structure, vine training, and disease control. A calendar lists grape-growing tasks by month throughout the year.

Direct Market Beef Publication

The Sustainable Agriculture Network just released its newest publication, [How to Direct Market Your Beef](#). The book portrays how one couple used their family's ranch to launch a profitable, grass-based beef operation focused on direct market sales. The book provides examples of real-life experiences and provides valuable tips for direct marketing beef from slaughtering to sales. It also has a special Entrepreneurs section that highlights farmers and ranchers who have marketed their sustainably raised food in innovative ways.

Fishery Co-Management: A Practical Handbook

IASCP - In his book, R. S. Pomeroy says during the last decade, there has been a shift in the governance and management of fisheries to a broader approach that recognizes the participation of fishers, local stewardship, and shared decision-making. Through this process, fishers are empowered to become active members of the management team, balancing rights and responsibilities, and working in partnership with government, this approach is called co-management.

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This handbook describes the process of community-based co-management from its beginning, through implementation, to turnover to the community. It provides ideas, methods, techniques, activities, checklists, examples, questions and indicators for the planning and implementing of a process of community-based co-management. It focuses on small-scale fisheries (freshwater, floodplain, estuarine, or marine) in developing countries, but is also relevant to small-scale fisheries in developed countries and to the management of other coastal resources (such as coral reefs, mangroves, sea grass, and wetlands). [Order on-line](#), the cost is \$65.

Herbs: Organic Greenhouse Production

ATTRA - [This publication](#) looks at marketing channels for and assesses the economics of small-scale organic production of fresh-cut herbs. Certified organic production differs from conventional methods chiefly in fertility management and pest control. Propagation methods differ for annuals and perennials.

Organic Herb Production

ATTRA - [This publication](#) emphasizes research into organic herb production in the U.S. and implications for herb production under the National Organic Program regulations. It addresses harvesting wild herbs, as well as organic production of annual and perennial herbs, and presents current research abstracts.

Local Food Directory Resource

ATTRA - In an effort to help connect consumers to farmers and ranchers who direct market their products, ATTRA compiled [the Local Food Directory Resource](#). The directory includes national, regional, state and community directory resources for all 50 states.

Agricultural Statistics Web Site Redesigned

ATTRA - The U.S. Department of Agriculture (USDA) recently redesigned the [National Agricultural Statistics Service Web site](#). The site provides

comprehensive statistical data on every facet of U.S. agriculture. Features such as the Quick Stats Agricultural Statistics Database offer the ability to search for data by commodity, state and year.

New in Agroforester's Bookshop: Edible Forest Gardens

ATTRA - [Edible Forest Gardens](#), Vol. 1, *Ecological Vision and Theory for Temperate Climate Permaculture* provides detailed guidance on the design and management of forest gardens, an intensive version of the agroforestry practice, forest farming, in temperate regions of North America. The cost is \$75.

Water Rights Reform: Lessons for Institutional Design

[This book](#) explores the issue of water rights reform in the US and other countries.

Managing the Commons

IASCP - As an outgrowth of a 2004 conference, a series of four publications on managing the commons are now available:

Managing the Commons:

Payment for Environmental Services (72 pages)

Conservation of Biodiversity (61 pages)

Markets, Commodity Chains and Certification (76 pages)

Indigenous Right, Economic Development and Identity (72 pages)

The series covers many of the problems and challenges related to the management of natural resources, and the work presented is a glimpse of the richness and relevance of some of the most interesting research currently being carried out within this field. To order, [email](#) or write to:

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Tel. 1-877-606-2005

New Guide to Northwest Farm Resources Available

The [2006 Farming Sourcebook for the Pacific Northwest](#) is now available. Produced by Celilo Group Media, publishers of the Sustainable Industries Journal, the sourcebook provides a one-stop guide to the most current tools, resources, and information available with respect to certified and sustainable agricultural production. It includes sections on marketing, certification and labeling, management practices, water quality, soil health, pest management, seeds and starts, farm energy, and more.

ATTRA Launches New Spanish Newsletter

ATTRA - Cosecha Mensual (Monthly Harvest), [ATTRA's new Spanish-language e-newsletter](#), started publishing on March 1. It focuses on sustainable agriculture resources and events of interest to Latino producers and to those who provide technical or financial assistance to the Latino agricultural community.



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