



Garlic Mustard Allelopathy: Is The Cure Worse Than The Disease?



Caption 2: Garlic mustard can form dense patches in forest understories. Photo Credit: Wisconsin DNR.

Principal Investigators & Partners

- Wisconsin DNR
- Langlade County Forest

Timeline

- Launch – April 2022
- Expected Completion Date – 2027
- Status – Ongoing

Contact Information

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Project Overview

A recent large-scale blowdown event in Langlade County, WI has led to widespread invasion of garlic mustard, an exotic biennial herb, prompting discussions about management options. For large-scale garlic mustard invasions, pesticides are often used, but they can negatively affect desirable plants and associated fungi. However, garlic mustard



Caption 1: Map of project locations in Langlade County.

Photo Credit: Wisconsin DNR.

also release chemicals into the soil that can negatively affect fungi and other plant species. This study investigates whether the cure is worse than the disease- whether treating garlic mustard with herbicide or leaving it to run its course will have a greater negative impact on native vegetation survival and soil microbial communities.

Key Points

- Herbicides are the typical treatments used by Langlade County Forest, but they have failed to control garlic mustard in nearby areas.
- Impacts of garlic mustard or herbicides on mycorrhizal fungi may in turn affect tree regeneration.

Management Implications

- The garlic mustard allelopathy project will help managers understand the efficacy and side-effects of using pesticides to control garlic mustard.
- Studying the effects of these pesticides on fungi will help us understand their potential effects on tree regeneration.