

Annosum Root Rot Treatment Guidelines for State Lands

Wisconsin Council on Forestry Issue Brief

Author: Kyoko Scanlon

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Presenter: Kyoko Scanlon

Wisconsin Department of Natural Resources, Division of Forestry is in the process of developing a fungicide treatment guide for annosum root rot on state lands. This issue was presented at the last COF meeting on September 27, 2012 as a discussion item. At this meeting, the issues and options will be discussed to make final recommendations from COF. Recommendations from COF will be considered by the Department as the bases to form a final decision on what will be the scientifically-sound and operationally-practical guidance for managing annosum and encouraging prevention on State lands.

Expected Outcome:

The Council on Forestry members are being asked to provide the State Forester with their collective recommendations regarding the proposed annosum root rot treatment guide

Introduction and Background:

Annosum root rot, caused by the fungus *Heterobasidion irregulare*, was first confirmed in Wisconsin in 1993 and is currently found in 23 counties. It is considered one of the most destructive diseases of conifers in the temperate regions of the world. Prevention of this disease is best because once it exists in an area, it is difficult to control. Many tree species can be hosts, but in Wisconsin, red and white pine plantations have been impacted by the disease most significantly.

In an effort to balance the future health of the pine resource with our ability to harvest the existing resource efficiently, a risk-based guide for fungicide treatment was proposed. The proposal was developed by the annosum root rot committee which consists of forestry professionals from public and private sectors. Once finalized, the guide will be used to help state land managers make decisions about when the fungicide treatment should be implemented.

Partner/public listening sessions were held in Green Bay, Wausau, Wisconsin Dells, and Eau Claire in order to share the details of the proposed guide as well as the biology and potential management of the disease on State lands in Wisconsin. Written comments for the proposed guide were accepted from the public until the deadline, July 20, 2012. Based on the written and oral comments, options have been developed to address the most critical issues surrounding the proposed management guide.

The use of the proposed guide will be recommended, but not required for private landowners including lands enrolled in the Managed Forest and the Forest Crop law. On County lands, any use of the proposed guide will be left to the discretion of the County Board, County Forestry Committee and/or County Forest Administrator. It should be noted that, if the risk assessment and subsequent treatment options are proven to be effective and cost effective in the prevention of the disease's spread, then at some point in the future it is possible that the guide may be expected by third party auditors to be applied on all certified lands.

More information about the disease, the proposed guide, and a compilation of all written comments are available on-line at <http://dnr.wi.gov/>. The key word is “annosum”.

Issues and options

1. Should we develop and implement the guide now or wait until more research is done?

Option A: Implement the guide on January 1, 2013** or as soon as possible in 2013

Pro:

- The guide will be promptly implemented and pine resources will be reasonably protected based on current scientific knowledge.

Cons:

- The guide will be implemented with limited data.
- Affected forestry professionals will have less time to prepare for guide implementation.

Option B: Implement the guide by giving a “reasonable period of time” to prepare (i.e. up to three years)

Pro:

- Affected forestry professionals will have time to prepare for the guide implementation.

Cons:

- Delaying implementation may significantly impact the state lands pine resources.
- Delayed implementation will further some level of inconsistency as some DNR land managers have implemented the treatment guide on some timber harvests.

Option C: Postpone implementation until more research is done

Note: It will take at least 3 years and most likely years longer before significant research data is available. (such as winter pathogen establishment rates and spore dispersal distance)

Pros:

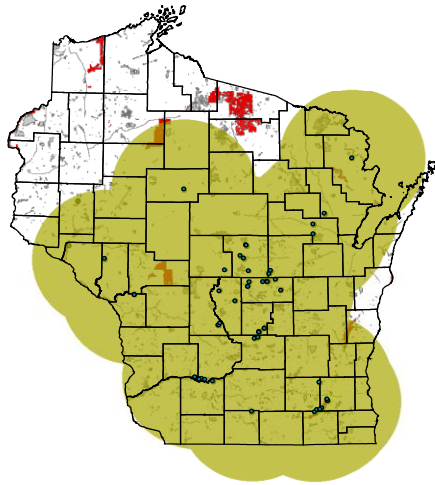
- A guide will not be implemented that has a possibility of being overly-cautious.
- Affected forestry professionals will have time to prepare for the guide implementation.

Cons:

- Delaying implementation may significantly impact the state lands pine resources.
- Delayed implementation will further some level of inconsistency as some DNR land managers have implemented the treatment guide on some timber harvests.

2. What distance from a known infected stand should be used in the guide?

Option A: 50 miles Distance



Note: Gray areas show state lands. Red areas are state forests.
Blue dots indicate individual stands confirmed with annosum root rot.

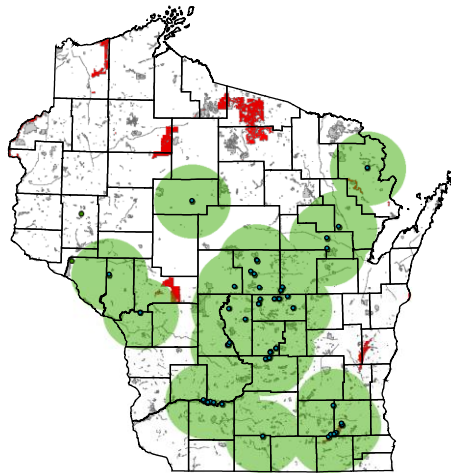
Pro:

- Most of the state lands except northwest corner would implement the guide.

Cons:

- Cost for treatment may be wasted because the risk of infection may be low.

Option B: 25 miles Distance **



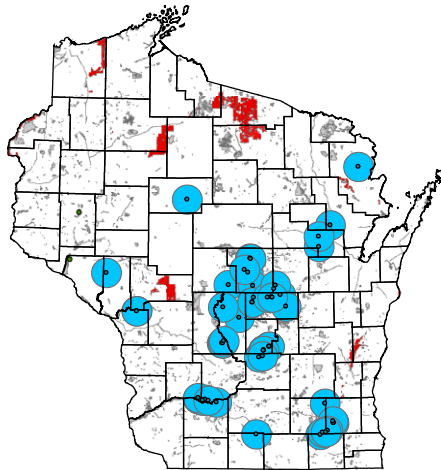
Pros:

- It will cover the majority of the state forests that are already implementing the treatment .
- State's properties with the most pine resource will be reasonably protected
- DNR's guide will be consistent with the guide that has been implemented by the Forest Service in the Lake States Region.

Cons:

- Cost for treatment may be wasted because the risk of infection may be lower than needed.

Option C: 10 miles Distance



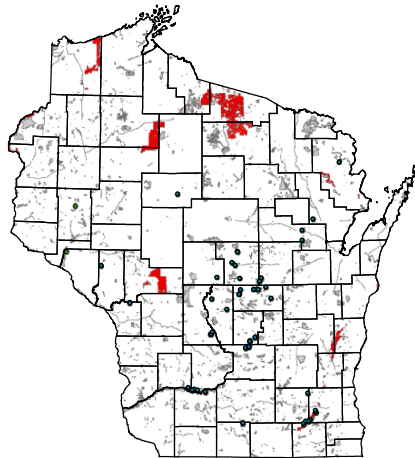
Pros:

- Impact to forestry professionals who will need to be prepared for the treatment will be significantly reduced.
- Reduced amount of pine resources will be protected.

Cons:

- It is possible that potentially high risk pine resources may not be protected.

Option D: 1 mile Distance



Pro:

- Impact to forestry professionals who will need to be prepared for the treatment will be significantly limited.

Cons:

- It is possible that potential high risk pine resources may not be protected.

3. What would be the guide for a winter treatment exemption?

Note: the Department made a decision based on feedback made following the September Council meeting. The winter treatment exemption (suspension) was implemented on December 1, 2012 and is in effect until March 31, 2013.

4. Which hosts tree species should be included in the guide?

Option A: All conifers

Pros

- It provides additional protection to pines as pines could be infected through root contacts with other infected tree species (currently believed to be uncommon occurrence).
- It provides protection to other species (the only conifer species in Wisconsin in which mortality has been commonly observed is balsam fir).

Con

- Stands that may be at low risk will need to be treated (more cost and labor).

Option B: All pines (but not other conifers) **

Pro

- Species that are considered highly susceptible will be protected.

Con

- Other conifers that are susceptible to possibly lesser degrees will not be protected.

Note: No one suggested that the guide should include only certain species of pines (such as only red pines, but not white pines).

5. At what concentration (density) of pines in a stand should the guide be implemented?

Option A: A stand with less than 50% pine component will also be included in the guide if the management objective of the stand is to retain pines

Pro

- Pine resources will have additional protection.

Con

- Pine stands that are considered less than high risk (at this point) will need to be treated (more cost and labor).

Option B: 50% of pine component in a stand (pine as the primary timber type) should be treated no matter what the Basal Area (BA) of pine is in the stand **

Pro

- Stands of which primary forest type is pine would be consistently protected regardless of the stocking level (BA) of pines.

Con

- Stands with lower BA with high pine components will need to be treated (more cost and labor).

Option C: 50% of pine component in a stand with certain BA (fully stocked?, BA at least 40, 80?) should be treated

Pro

- Natural stands with low BA will not need to be treated (less cost and labor).

Con

- The majority (50%) of the tree species in a stand may be impacted.

Note: If the BA of pines is low, the risk of underground spread should be lower.

6. How long should be the grace period for implementation in areas that will be covered by a new distance buffer based on a newly confirmed annosum stand?

Option A: Provide less than one year of grace period, effective with all new harvest contracts.

Pro

- Possibly susceptible pine resources will be promptly protected.

Con

- Affected forestry professionals will have less or no time to prepare for the treatment.

Option B: Provide one year of grace period**

Pro

- It will give land managers, foresters, and loggers in the area more time to prepare for the logistics of the treatment.

Con

- In the meantime, state's pine resources may be significantly impacted.

Option C: Provide three years of grace period

Pro

- It will give land managers, foresters, and loggers in the area more time to prepare for the logistics of the treatment (more than Option 1).

Con

- In the meantime, state's pine resources may be significantly impacted (more than Option 1).

** This was the option recommended by the Committee, note: not all members were in agreement on all recommendations.

Attachments:

Annosum Root Rot: A White Paper (May, 2012)

Summary of the public comments by the topic

A map of confirmed stands in Wisconsin

Pine resources and treatment of annosum root rot in the United States

Stand-level economic analysis of annosum root rot (treatment cost versus value loss) DRAFT

Cost analysis of the fungicide treatment for annosum root rot based on various distances proposed in WI