

Project #9075
Evaluation of novel herbicides for broadleaf weed control
In carrots grown on muck soils

BRIEF

DESCRIPTION

This project addresses priorities identified by the Ontario root bulb & leafy Vegetable Research and Services Committee for weed control in carrots and dry bulb onions.

Carrots are an important vegetable crop grown on muck soils in Ontario. The farm value of carrots grown in Ontario is \$22.8 million (OMAFRA, 2005). Uncontrolled weeds cause significant economic losses to producers, for example, if weeds have not been adequately controlled and reduce yields by only 7%, this represents an annual loss of \$1.6 million to Ontario carrot producers. Weed management in carrots is at risk because growers rely on two older herbicides, Lorox (linuron) and Gesagard (prometryne) which have been used for the past 30 years. These herbicides may be withdrawn as a result of re-evaluation by PMRA or by the manufacturer. Further more, weed populations that are resistant to both herbicides have developed that cannot be controlled by herbicides that are currently registered in carrots.

PROJECT

OBJECTIVE

To evaluate alternative herbicides for the control of broadleaf weed control in carrots grown on muck soils. Four trials will be conducted:

- 1) Clomazone applied preemergence: efficacy and tank-mixtures (12 treatments)
- 2) Clomazone: carrot tolerance to 0.5X 1X and 2X rates and recropping with onions the following year (4 treatments)
- 3) Directed postemergence herbicides: Paraquat, Glufosinate, and Carfentrazone (4 treatments)
- 4) Metribuzin applied postemergence: efficacy and tank-mixtures (8 treatments)