

Mulching Provides Alternative Disposal Method for Garlic Mustard on Sod-Forming Grass (Wisconsin)

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Weed control plans often include provisions for the disposal of culled specimens. Garlic mustard (*Alliaria petiolata*) disposal frequently presents a challenge because pulled specimens that have reached early flowering and later stages can still produce viable seed in some circumstances (Solis 1998). In areas where landfills will not accept plant material, composting could be an option if viable seeds have not formed. I am not aware, however, of any proof that temperatures in an active compost pile will sterilize garlic mustard seeds. Burning or burying pulled plants may be effective, but is often impractical.

From 1997 through 2001, I experimented with disposing of garlic mustard by using a standard 20-inch (51-cm) mulching mower on sections of lawn on a 0.5-acre (0.2-ha) property in Greenfield, Wisconsin. First, I spread a thin layer of recently pulled garlic mustard in the early-to-late silique-forming stages on two 25-ft x 5-ft (7.6-m x 1.5-m) plots. Since I wanted to determine whether mowing would throw the seed onto areas that were free of infestation, I established each plot at least 3 feet (1 m) away from an adjoining woodland that had no garlic mustard. I mulched the culled specimens before they became desiccated with the mower. When necessary, I made a second pass to chop missed specimens and/or specimens that had not been finely cut during the first pass. Although larger, more fibrous stems did remain at times, these tended to break into smaller, less visible pieces when mowed a week or two later. I strongly recommend thoroughly cleaning the mower deck after mulching garlic mustard that has potentially viable seed.

I have not observed any germination of garlic mustard in areas of the study plots where the turf grass formed intact sod, but some specimens did germinate on two small areas with bare soil the first year after mulching. Regularly mowing from the first week of May to mid-July prevented those plants from producing seed. By mid-July, the remaining small specimens had died. Since then, I have not seen any garlic mustard germinate in these areas even though I continued to mulch culled garlic mustard in the plots during the next two years. I have also not observed any specimens in the adjacent woodland area, which suggests that the mulching mower did not throw seed 3 feet or farther.

The lack of significant garlic mustard on my study plots suggests that the combination of sod-forming grass and regular mowing prevents this species from becoming established and provides an alternative disposal method for garlic mustard. This disposal method might be considered for certain other invasive plants that can be mulched with a mower.

REFERENCES

Solis, K. 1998. Preliminary result of garlic mustard experiment (Wisconsin). *Restoration & Management Notes* 16(1):100.