Committee on Resources

Witness Testimony

Testimony on Resident Exotic Plants and Pests Threatening the Health of the National Forests
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Summary:

Rather than focusing on individual pests of concern, our ability to minimize the impact of exotic pests on forest health in Vermont, including on the Green Mountain National Forest, would be enhanced by an ongoing, stable forest pest management program including:

- Continued support for State and Private Forestry's Forest Health Protection units.
- Enhanced staffing of forest pest management at Northeastern Forest Experiment Station research laboratories.
- Continued commitment to detection through the National Forest Health Monitoring program.
- Immediate eradication of new pests.
- Emphasis on impact assessment and management of established pests.
- Flexible workloads so that federal research and management can address new issues as they arise, set priorities based on local needs, and focus on both high and low profile pests.

Background

Vermont's Forest Land Base

Vermont is eighty percent forested. Five percent of the land is in federal ownership, primarily the Green Mountain National Forest. Three quarters of the land belongs to non-industrial private landowners. Nearly half of the trees in the state are maples.

Forest Health Protection in Vermont

Vermont Division of Forestry provides forest health protection services on state and private lands with substantial funding and technical support from the US Forest Service State and Private Forestry. State and Private Forestry also provides coordination between states, produces publications for distribution, and provides leadership for forest health monitoring and pest detection efforts. It has been extremely responsive to changing needs.

Information on developing pest problems has historically been provided by forest pathologists, entomologists, and research foresters in the northeastern US and eastern Canada. We have had excellent

cooperation from both the Northeastern Forest Experiment Station and local land grant universities. However, due to declining federal funds, reduced staffing, and the fact that existing researchers are often tied to the current hot topic, it is increasingly difficult for research to respond to changing pest problems.

Health protection on federal lands is provided by State and Private Forestry, with some participation by National Forest and state personnel.

The State of Vermont has put a high priority on forest health protection, including early participation in forest health monitoring programs, high staffing levels, and a variety of pest detection and management efforts.

Exotic Pests in Vermont

Exotic pests are biological pollution; once established, they're here for good. They limit possible future conditions of the forest, cause growth loss and mortality, induce forest type changes, threaten biodiversity, and reduce opportunities for shipping forest products.

Exotic pests have caused substantial changes to some Vermont tree species (chestnut blight, butternut canker, beech bark disease, Dutch elm disease). Other widespread exotic pests are locally significant, but the host species remain largely healthy (pear thrips, birch leaf miner, gypsy moth, larch case bearer and balsam woolly adelgid). Many exotics which are established rarely occur in outbreaks, and have impacts similar to native pests (European pine sawfly, lecanium scale, scleroderris canker, satin moth). Some are of concern primarily when regeneration is desired (buckthorn, honeysuckle, white pine blister rust). Others, while already introduced to the United States, are not known to occur in Vermont (Asian longhorned beetle, hemlock woolly adelgid, pine shoot beetle).

Issues Related to Exotic Pests in Vermont

General Recommendations

Maintain a stable, decentralized forest health protection program. Spreading diseases and insect outbreaks lend themselves to crisis funding, forcing scientists must jump on the current bandwagon, ignoring other issues. A stable program allows specialists to develop expertise in the local resource, develop links with the public, and be on site when a crisis develops.

Continue to provide interstate and international coordination. State and Private Forestry provides a means for states to have a uniform program for dealing with exotic pests, instead of a developing programs independently. Additionally, the federal government is the appropriate level for dealing with our Canadian neighbors who share many of our exotic pest concerns.

Preventing Spread

Identify foreign pests which threaten our forests. As global trade increases, so does the chance for accidental introductions. Communication with pest specialists from similar climatic zones will help focus exclusion efforts where they will do the most good.

Continue attempts to eradicate new introductions. Eradication costs dwarf losses caused by even a minor pest over a widespread area . Eradication also reduces the need for pesticide use in the future.

Increase the federal role in slowing the spread of introduced pests. Uniform quarantine regulations would improve compliance during interstate shipment of plant materials and forest products. Federal review would discourage use of quarantine regulations to provide commercial advantages.

Detecting Pest Problems

Strongly support forest health monitoring. The main components of the national forest health monitoring program are detection plots and off-plot detection surveys. Although the program has experienced some growing pains, health monitoring is one of the most important things we do. It can detect species at risk, and provide information on the impact of established pests.

Emphasize public information to support detection efforts. Looking for exotic pests is like looking for a needle in a haystack. The more eyes we have looking, the more likely we are to find a problem. Education also provides awareness, which slows down the movement of pests.

Managing Established Exotic Pests

Restore funding for forest pest research. We lack flexibility to respond to new pests and changing issues. Currently, many of the remaining scientists are tied to a single pest. Research priorities have been established by headlines and "big bugs".

Place a high priority on determining the impact of established insects. Impact research requires multi-year commitments, but helps managers prepare for new pests, and helps prioritize research and control efforts.

Obtain local input on priorities and needs. Forest users know which pests limit their management efforts. Often these are not the high profile pests.

Focus research on management recommendations once exotic pests become established and their impact is known. Established pests will not be eradicated. However, the changes they cause require new management strategies.

Maintain a diverse toolbox. Impact assessment, public information, quarantine, stand manipulation, biological control, and chemical pesticides must all be available for use.

Thanks to introduced natural enemies and a changed forest, the impact of gypsy moth in the northeast differs from that in areas where it is a newcomer. When experts are pulled in from other regions to cope with northeastern outbreaks, lacking local experience, they are likely to treat the outbreak as a larger crisis than it is, and recommend larger than necessary control efforts.

When all states are conducting their aerial damage detection surveys the same way, we will be able to get a more accurate picture of the impact of exotic pests. Uniform standards are being developed through the National Forest Health Monitoring off-plot program, with considerable input from the states.

A native fungus which attacks sugar maple is closely related to Dutch elm disease. If an insect was imported which could spread the fungus from tree to tree, the impact of the fungus could be much more severe.

Thanks to rapid response at all levels of government, the first stage of an Asian longhorned beetle

eradication effort against the was completed before the insect had a chance to emerge in the spring. Although it's too early to measure success, the beetle's ability to feed on a variety of native species justified the action.

When the northern New England states wanted to slow the introduction of hemlock woolly adelgid, it was determined that there was no federal role. Each state had to write its own quarantine.

Butternut is at risk throughout its range because of butternut canker, an apparently non-native disease. Because butternut is a widely scattered species, the extent of the problem was not appreciated until recently. An ongoing health detection program would have identified a problem earlier.

When hemlock woolly adelgid was first detected in New England, Vermont carried out surveys to look for it. The only time we have found it in our state was when it was reported by a landowner.

As hemlock woolly adelgid moves north, we need to know whether it can survive cold winters. The few remaining US Forest Service research entomologists in our area were not able to take on this study. Funding had to come from outside research to get the work done.

Pear thrips defoliated one-quarter of the maple in Vermont nine years ago, a conspicuous, widespread outbreak that appeared to justify any control measures. However, we are still unclear about the impact, and so cannot evaluate the need for management.

A local forester, when asked which exotic pests are of most concern to his management efforts, mentioned buckthorn and ash yellows. Gypsy moth and white pine blister rust were not as important.

Dogwood anthracnose is not going away. However, the forest understory can probably be modified to make conditions less favorable to fungus diseases. Research could help us understand this better.

Vermont has just enacted a moritorium on the aerial spraying of herbicides. Thanks to testimony by foresters, this does not include ground spraying, which is the only known way to elimate exotic brushy weeds, like honeysuckle, which prevent stand regeneration.

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