



Garlic Mustard Allelopathy: Is the Cure Worse than the Disease?



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 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.

Principal Investigators and Partners

- Wisconsin DNR
- Langlade County Forest

Timeline

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

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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.