



UI Extension Forestry Information Series

Plant Health Care: Common Sense Forest Management

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Our forests are valuable, long-term resources that benefit from long-term care. As young children, we pay our first visit to the dentist and continue dental care throughout our lives. We practice dental *preventative health care* to avoid painful and costly dental problems. As with our dental health, the health of our forests can also benefit from a *preventative care* approach. Plant Health Care (PHC) management systems focus on all the components that make up a healthy forest. PHC is composed of frequent monitoring, early detection of problems, preventative care, and integrated treatments to provide long-term solutions to forest problems. A healthy forest is the best prevention for many insect and disease problems, erosion, and declines in water quality, fish and wildlife habitat conditions, and soil fertility.

How does a forest landowner adopt a PHC management approach? If you do not have a forest management plan, or if the site inventory is outdated or incomplete, this should be your first step. A good site inventory should consider all the biological and physical parts of the ecosystem including:

- a good map of the area;
- the location and species of all plants and animals found in a particular area;
- climate-related factors that influence plant performance: temperature extremes, light conditions, wind, and precipitation levels;
- topography and soil texture, structure, depth, reaction, and fertility. Check with your local Natural Resource Conservation Service office for your county's soil survey;
- a determination of the likelihood of site-related injury or disease problems.

With this information in hand you are ready for the next step - *scouting*. Take a walk through your forested land. Are there erosion problems? Do you see any insect and disease problems? Are fuel loads reaching a point where they could cause a small burn to become a wildfire? Record existing and potential problems (ex: a neighbor with bark beetle problems that could spread to your property). As with visits to the dentist, once is never enough. Continue scouting whenever possible. Record problems encountered, environmental conditions, and the effects of past treatments. Keep this log with your forest management plan to establish a history of your forest.

Your scouting may reveal some problems. Correct diagnosis of forest problems is essential. Improper diagnosis can lead to improper treatment, which can result in new problems. Identifying insect and disease problems can be tricky, and professional help from a qualified forestry or nursery professional is often needed.

Treatments to control diagnosed problems fall into 3 categories:

1. *Cultural Controls* - sanitation (hand removal of pests/diseased plant parts, and proper disposal), pruning, fertilization, thinning, and crop rotation.
2. *Biological Controls* - natural enemies of specific pests (parasites, predatory insects, etc.), microorganisms, and biological management such as cover crops.
3. *Chemical Controls* - pesticides, natural products such as horticultural oils and soaps,

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and other natural chemicals like pheromones, growth regulators, and juvenile hormones.

PHC control strategies combine of the above tactics to obtain more thorough, long-lasting results.

In summary, Plant Health Care is a management system for your land that provides effective, economical and environmentally sound approaches to maintaining forest health and vigor. By practicing preventative health care on your land, you can avoid many

common forest health problems and help prevent drastic changes caused by severe insect, disease, or fire damage.

This information first appeared in Woodland NOTES, Vol. 4, No. 2.

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