



Extension FactSheet

School of Natural Resources, 2021 Coffey Road, Columbus, Ohio 43210

Forest Management Developing a Plan to Care for Your Forest

Randall B. Heiligmann
Extension Specialist, Forestry

What Is Forest Management?

If you were to ask a forester to define forest management, he/she would probably tell you something like: “Forest management is the application of appropriate technical forestry principles, practices, and business techniques (e.g., accounting, cost/benefit analysis, etc.) to the management of a forest to achieve the owner’s objectives.” Stated more simply, forest management is providing a forest the proper care so that it remains healthy and vigorous and provides the products and the amenities the landowner desires. Forest management is not so much a subject or a science as it is a process. Think of it as the development and execution of a plan integrating all of the principles, practices, and techniques necessary to care properly for the forest.

The Planning Process

This planning process includes careful identification of landowner objectives, inventory of resources, development and implementation of the management strategy to be used, and periodic re-evaluation of the implemented strategy.

Identify Landowner Objectives

The first step in developing a management plan is to identify landowner objectives — what products and amenities does the landowner wish to obtain from the land. It is imperative that these objectives be identified at the beginning because they determine what resources should be inventoried and define the goal of the management plan. Table 1 lists some examples of forest landowner objectives.

Some landowners may be interested in emphasizing only one management objective. They might, for example, be interested in maximizing the net financial return on investment through timber yield, or they might wish to develop the forest primarily as wildlife habitat. Management such as this, which emphasizes a single resource objective, is called dominant-use management.

The forest can and will provide other products and amenities as it is managed (e.g., cuttings to enhance wildlife habitat will yield timber and/or income), but the management plan is developed to enhance or improve one (dominant) resource.

Most forest landowners, however, are interested in obtaining more than one product or amenity from their forests. They might, for example, desire income from timber harvest, wildlife habitat enhancement, and the maintenance of aesthetic quality. Forest management designed to enhance or produce more than one product or amenity is called multiple-use management. It is important to note that multiple-use management does not require that every acre of the forest be managed for every desired product or amenity, but rather that the forest as a whole be managed in such a way that it yields the desired mix. In the example given previously, some areas might be managed primarily for timber with aesthetic considerations, while on other acres specific practices are undertaken to enhance wildlife habitat.

Resource Inventory

Once ownership objectives have been defined, resources can be inventoried. Obviously, the tree/forest resources will be inventoried and such forest characteristics as tree species, con-

Table 1. Examples of Forest Landowner Objectives

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|-----------------------------|------------------------------|
| • Source of Income | • Speculation |
| • Tax Shelter | • Inheritance |
| • Product Yield | • Security |
| • Soil Stabilization | • Wildlife Habitat |
| • Aesthetics | • Recreation |
| • Preservation | • Increase Species Diversity |
| • Pride & Self-Satisfaction | • Exercise/Hobby |
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dition, numbers, age, volume, value, growth, and basal area will be measured. Soil/site quality will be evaluated to determine what the site can produce. Depending on ownership objectives, other resources may be inventoried such as boundaries, wildlife, wildlife habitat, streams, trails, roads, campsites, vistas, and easements. Inventory data are analyzed to determine what is present and what the forest site is capable of producing.

Develop and Implement the Management Strategy

Based on the inventory analysis, one or more management plans are then developed to achieve the ownership objectives. These forest management plans are based on and limited by what is biologically/ecologically possible on the area, what is economically and organizationally feasible, and what is socially and politically desirable.

The biological/ecological characteristics of the forest (e.g., tree species, soil type, topography, etc.) determine what is possible on the area, including such things as which tree species will grow, how fast they will grow, what wildlife will live on the area, etc. Based on the biological/ecological characteristics of the site, silvicultural practices can be prescribed to achieve ownership objectives. Silvicultural prescriptions are treatments designed to manipulate forested land such as various kinds of timber cuttings, tree plantings, prescribed burning, and the use of specific chemicals such as herbicides and fertilizers.

Economic/financial considerations may determine which activities are feasible. If economic/financial objectives are important to the landowner, then silvicultural activities undertaken must not only be biologically/ecologically possible, but also must contribute positively in the appropriate economic/financial analysis.

As an example, fertilization of most hardwood woodlands in Ohio would result in an increase in total growth — it is ecologically possible and produces positive results. However, if the cost

of the fertilizer was invested in a certificate of deposit, it would increase in value more than the forest will as a result of the fertilization. Therefore, if economic/financial return is an important ownership objective, fertilization is not an attractive silvicultural alternative.

On the other hand, there may be activities in which the landowner is willing to invest with little or no expected financial return because of the expected non-financial returns. These might include such things as the development of hiking trails, vistas, or wildlife habitat.

Similarly, limited financial or organizational resources may restrict management activities in a woodland. Obviously, if a landowner does not have the financial resources or labor to accomplish desired activities, they won't be done.

Finally, management activities are constrained by what is socially and politically desirable. Activities that violate the law are obviously unacceptable, and activities that upset neighbors are generally not prudent.

The careful development of a forest management plan in consultation with a professional forester is essential if landowners are to achieve their desired ownership objectives. The forest management plan is the blueprint of activities for caring for the forest. It is important to remember, too, that the management plan is not "cast in stone," but is an evolving plan that should be periodically reviewed and updated.

Review the Management Plan

Changes in ownership objectives, forest inventory, technology, and/or the business climate can all result in the need for modification of a forest management plan. In Ohio, intervals between periodic reviews and updates should probably be no more than five to 10 years and more often if recommended by a forester.

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