



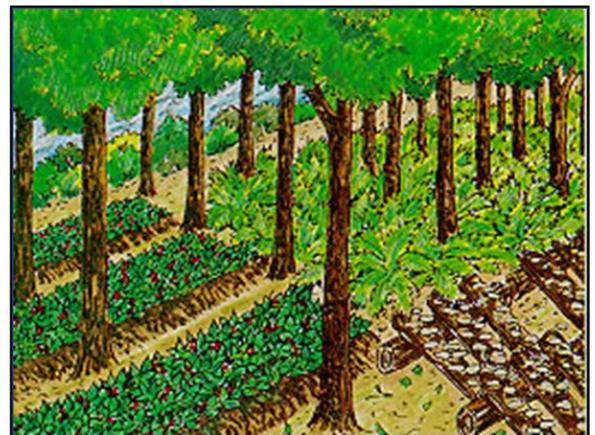
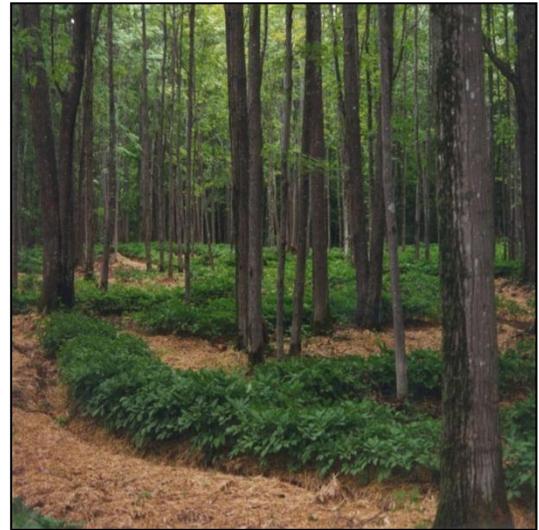
## AGROFORESTRY IN MINNESOTA FACTSHEET SERIES #2

# Forest Farming

### WHAT IS FOREST FARMING?

Forest farming is cultivating high value specialty crops under the protection of a forest canopy that has been modified to provide the optimal level of shade necessary for the optimum growth of the crops. In other words, it is the intentional and sustainable cultivation of marketable non-timber forest products (NTFPs) in woodlands with suitable shade and site conditions. This agroforestry practice a) diversifies forest management and enhances associated income opportunities, and 2) improves forest composition and structure and long-term health, quality, and economic value.

Forest farmers actively monitor and manage interactions between trees and understory crops with long-term forest health and productivity in mind. Both timber and non-timber crops can be managed on the same forested land, or non-timber crops can be grown in forests where timber harvesting is not possible or desired.



### Benefits

- Enhance forest health
- Improve forest composition
- Improve timber quality
- Diversify income opportunities
- Profit from the rising popularity of forest farmed products
- Great animal habitat

### Challenges

- Informal or immature markets
- Variable yield
- Limited information available on how to produce crops
- Volatile markets for some products
- Some crops attractive to poacher

## CROPS FROM THE MINNESOTA FOREST

Fruit	Medicinal Herbs	Nuts	Woody Florals	Other Products
currants	ginseng	Black walnut	Willows	Syrups
elderberry	bloodroot	hazelnut	Dogwoods	honey
blackberry	burdock	beechnut	Holly	mushrooms
raspberry	catnip	chestnuts	Red Birch	pine straw
				ferns



Above: Dutchman's Breeches, Shiitake Mushrooms, and Black Walnuts are all examples of forest farmed products.

## DESIGN

A successful forest farming system should have a forest management plan based on the owner's objectives, resource inventory and business plan. In order to achieve optimal light conditions in the forest, thinning will need to be done in your woodland or plantation. Typically, landowners keep the best quality trees that create a canopy that is not fully shading the understory and can later be sold as timber. Your design will be determined by your objectives. When designing forest farming, consider the following factors when assessing suitability of the site for the practice:

- Soil pH, organic matter, mineral nutrients and drainage
- Land formation (slope, aspect, erosion, surface drainage)
- Precipitation, temperature, overstory canopy cover
- Existing forest vegetation
- Pests, pathogens and beneficial organisms.

## MARKETING

Marketing your product is the most important aspect of having a successful business. Before beginning your forest farming endeavor, you must assess markets and see how much demand there is for the product(s) you would like to sell.

### Two Examples in Minnesota

**Herbal Turtle Farms** is a family run farm in Winona, MN specializing in forest grown mushrooms and Specialty herbs. Herbal Turtle currently cultivates Shiitake, Winecap, and Oyster mushrooms and is certified by the University of Minnesota and the Department of Agriculture to forage and sell wild mushrooms.



*Left: "We do what we do because we are interested in trying to find a better solution for our agriculture system," says Bryan Crigler, Co-owner. Right: Co-owner Katelyn Foerster inoculating logs.*



**Camp Aquila Maple Syrup** began in early 2000. The owners had Department of Natural Resources employees give the Petersons ideas for what to do with their forested property. The decision came to maple syrup production as their land was already full of Sugar Maple Trees.

Stu and Corrine Peterson tap over 1200 Sugar Maple trees on 150 acres. They produce over 200 gallons per year with a gravity collection system and a wood fired elevator. They have won several awards including first place at the MN State Fair in 2011.



### ADDITIONAL RESOURCES

<http://www.extension.umn.edu/environment/agroforestry/>

<http://nac.unl.edu/publications/agroforestrynotes.htm>

<http://www.centerforagroforestry.org/pubs/>

[http://nac.unl.edu/documents/workingtrees/infosheets/WT\\_Info\\_forest\\_farming.pdf](http://nac.unl.edu/documents/workingtrees/infosheets/WT_Info_forest_farming.pdf)

## NEED MORE INFORMATION?

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## PHOTO SOURCES

Center for Agroforestry - University of Missouri; National Agroforestry Center; and University of Minnesota Extension