

Mustard seed meal suppresses weeds in container-grown ornamentals

September 29 2008

Mustard is one of the most widely used condiments on the planet. Prized for its oils, mustard plants grow wild in North Africa, the Middle East, and the Mediterranean, and is grown commercially in the United Kingdom, Canada, and the United States.

During processing, the useful oils are extracted from the mustard plant, leaving mustard seed meal, or MSM, as a byproduct. Scientists are searching for innovative uses for mustard seed meal, hoping to increase profitability for mustard producers. Several products derived from natural sources are currently used as pest control substances for greenhouse plants. MSM and other byproducts of the expanding biofuels industry are being studied as solutions for controlling pests while offering the potential to increase profitability of biofuel production.

The use of herbicides in container-grown ornamentals is often limited as a result of the lack of registered products for use in greenhouses and the difficulty in assuring crop safety on numerous species grown in ornamental nurseries. Can MSM offer a solution? Dr. Rick Boydston and colleagues at the USDA recently published a report of their study of MSM's usefulness as an herbicide for container-grown ornamental plants. In the study, seed meal of mustard was applied to soil surfaces to evaluate its effect on several common weeds in container-grown ornamentals.

MSM applied to the soil surface of containers at 113, 225, and 450 g·m⁻² reduced the number of annual bluegrass seedlings by 60%, 86%,

and 98%, respectively, and the number of common chickweed seedlings by 61%, 74%, and 73%, respectively, at eight weeks after treatment.

"Surface-applied MSM may control weeds in container-grown ornamentals without injuring the crop", summarized Boydston. In addition, MSM provides about five percent nitrogen and contributes to the nutrient needs of the crop."

"MSM has the potential to be developed as a selective herbicide for annual weed control in ornamental containers and further research could identify additional tolerant and susceptible species of both weeds and ornamentals", Boydston noted. Cost may be a factor in the long-term use of MSM, he noted, adding, "Transportation of MSM from oil-crushing facilities to end users will be a major factor influencing the overall cost of MSM".

The complete study is available on the ASHS HortScience electronic journal web site: [hortsci.ashspublications.org/c ... t/abstract/43/3/800/](https://hortsci.ashspublications.org/c...t/abstract/43/3/800/)

Source: American Society for Horticultural Science

Citation: Mustard seed meal suppresses weeds in container-grown ornamentals (2008, September 29) retrieved 25 April 2024 from <https://phys.org/news/2008-09-mustard-seed-meal-suppresses-weeds.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.