

# Silviculture and Nontimber Forest Products: Extending The Benefits Of Forest Management

by

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Jackie makes birch bark and sweet grass baskets, stitched with spruce root. Her work is so fine that a New England folklife institute has recognized her as a master basketmaker. Nora and Lawrence earn a very modest income selling mushrooms and other wild foods to upscale restaurants. A good part of their own food and medicine also comes from the woods, wetlands, and open spaces. Linda keeps up with the locations that her logger husband and son work so that two to three years later she can pick berries in these sites. Known collectively as nontimber forest products (NTFPs), these edibles, medicinals, craft materials, etc. are small but important parts of the livelihoods and lifeways of some who live in and around northeastern forests. The folks who depend upon them are constantly on the lookout for sources of the plants that they use.

People have

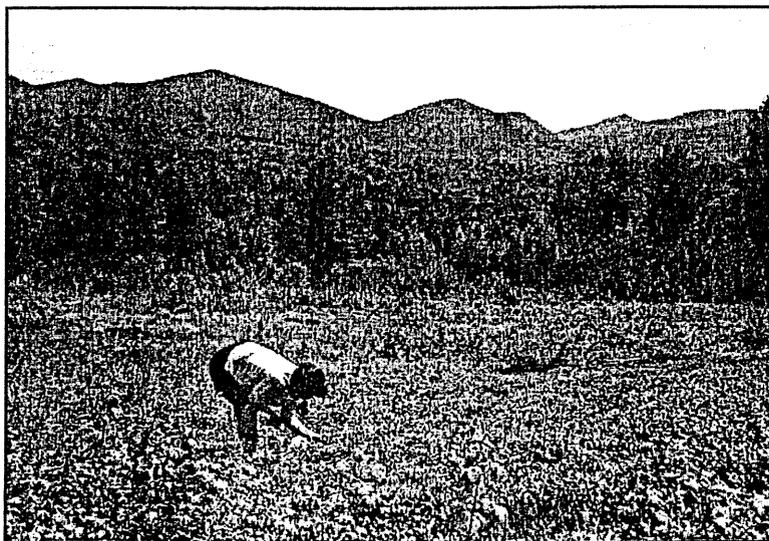
long managed our northern forests to ensure a supply of the NTFPs they rely on. Including NTFPs in silvicultural systems today can provide benefits that are largely overlooked by contemporary forest management. These include:

**Community good will, support for forest management.** Industrial forest landowners have long known that providing benefits to the surrounding community builds good will. Managers of public forestlands are charged with providing benefits to all

citizens. Explicitly incorporating NTFPs into silvicultural plans and considering ways to make them available can increase the numbers of people who benefit from and, consequently, support both public and private land management.

**Additional forest resources.** Private landowners may find that they enjoy using many resources from their forest. Sharing knowledge and harvesting experience with children and grandchildren can create an incentive to keep land forested and in the family.

**Potential income.** Incorporating NTFPs into silvicultural strategies may also help with the persistent challenge of providing income for landowners between timber harvests. While the claims for income potential from NTFPs are frequently overstated, they can provide modest income streams.



*The Green Mountain National Forest actively manages 60 acres for blueberry production. This free-for-personal-use area is visited by hundreds of families each season.*

**Appreciation of forested landscapes.** NTFPs connect people to forests in new ways. A walk in the woods yields previously unsuspected information (and treasures) as you begin to observe relationships between the seasons, weather, plant communities, site characteristics, and land use history in finer detail.

### **Incorporating NTFPs Into Silvicultural Systems**

A silvicultural system is the series of treatments that are conducted over the life of a stand to achieve landowner goals. In terms of NTFPs, silvicultural treatments can be divided into two categories: 1) those that have other objectives, such as timber or wildlife habitat, but affect NTFPs, and 2) those that are related directly to NTFP management. A timber harvest that removes the entire overstory, setting up the conditions for germination of light-loving fruit species like pin cherry and raspberry but eliminating edible mushrooms that depend on mycorrhizal relationships with host trees would be an example of the first. The latter include treatments like prescribed burning to maintain blueberry fields. To include NTFPs in silvicultural systems, a landowner or land manager needs the answers to a number of questions:

- What plant materials are gathered in your area?
- Who gathers them?
- How are they used?
- What is their market or household value?

- When are they harvested?
- How are they harvested?
- Where do they generally occur?
- What are their life cycles like?
- How do they respond to disturbance?

Answers to the first several questions will help you identify the NTFPs that might be included in your silvicultural system and the benefits you can most reasonably expect from them. Responses to the last five questions are needed to plan the type and timing of treatments for NTFP objectives.

Unfortunately there is no comprehensive reference on NTFPs and silviculture. You will have to seek out information that is distributed across many sources and media. The USDA National Agroforestry Center and some state extension services have information on NTFPs that show potential as income sources for landowners. Often these focus on agroforestry systems for products with current or developing markets such as maple syrup, wreaths, and ginseng. Online sources can provide rapid access to information on NTFPs. (See the list of selected websites, page 12.)

However, the best place to start is with people who gather NTFPs. Conversations with gatherers can provide answers to a lot of the key questions. People are often pleased to share what they know, provided they do not fear that the information will be used to their detriment. A gath-

erer may be especially interested in talking if there is an honest possibility that the silvicultural plans will give them increased access to something that they harvest. Long-time gatherers especially can have a wealth of first-hand knowledge about the site characteristics, plant association, and weather conditions associated with the things they gather. Be prepared to hear some strong opinions about the effects of disturbance and harvesting on the species they collect.

NEFF has experimented with some non-timber forest products as an alternative cash crop to provide income between timber sales. NEFCo Forester Charlie Baylies has used two of our forests in northern New Hampshire to grow shiitake mushrooms and the medicinal plants American Ginseng, St. Johnswort, and Goldenseal. His results have been varied.

Charlie has been very successful growing shiitake mushrooms on a variety of hardwood logs. They can retail for as much as \$10 per pound. Goldenseal was highly successful with little pest damage. Ginseng was found to be more economical for beginners to grow from seed rather than planting rooted stock but showed potential. St. Johnswort sown into a groundcover of Japanese Millet for weed control also produced a good crop of plants.

For more information, please contact Charlie Baylies at (603) 837-2680, e-mail at [eco\\_man@ncia.net](mailto:eco_man@ncia.net), or on the web at [www.teamebm.com](http://www.teamebm.com).

The local community is obviously an important place to begin identifying who gathers what in the vicinity of your forest. However, gatherers sometimes do not live year round in the area. Urban residents sometimes travel long distances to gather NTFPs for personal use or commercial sale. Residents of one rural area may travel to another to find a product that they use. Seasonal residents may collect berries and other items as a recreational activity. It is important that forest managers consider both local and extra-local gatherers in their NTFP plans.

Loggers and other on-the-ground managers often harvest NTFPs and have family or friends who also do. Local fairs are good places to find crafters and artisans who gather some or all of the materials they use. Folks at local civic events such as volunteer fire department suppers and church bazaars will probably know community members who gather. Harvesters who come from a distance may be known at local diners

and markets where they buy food and supplies. Nonprofit cultural and social services organizations can be helpful in contacting immigrant communities that include gatherers. Tourist destinations can be good places to find recreational harvesters. Tribal organizations can provide insights into the importance of NTFPs for their members.

Face-to-face conversations in comfortable locations are always the most conducive setting for talking to gatherers. Remember that folks are doing you a favor. Let them know that you appreciate their time and understand that there may be information they don't want to share with you. A little respect goes a long way with gatherers, whose knowledge is not often appreciated.

Obviously, the first decision to be made is which products you would like to include in your silvicultural system. If you plan to manage actively for NTFPs, we suggest that you start small and scale up as you learn from experience. You

must also decide whether your goal is community good will, resources for personal use, income, better understanding of forest dynamics, or some combination of these. Products with an existing market offer the best opportunity for income. However, experience around the world suggests that you should be wary of new high-value markets. They have a nasty habit of following classic boom-bust patterns. Demand for your NTFP material will depend largely upon a product's economic uses and the numbers of people who gather it. In general, the volume will be greatest for materials that are used in value-added products with national and international markets. The higher the market value of the product, the greater the number of gatherers will likely be. Volumes will be smallest for raw materials used by isolated cottage businesses and for personal use by a few people, whether just your own family or others who rely on NTFPs for material and cultural survival.

If you are going to make NTFPs available to other people, it will be especially important to plan for mutually beneficial terms of access. Depending upon a product's economic uses and landowner objectives, there is a range of ways to make NTFPs available to the folks who gather them. Through conversations with gatherers you should be able to determine whether the level of demand and social, cultural, or ecological sensitivity merit the expense and logistical efforts of a formalized program. If such a program is warranted, it will be most

### **Useful NTFP Websites**

**U.S. National Plants Database**  
<http://plants.usda.gov>

**Provides photographs, distribution maps, brief descriptions, botanical classification information, and references for many species used as NTFPs.**

**Ethnobotany Database**  
<http://www.umd.umich.edu/cgi-bin/herb>

**Catalogs the wild plant uses of Native Americans reported in scholarly texts.**

**Virginia Polytechnic Institute Special Forest Products website**  
<http://www.sfp.forprod.vt.edu>

**Features commercial uses of NTFPs from local crafts to internationally marketed commodities.**

**Institute for Culture & Ecology Non Timber Forest Products website**  
<http://www.ifcae.org/ntfp>

**Contains conservation and development information on recreational, commercial, and subsistence extraction of NTFPs.**

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effective if it is developed through a collaborative effort with gatherers. Non-industrial private landowners may find that access by permission is the best system for them. You may allow gatherers to come on the land and harvest for free or in exchange for any number of goods and services, which could include teaching the landowner about NTFPs, some portion of their harvest, or a craft or foodstuff made from the NTFP. Permits or leases are an option for any type of landowner looking for income from NTFPs. However, care should be taken to set reasonable prices. The dollar return on NTFPs increases exponentially from the woods to the point of final consumption. The retail value bears little relationship to the payment received by

gatherers, who typically earn less than minimum wage when all their expenses and time are calculated. Pricing long-term gatherers out of access to NTFPs sets the stage for enforcement difficulties and community resentment.

Including NTFPs in silvicultural plans adds a new set of potential benefits to the ownership and management of forestlands. It can provide new opportunities for neighborliness and good community relations. Landowners may find great enjoyment in being able to turn to their woods year after year for resources that they can use personally and share with family and friends. If both expectations and forests are managed wisely, NTFPs can provide modest income streams to land owners.

On rare occasions, there may even be a possibility of substantial income. A warning is in order, however. Once discovered, NTFPs tend to become a fascination if not an obsession.

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