

BOOK OF ABSTRACTS FOR POSTER PRESENTATIONS

IUFRO 3.08.00 Small-Scale Forestry
Conference 2012: Science for Solutions

24-27 September 2012

Amherst, Massachusetts USA

<http://iufrossf2012.org/>



Coordinated by the Family Forest Research Center
(www.familyforestresearchcenter.org) – a joint project between
the US Forest Service and the University of Massachusetts Amherst

Conference Sponsors:



Coordinating committee:

Brett J. Butler (conference co-chair), US Forest Service

Jaketon H. Hewes, Family Forest Research Center

David B. Kittredge (conference co-chair), University of Massachusetts

Jessica Leahy, University of Maine

Stephanie Snyder, US Forest Service

Science committee:

Thomas Beckley, University of New Brunswick

A. Paige Fischer, USDA Forest Service

David Kittredge, University of Massachusetts Amherst, USA (science committee co-chair)

John Herbohn, University of Queensland

Teppo Hujala, Metla –Finnish Forest Research Institute

Jessica Leahy, University of Maine (science committee co-chair)

Gun Lidestav, Swedish University of Agricultural Sciences

Ikuo Ota, Ehime University

ABSTRACTS ARE LISTED IN ALPHABETICAL ORDER
BY LAST NAME OF THE PRESENTER

List of Posters

Opportunities for development of local forest markets: the case of Amish furniture manufacturing

Matt Bumgardner, USDA Forest Service

Investigation of Potential Governance Structures for Community Forestry in Newfoundland

Sara Carson, University of New Brunswick

Understanding nature step by step: A case study in primary schools (Istanbul)

Sara Dadras, Istanbul University

Trends in the maple syrup industry in Ohio and the United States: local economic benefits from a nontimber forest product

Gary Graham, Ohio State University

The American Chestnut: A Model for Hardwood Species Restoration and Conservation

Kendra M. Gurney, The American Chestnut Foundation, South Burlington, VT

NTFP knowledge of & utilization by locals around community forests in Nepal

Mathura Khanal, Dalit NGO Federation (DNF), Nepal

Preliminary Assesments on The Growth of Hevea brasiliensis and Gigantochloa albociliata for Latex and Shoot Production Under Agroforestry System

Rosdi Koter, Forest Research Institute Malaysia (FRIM)

Bridging the Climate Communication Divide between Agents and Small Forest Landowners in North Carolina

Mark Megalos, NC State University

Commercial Farm Forestry: It is All About Knowing How To Do

Karsten Raae, Danish Forestry Extension

Using Social Networks in Forest Landowner Education

Kevin W. Zobrist, Washington State University

Bumgardner, Matt

Opportunities for development of local forest markets: the case of Amish furniture manufacturing

Matt Bumgardner, Forest Products Technologist, USDA Forest Service

Gary Graham, Ohio State University Extension

Charles Goebel, School of Environment & Natural Resources Ohio State University

A dramatic decline in the production of hardwood furniture in the United States has had profound impacts on employment and hardwood markets. Between 1999 and 2010, employment in the U.S. wood household furniture industry declined by 70%, and hardwood lumber use by 87%, as imports captured a substantial share of the U.S. furniture market. Against this backdrop, the Amish-based furniture cluster in Ohio has expanded and hardwood lumber consumption by the cluster is significant. Recent research suggests that 71% of firms in the cluster expanded during a 3-year period from 2006-2008, even as the overall domestic industry contracted. Another measure of success (and indicative of the small size of many of the firms) is the finding that a plurality of firms (46%) began their operations by retrofitting existing buildings (often farm buildings), but that most firms had since expanded by constructing new facilities (56%). Identifying factors that enable the Amish cluster to be competitive, given the prevalence of small firms, may provide important insights. Several factors will be discussed, including economic clustering. Clustering has enabled several competitive advantages related to supply chain management, productivity, and distribution, and has led to local forest-based development. For example, a considerable volume of wood manufacturing inputs, and final product sales, are based on local and regional markets, although finished products are distributed throughout the United States. The Amish furniture cluster in Ohio is a case of a small-scale solution that can compete in a global market, and therefore benefit landowners through development of local forest markets.

Carson, Sara

Investigation of Potential Governance Structures for Community Forestry in Newfoundland

Sara Carson, University of New Brunswick

Nationally, community forests are being recognized as a means of maintaining and creating local employment alongside of retaining a level of control in the local decision making process. In response to the current downward trends, people at all levels of the supply chain are looking for alternative management solutions with aim to sustain viable forests and forest dependent communities. The idea of establishing community forests in Newfoundland dates back to recommendations by the Kennedy and Poole Royal Commissions on Forestry in 1955 and 1981 (Kennedy, Cameron, & Goodyear, 1955) (Poole, Carrol, & Rme, 1981). The study aims to assess current barriers relating to forestry and rural sustainability in Newfoundland and determine both the suitability and benefits of the establishment of community forests in the province. The main objectives are to assess, through case studies, which governance structure of community forest would best suit the Newfoundland context and to assess whether community forestry development in Newfoundland would be beneficial in terms of rural sustainability, economic development and job creation as an alternative option to the current forest industry. The expected outcomes of the study are a greater understanding of the barriers currently hindering the forest sector in the province, a better perception as to what model would best suit the Newfoundland context, with the found barriers in mind, and a enhanced overall understanding as to whether or not community forestry has the potential to improve and sustain the ecological, economic, and social dimensions of forest dependent communities in Newfoundland.

Dadras, Sara

Understanding nature step by step: A case study in primary schools (Istanbul)

Sara Dadras, Istanbul University

The environmental education is an important task of the nature agencies in order to improve the knowledge of kids and their future behaviors.

The presented study followed a process of informing children and evaluates the knowledge of pupils from different cultures in the forest. The following steps are taken for this purpose:

- Preparation process

1. Step: Search for sources and determine the importance of the subject
2. Step: The establishment of research
3. Step: Introduce students to the scope and type of work
4. Step: Create activity plan

- Application process

5. Step: Implementation of data collection tools with students
6. Step: Area studies

- Reporting process

7. Analysis of the data obtained
8. Discussion of findings

- Sustainability process

9. Share the analysis in national and international platforms
10. Communication with schools and create a tracking system

The findings show significant differences and positive effects in those areas where additional programs by the forest are used.

Graham, Gary

Trends in the maple syrup industry in Ohio and the United States: local economic benefits from a nontimber forest product

Gary Graham, Ohio State University

Production of maple syrup in Ohio and nationally has seen a profound increase due to many factors, including higher market prices and a trend of consumers looking more to locally grown foods. The 1860 Census indicated that Ohio was the leading maple producer in the United States, and for many subsequent years Ohio ranked as the fourth largest maple producer. More recently, Ohio has dropped in rank yet production has increased in terms of the total gallons produced and the value of total production according to tracking data from the USDA NASS program. However, data from this source is unavailable for hobby operations (with fewer than 100 taps), which recent research has suggested comprises 22% of the producers in Ohio. Nationally, maple syrup production increased 390,000 gallons between the 2009 and 2011 maple seasons. Producers whom report indicated that 605,000 new taps were put into production during that same time frame. Production (gallons of syrup per tap) also increased by 0.024 gallons per tap during this time. This is substantial growth even though the 2010 maple season was a poor production year due to climatic conditions across the maple region. Nationally, the average price per gallon decreased by \$3.20 yet Ohio saw an increase of \$4.80 per gallon from 2009 to 2011. Overall, maple syrup production has increased nationally and internationally with no indications of slowing down, and the United States continues to import syrup from Canada due to supply/demand differentials. Prices remain strong indicating a bright future for this often small-scale, family based nontimber industry.

Gurney, Kendra M.

The American Chestnut: A Model for Hardwood Species Restoration and Conservation

Kendra M. Gurney, The American Chestnut Foundation, South Burlington, VT

Sara F. Fitzsimmons, The American Chestnut Foundation and Pennsylvania State University, University Park, PA

The American chestnut (*Castanea dentata*) was once a species of great importance to eastern U.S. forests, providing food and shelter for countless wildlife species and supplying Appalachian mountain families with a reliable source of quality timber, tannin and a staple crop. Unfortunately, these benefits were lost during the twentieth century with the accidental importation of chestnut blight, caused by the fungus *Cryphonectria parasitica*. The compelling story of species collapse and restoration incorporates timely themes including forest stewardship and restoration, the benefits of planting native trees and plants, the perils of introducing exotic flora and fauna, and the ties between our forests and our cultural history.

The account of the American chestnut's demise and rebirth can serve as a springboard for hands-on efforts, involving a diverse volunteer base, to help a species in peril. The American Chestnut Foundation® (TACF®) was formed by professional scientists who developed and volunteered to guide a program of traditional backcross breeding, an approach not previously used for chestnut. Many portions of TACF's program are still run almost entirely by volunteers, allowing for unique perspectives and creative solutions that strongly complement professional efforts. To date, TACF volunteers and collaborators have identified and incorporated more than 750 wild American chestnuts in the breeding program, established approximately 500 planting locations and involved close to 250 cooperative partners in American chestnut restoration efforts. With a great reliance on volunteers and citizen scientists, TACF's program provides a model for the conservation and restoration of other forest tree species currently under attack.

Khanal, Mathura

NTFP knowledge of & utilization by locals around community forests in Nepal

Mathura Khanal, Dalit NGO Federation (DNF), Nepal

The study documents plant species used as Non-Timber Forest Products (NTFPs) and traditional knowledge on the utilization of these plant resources by local people around the Community Forests (CFs) in Kamere-Karchape and Madhuban of Arghakhanchi and Kapilvastu districts of Nepal between July and September in 2011. 41 households were taken as the sample size from both of the CFs and a variety of ethnobotanical and anthropological methods were applied; semi-structured interviews with traditional healers and elderly persons of the user groups, community forest maps, participatory observation and photography. A total of 103 plant species have been identified from both of the community forests. All identified plant species have medicinal properties along with other uses. Most of them have medicinal properties in their bark, root and fruits. A large number of these identified plant species are used for gastro-intestinal problems, rheumatism, chest infection, fever and typhoid. Medicine from these plant parts is prepared in the form of juice, paste and powder usually prepared by elder female in the family. Elderly persons and traditional healers of the areas pose vast knowledge on ethnomedicinal practices along with various rituals in comparison with the young generation. The knowledge transformation system is quite restricted within the family. Users were found very aware in conservation of NTFP's in their CFs and their interest are oriented towards NTFPs plant species which have high demand in market with high price and have multiple use value. Therefore, medicinal plants found in CFs are very important for curing diseases and ailments in remote areas where modern health facilities do not exist. It is not only essential to conserve such a wealth of information hidden among the local people but also to apply them to modern knowledge of science and technology to meet the ever increasing requirement of mankind.

Koter, Rosdi

Preliminary Assesments on The Growth of *Hevea brasiliensis* and *Gigantochloa albociliata* for Latex and Shoot Production Under Agroforestry System

Rosdi Koter, Forest Research Institute Malaysia (FRIM)

Abd Razak Othman

Hashim Md Noor

Ahmad Zuhaidi Yahya

Natural forests are no longer sustainable in supplying raw materials for wood based industry in Malaysia. Realizing this, Malaysian government under the Ministry of Plantation Industry and Commodity has promoted *Hevea brasiliensis* as one of the timber tree species to be planted on a commercial scale. Various incentives have been given for the forest plantation establishment. Majority growers ventured to this scheme are expected to intermediate income 9 years after planting from rubber tapping. Agroforestry is considered a suitable solution to help the farmers to get early income, Agrisilviculture, an agroforestry demonstration plots was established to determine the efficiency of the combinations between rubber and bamboo. The income from bamboo shoot is expected one year after panting. The project was officially launched in 2008. The project incorporates production technique using methods that combine both agriculture and forestry crops on piece of land to fully utilize the natural resources of light, water and nutrients in the agroforestry ecosystem. For successful integrations, consideration must be given to the selection of adaptable bamboo species, production and maturity cycle; and type of management systems to be adopted.

Megalos, Mark

Bridging the Climate Communication Divide between Agents and Small Forest Landowners in North Carolina

Mark Megalos, NC State University

Aaron Vuola, NC State University and Helsinki University

A December 2011 survey of North Carolina Cooperative Extension agents and faculty revealed gaps between the agent perceptions on climate change and their landowner audiences. The survey instrument followed the Global Warming's Six Americas methodology of Yale and George Mason Universities in a time series since 2008. The effort is part of a larger, five-year, regional climate mitigation and adaptation research and extension effort for planted pines in the Southeast entitled PINEMAP. Survey responses were used to baseline the current status of extension professionals related to climate change programming. Survey results indicate that a mere 14.4 % of North Carolina Extension professionals have participated in professional development/continuing education related to climate change, while the majority were willing to participate in such training (59.3%). Similarly, only 10.2% of responding extensionists had developed programming materials related to climate change, yet over 55% were somewhat willing to develop materials, workshops or incorporate global warming information into their work. Currently extension respondents "sometimes" use the following terms in their programming efforts (by percentage): climate change (29.3%), climate variability (21.9%) and global warming (16.5%).

When extensionists were asked to identify constraints to climate change programming nearly one-quarter indicated these primary factors as limiting their involvement a great deal (by percentage):

- Lack of audience interest (24.7%)
- Not enough applied information (24.4%)
- Lack of program funding (22.6%)
- Available information is conflicting (21.8%)

Overcoming limitations to extension climate variability programming with their forest landowner audiences and determining motivations for learning about a "no regrets" risk reduction strategy are discussed.

Raae, Karsten

Commercial Farm Forestry: It is All About Knowing How To Do

Karsten Raae, Danish Forestry Extension

The demand for wood and biomass is increasing.

We can't continue relying on tropical rain forests as a major source of supply.

Wood is a renewable resource.

Trees sequester CO₂.

Wood for energy production is considered CO₂ neutral.

Efficient tree growing on farms seems to be a part of the answer.

Trees as cash crop can often compete with traditional agricultural crops.

The major obstacles for farmers to be engaged in tree growing are lack of knowledge about how to do and the time span between investment and income.

Unclear and insecure tenure rights for forested land plays in bigger parts of the world an important role too.

The Farmer Field School (FFS) concept is a way to pass on knowledge. It is practised in many forms all over the world. Manuals and descriptions fitting the original concept on how to do are available for a number of agricultural crops.

In 2011 the first complete concept, based on FFS principles, dealing with commercial tree growing on farms has been developed and tested in Viet Nam.

A team of five carefully selected Master Trainers develop and conduct a four month Training of Trainers (ToT).

The participants in the ToT produce as part of the training, the plan and materials for how they will later pass on knowledge to motivated farmers in the villages where they live during weekly half day long sessions over a period of 5-6 month .

Zobrist, Kevin W.

Using Social Networks in Forest Landowner Education

Kevin W. Zobrist, Washington State University

The growing trend of social network use creates new opportunities for forestry educators in how they engage with their audience. The Washington State University Extension Forestry program is using social networking sites, particularly Facebook and Twitter, as part of a broad communication strategy. This effort has been largely successful in engaging more people, increasing interaction (including peer to peer interaction), and generating more interest in and awareness of Extension education programs. WSU Extension Forestry's experience with different social networking tools has yielded valuable lessons about how to effectively interact with landowners through social networking while maintaining professionalism and not significantly increasing workload.