

Forest Meets Farm: Profitable New Crops for Small Farms in Forested Ohio

Final Report for ENC01-056

Project Type: Professional Development Program

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Matching Non-Federal Funds: \$84,624.00

Region: North Central

State: Ohio

Project Coordinator:

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Rural Action, Inc.

Project Information

Abstract:

Rural Action conducted an initiative to increase the knowledge of natural resource professionals about forest cultivated crops (FCCs) and their motivation to include them in their educational activities. Two trainings were held for 70 participants, a binder of informational materials was compiled including a list of resource persons and publications on cultivation of different FCCs, materials on the cost of production were provided for ginseng and shiitake production, a new cost of production piece was developed for goldenseal, educators were networked, and various follow-up activities have been implemented, including an 80 person workshop on ginseng cultivation and development of educational publications by OSUE.

Project Objectives:

Objectives and Performance Targets

Year One Objectives

- 75 NRPs know the basics of 5 FCCs (including site requirements, labor needs, markets, and economic potential)
- 25 of 75 NRPs are interested in learning more about agroforestry
- 20 NRPs use information available on the list-serv or utilize a connection made with another educator as a result of our activities
- 30 of 75 NRPs feel FCCs are a useful development activity for part or all of Ohio
- 15 NRPs provide informational resources to growers relating to FCCs
- 50 NRPs feel they know where to go for information on FCCs
- 7 Foresters view FCCs as part of their job
- 5 Agency partners view the Roots of Appalachia Growers Association (RAGA) involvement in program development as helpful

Intermediate-Term Objectives

Within 12 months of the completion of the final training we anticipate:

- 3 FCC workshops organized or co-organized by persons trained in our PDP
- 15 forest management plans including understory species written by trainees

Within 3 years of the completion of the final training we anticipate:

- Responsibilities for FCCs being more than 50% of the time allocation for one or more state or regional specialists
- OSUE includes FCCs in training plan for new ANR agents in forested areas
- ODNR includes FCCs in training plan for new service foresters
- 1 or more FCC growers involved on OSUE advisory boards (zero now)
- OSUE responds to 30 landowner requests for information on FCCs

Long-Term Objectives

If we were to speculate we might look for, within 20 years:

- An agroforestry center run by OSU or NRCS in Ohio with 3 staff dedicated to training educators and addressing landowner agroforestry questions beyond the knowledge of county agents
- Non-timber forest products (FCCs in particular) in the curriculum for all introductory forestry classes in Ohio and as a separate stand-alone class offered to both forestry and agriculture students
- OSUE collaboratively working with non-profit community, grower associations and other non-traditional partners, with development of joint work plans where appropriate
- OSUE adoption of participatory or farm-based research as a core strategy for agricultural research (with 30% of the budget dedicated to these approaches)

Introduction:

Recent market trends have opened up marketing opportunities for producers of forest-grown medicinal herbs and other Forest Cultivated Crops (FCCs). The forests of Ohio, especially the Appalachian region, have prime microclimates for cultivation of these products, and landowners in the region are greatly in need of income. Furthermore, the cultivation practices for these crops in forested situations are typically organic and involve very minimal impacts on soil compared to conventional agriculture.

Unfortunately, natural resources educators, including foresters, extension agents and others, do not have knowledge of these crops and are not able to provide information to landowners. Furthermore, most are unaware of the economic potential that many of these crops hold and are therefore not motivated to learn more and include them in their management plans.

This project conducted literature review and development of new literature, developed a package of resource material for distribution to extension agents and foresters, and conducted networking and follow-up activities leading to increased institutional inclusion of these crops.

Education & Outreach Initiatives

Objective:

Description:

Methods

To carry out this project, we enlisted a variety of project partners and collaborators. At the onset of the overall project planning, we met with state-level personnel from Ohio Division of Forestry and Ohio State University Extension to gather their ideas on how to move forward. We then moved forward on planning for our first introductory training throughout the early part of 2002, which included developing and contacting a list of potential speakers, narrowing their topics for presentation, compiling a list of resources for distributing to the professionals, and many other tasks. We then publicized and convened the training, after which we conducted an evaluation to gather input from participants for our next training.

As part of the evaluation of the first training, and in anticipation of the second, we conducted a survey of first-training participants to see how they had applied what they learned, and determine what they felt would be most useful for the second training. Based on that input, and conversations with other forestry leaders, we moved forward on planning for the second training, which we decided to convene in association with our annual Landowners Conference, in order to add value to the professional training and allow for the additional learning opportunity afforded by the two-day weekend conference.

Participants at each training session received a binder full of useful information related to forest cultivated crops. For participants that came to the first training, but not the second, we sent out mailings that included new materials collected over the year between events.

Publicity for each training session was carried out through a variety of media. We sent out hundreds of brochures, sent email updates, and worked with project partners to get the word out.

In addition to the trainings that we convened during this project, we also attended professional meetings as part of our outreach efforts.

Outreach and Publications

Publications emerging from the project, completed or in progress

The resource binders are our most obvious publications that have emerged from this project. While some of the materials included in the binders are our original work, a large number of the resources have been compiled from elsewhere. We feel that this resource will be of great use to professionals, and allow them to answer many questions that they have through the years as they integrate FCCs into their work with landowners.

During the project period, we also developed a formal arrangement with the Ohio Woodland Journal to place FCC-centered articles in the quarterly publication, under a column called "Under the Canopy." To date, we have published articles about ginseng, goldenseal, and black cohosh. This arrangement allows us to reach both forestry professionals and landowners, especially those registered under the Tree Farm System.

As mentioned above, we are presently assisting Ohio State University Extension in completing a series of publications related to FCCs.

Finally, several press articles on growers we work with in Farm and Dairy and other publications of regional interest read by the farm community and landowners were published.

Outcomes and impacts:

Impact of the Results/Outcomes

Impact on farm production, the environment, family farms, etc.

Adoption of forest cultivated crops provides yet one more option for diversifying a farm production system. While most landowners will not develop full-time businesses by growing FCCs, the added income from sales of such crops can be very important to many families in the region. Supplemental income from FCCs can help pay property taxes, send the children to college, or provide for a bit more retirement income during the later years. The greater potential for additional income remains in value-added opportunities, which several growers are exploring and developing.

The environmental benefits of integrating FCCs into farm production systems relates to a large extent to the possibility of maintaining intact forests, while also garnering economic benefits from FCCs. As more landowners understand the potential of FCCs and integrate them into their farms, they see the importance of implementing best management practices during timber harvesting, so as not to degrade the productive capacities of soils and the forest in general.

FCCs also represent options that can involve the whole family in the farming enterprise, as cultivation does not rely on large equipment and hazardous chemicals. Hence, we hear many stories of growers who forge closer relationships with their children during their ventures in the forest as they cultivate their forest crops.

Demonstrable impacts to date

Ohio State University Extension developing FCC expertise

We are presently assisting Ohio State University Extension in completing a series of publications related to FCCs, providing further evidence that this formerly under-appreciated facet of forestry is fast making inroads as a viable addition to natural resources management. These publications include:

"Growing American Ginseng in Ohio: An Introduction"

"Growing American Ginseng in Ohio: Selecting a Site"

"Growing American Ginseng in Ohio: Site Preparation and Planting Using the Wild Simulated Approach"

We anticipate that future publications will diversify beyond ginseng to represent the full range of FCC options.

Inclusion of FCCs in mainstream forestry publication

We have further expanded our ability to reach both the professional forestry community and landowners through a quarterly FCC-centered column, "Under the Canopy," in the Ohio Woodland Journal. Published by the Ohio Tree Farm Committee, this publication has a distribution of over 5,000.

Inclusion of FCCs in National Tree Farmer Convention in Ohio, Fall 2003

At the request of the event organizers, leaders in Ohio's forestry community, we will be participating in the National Tree Farm Convention, to be held October 2003 in Columbus, Ohio. We will be conducting an FCC demonstration planting at the Convention, and will be hosting a tour at our 68-acre Research and Education Center in southeast Ohio.

Impacts expected from project in future

Reaching thousands of landowners

The two first professional trainings were a great first step toward institutionalizing forest cultivated crops in the state natural resources agencies and private forestry community. Together, they reach thousands of landowners.

Diffusion of FCC information throughout professional community

Through interacting with their peers, we anticipate participants to facilitate a slow

but sure diffusion of innovation related to the great opportunity offered by forest cultivated crops.

Passing the FCC baton

FCCs remain especially suited to the region's small-tract forestland owners, and interest continues to grow by leaps and bounds. Our work to promote FCCs and develop an FCC industry that builds on the natural and cultural assets of the region has been strengthened greatly through this process. We have been providing FCC-related technical assistance to landowners, and look forward to passing the baton to our professional counterparts, including Service Foresters, County Extension Agents, and private consulting foresters.

Project Outcomes

Project outcomes:

Results and Discussion/Milestones

Introductory Training in May 2002

In May 2002, we held our first training, which was a 2-day session including a day-long series of presentations by FCC specialists, followed by a field day to visit herb cultivation sites to see the plants growing in their native habitat with the indicator plants that help identify suitable growing sites. This "overview of FCCs" training was attended by fifty natural resources professionals, including individuals from Ohio State University Extension (county agents and a variety of specialists), Ohio Division of Forestry (mostly State Service Foresters), a Hocking College professor, several consulting foresters, a few grower-educators, and a few landowners. This was a good mix of professionals from different backgrounds that enriched the networking opportunity afforded by the training.

Specific topics covered during the first day included:

-- an overview of the history and economic opportunity of FCCs and a discussion of farm diversification, the herbal nursery trade, organic production of herbs, herb marketing, site selection using indicator species, and value-adding opportunities (presented by Edward Fletcher of Strategic Sourcing, Inc, a North Carolina herbal products company)

-- more focused presentation about American ginseng, including cultivation methods, site selection, economic opportunities, and marketing methods (presented by Andy Hankins, Virginia's Alternative Agriculture Extension Specialist, and Greg Duskey, a grower-educator from southeast Ohio and proprietor of the Wild American Ginseng Company)

-- two presentations about other FCC opportunities, including pawpaws and mushrooms (presented by Chris Chmiel, a pawpaw specialist and proprietor of Integration Acres, a company that produces value-added specialty foods items; and George Vaughn, a mushroom specialist, and proprietor of Mushroom Harvest, a company that provides gourmet mushrooms to restaurants and spawn and growing equipment for other mushroom growers)

Building on the information-rich first day, we then followed up with a day of field tours to teach plant identification and site selection. We visited the National Center for the Preservation of Medicinal Herbs, a 68-acre forested farm in Meigs County, dedicated to researching best practices related to cultivation of medicinal herbs. We then toured United Plant Savers' nearby plant sanctuary, where we also heard from Paul Strauss about the importance of considering understory plants when

developing forest management plans and conducting timber harvests.

To enable participants to dig deeper and build on the training, we provided each participant with a resource binder packed full of FCC information, including contact lists for FCC specialists, a bibliography of FCC resources, and articles and briefing sheets that provided more in-depth information about a variety of species.

Advanced Training in June 2003

In June 2003, we followed up the successful two-day introductory training with an advanced training focused on the marketing of FCCs - of crops themselves, value-added ideas, and group marketing opportunities. Additional topics included how FCCs relate to agroforestry, and approaches for integrating FCCs within overall forest management frameworks.

Marketing of FCCs

To cover marketing, we brought in Steven Foster, world-renowned authority on medicinal herbs, and Jim Freed, Special Forest Products specialist for Washington State Cooperative Extension Service. Foster discussed the scope, scale, and trends of the medicinal herb market, while Freed discussed innovative approaches to marketing (including how to sell small scale, cooperative marketing, and florals and crafts).

How FCCs relate to agroforestry

Bruce Wight, NRCS Lead Agroforester at the USDA National Agroforestry Center in Nebraska discussed how FCCs relate to agroforestry in general, explained related cost-share and income opportunities, and discussed ways of incorporating FCCs into riparian forest buffers.

Integrating FCCs into overall forest management

Russ Richardson, private forester and President of the Woodland Owners Association of West Virginia, shared his experience and perspectives related to integrating the understory with timber management.

We ended the day-long series of workshops with a facilitated discussion focused on developing ideas for increasing FCC cultivation and management in the region. This discussion pointed to the need for more demonstration sites that highlight ways that FCCs can be integrated within the overall context of forest management (i.e. with timber production).

We rounded out overall experience of the professional trainees by designing a FCC-focused track of workshops at our 5th Annual Landowners Conference (held during the two days following the Advanced Professional Development Training).

Workshops included much of the same content covered during the first training (introduction to ginseng cultivation, herb identification hikes, etc.).

As with the initial introductory workshop, we also provided a resource binder of FCC-related materials for the professionals at the advanced training. For individuals who attended the first training, we provided an update packet with materials collected over the year between the two trainings. For individuals who attended the initial training, but not the second, we mailed out the updated packets for them to add to the resource binder that we provided the year before.

Summary of Overall Results

Year One Objectives

- 75 NRPs know the basics of 5 FCCs (including site requirements, labor needs, markets, and economic potential): All participants have learned key information about of ginseng, goldenseal, black cohosh, shiitake, paw paws as well as other FCCs
- 25 of 75 NRPs are interested in learning more about agroforestry: Evaluations were

very positive and a number of persons returned for the advanced training. We anticipate that more than 25 have a significant interest

- 20 NRPs use information available on the list-serv or utilize a connection made with another educator as a result of our activities: We did not evaluate this
- 30 of 75 NRPs feel FCCs are a useful development activity for part or all of Ohio -- Based on evaluations we feel we met or exceeded this benchmark
- 15 NRPs provide informational resources to growers relating to FCCs: While we did not do a follow-up survey we feel we likely met this objective
- 50 NRPs feel they know where to go for information on FCCs: Based on the evaluations of our activities we feel we met this objective
- 7 Foresters view FCCs as part of their job: More than 7 foresters participated and evaluations indicate we met this
- 5 Agency partners view the Roots of Appalachia Growers Association (RAGA) involvement in program development as helpful: While we do not have specific data we did see 2 workshops involving RAGA members as presenters, which indicates perception of their value

Intermediate-Term Objectives

Within 12 months of the completion of the final training we anticipate:

- 3 FCC workshops organized or co-organized by persons trained in our PDP: Partners in OSU Extension have indicated that FCCs will be integrated into their future programming
- 15 forest management plans including understory species written by trainees: We anticipate this being exceeded

Recommendations:

Potential Contributions

Farmer Adoption

Extent to which farmers have adopted production methods/systems

Hundreds of landowners are showing interest in adopting wild-simulated FCC production systems. Our annual Landowners Conference is growing every year, with a FCC focus. The 2002 ginseng conference, co-sponsored with OSU Extension, was a standing-room only event. Dozens of attendees of each event followed up by ordering planting stock from us.

Number of farmers reached

Rural Action reached roughly 800 farmers over the project period but the number of farmers reached by educators has not been documented. That would require an extensive process by which we contact the educators' clients. We know that each educator should reach 100 producers annually on average, and with over 70 participating in our workshops, that would be 7,000 annually. Not all will be interested in forest cultivated crops, but if even 5% were over the next 5 years that would be 1,750. The fact that private consulting foresters participated in both trainings indicates that there is a significant interest among their client bases and thus their rate of FCC-related visits is probably fairly high. We also know that workshops conducted by OSUE educators stimulated by our efforts have reached 100 persons, in particular through our partnership on a large ginseng workshop.

Future Recommendations

Areas for future research, demonstration, training

Training activities reached a significant but not overwhelming number of natural resources educators in Ohio. Further professional development activities will likely

be needed to reach other educators who have not yet been reached. Some who were not interested in this early round of training may well be interested as they hear from their colleagues how what they have learned has been useful in meeting landowner demand for information about these products. Often foresters, in particular, will not get questions from landowners about non-timber products as landowners assume the foresters are only knowledgeable and interested in the trees. As foresters become more knowledgeable they will likely hear more questions from landowners, which will increase foresters' interest in learning more.

Ways project could be expanded/taken in different direction

Participants indicated a strong interest in developing a robust network of demonstrations sites that show examples of how forest-based crop cultivation can be integrated within an overall forest management framework that includes timber harvesting. Most professionals also indicated a strong interest in trainings that involve a majority hands-on component.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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