



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
BOARD OF PESTICIDES CONTROL
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GOVERNOR

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COMMISSIONER

DRAFT

Memorandum

To: Board of Pesticides Control

From: Julia K. Vacchiano, Pesticide Registrar and Water Quality Specialist

RE: EPA Special Local Need (SLN) [FIFRA, Section 24(c)] application to approve the use of Arbotect, EPA Reg. No. 100-892, to be used as an injection to control Beach Leaf Disease in *Fagus spp.* presumably caused by the foliar-feeding nematode *Litylenchus crenatae mccannii*

March 14, 2024

Enclosed is the above-referenced Special Local Needs (SLN) [FIFRA, Section 24(c)] application and supporting documents for your consideration.

Arbotect is currently registered in the state as an injectable fungicide for Dutch Elm Disease in Elm trees (*Ulmus spp.*) and Sycamore Anthracnose in Sycamore trees (*Platanus spp. and hybrids*). This Special Local Needs (SLN) would expand the site and target pest applications. The proposed SLN adds trees in the *Fagus* genus to the sites for use, which includes the native American Beech (*Fagus grandifolia*) as well as European and Asian species. The target pests would be expanded to include the probable cause of Beech Leaf Disease, *Litylenchus crenatae mccannii*. The SLN directions for use instruct applicators to inject 2-8oz of Arbotect 20-S, diluted per label instructions, for every 5 inches of trunk diameter. The tree should be fully in leaf and infected with the target pest. Injection sites are to be placed at 3-10 inch intervals around the root flares. This procedure should not be done more than once every 2 years.

Arbotect contains 26.6% of its one active ingredient, Thiabendazole Hypophosphite (CAS No. 28558-32-9) accounting for 20% total Thiabendazole. Thiabendazole is considered by the EPA to have “generally low toxicity” to human beings but is highly toxic to freshwater estuarine fish and freshwater invertebrates. It is considered practically non-toxic to birds and other non-human mammals. The concern for leaching through tree roots into groundwater after xylem injection is considered to be low. There are existing SLN’s for the use of Arbotect for Beech Leaf Disease in Connecticut, Massachusetts, New Jersey, New York, and Ohio.

This SLN was submitted to the BPC by Bartlett Tree Expert’s plant pathologists Andrew L. Loyd, PhD, and Matthew A. Borden, DPM. They have conducted experiments and consider this to be a substantially better treatment option when compared to available alternatives for treating

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trees in forest and ornamental settings. This request is paired with letters of support from Alicyn Smart, DPM. Alicyn is an Associate Extension Professor and Plant Pathologist at the University of Maine Cooperative Extension and the Director of their Plant Disease Diagnostic Laboratory. Arbotect manufacturer Syngenta Crop Protection, LLC. also sent a letter of support for this SLN.

Please review the attached documents and let me know if you have any questions.

- FIFRA, Section 24(c) application
- Letter of request from Andrew L. Loyd, PhD, and Matthew A. Borden, DPM, Plant Pathologists, Bartlett's Tree Experts
- Addendum: Supporting Figures from Andrew L. Loyd, PhD, and Matthew A. Borden, DPM, Plant Pathologists, Bartlett's Tree Experts
- Letter of Support from Alicyn Smart, DPM, Associate Extension Professor and Plant Pathologist & Director of the Plant Disease Diagnostic Laboratory, University of Maine Cooperative Extension
- Letter of support from Pat Dinnen, Regulatory Manager, Syngenta Crop Protection, LLC
- Arbotect Section 3 Label
- Arbotect Section 24(c) Special Local Need Label
- Arbotect MSDS

References:

Doccola, J. J., & Wild, P. M. (2012). Tree Injection as an Alternative Method of Insecticide Application. In S. Soloneski & M. Larramendy (Eds.), *Insecticides: Basic and Other Applications* (pp. 61–78). essay, InTech.

United States Department of Environmental Protection. (2002, May). *Pesticides - R.E.D. FACTS Thiabendazole and Salts*. Prevention, Pesticides, and Toxic Substances.
https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/fs_PC-060101_1-May-02.pdf