

Weed Management in Carrots

By Julie Kikkert, Cornell Vegetable Program

Carrots are very sensitive to competition from weeds. Unfortunately, the herbicides labeled for carrot production are somewhat limited. Herbicide resistant weeds can develop when the same herbicides are continually used on the same ground. At the 2011 Muck Vegetable Growers Conference in Ontario, Canada, it was reported that linuron-resistant red root pigweed and common ragweed were becoming a problem in the Holland Marsh. There have also been reports of linuron resistant Powell amaranth in Ontario, CA and common purslane in Michigan, all in fields with continuous carrot production. Growers should be looking at the overall weed management strategy on their farms to minimize the population of weed seeds in their soils. Julie Kikkert and Robin Bellinder from Cornell are sampling some local muck fields to determine if linuron-resistant weeds are present in NY.

Preplant incorporated (PPI) or pre-emergence (Pre) herbicides:

- Treflan HFP (PPI) – Mineral soils only. Controls grasses and some broadleaves except ragweed, galinsoga and mustard.
- Prowl H₂O – Apply within 2 days of planting. Annual grasses and suppression of some annual broadleaves.
- Dual Magnum – Apply after planting, but before carrots emerge. Different rates for mineral and muck soils. Controls annual grasses, yellow nutsedge, hairy galinsoga. Suppression of some other broadleaves.

Post-emergence herbicides:

- Lorox (linuron) – Effective against many annual grasses and most broadleaves including ragweed and galinsoga. Multiple applications beginning at the 1 or 2 leaf stage will significantly improve weed control compared to a single application. See details on p 151 of the Cornell Vegetable Guidelines.
- Metribuzin – Apply after carrots have formed 5 to 6 true leaves, but before weeds are 1 inch tall. Effective against some annual grasses and many annual broadleaves including redroot pigweed, lambsquarters and galinsoga. May burn carrots at temperatures <55 F or >85 F.
- Select Max – Controls numerous annual and perennial grasses. Always use only 0.25% v/v non-ionic surfactant (NIS).
- Fusilade DX – Controls annual grasses. Apply when grasses are actively growing.
- Poast – Controls annual grasses. Apply when grasses are actively growing. Use 2 pts of oil concentrate per acre.

Barley windbreaks will also compete with carrots, so they should be killed with Fusilade DX or Poast herbicide when the barley is 4 to 5 inches tall. The killed companion crop will still serve as a windbreak even though it is dead. *From B. Zandstra, Michigan State Univ.:* During cool weather, increase the rate of the graminicides to improve kill of the cover crops. If the graminicides are applied alone, include crop oil concentrate (COC) or nonionic surfactant (NIS) in the mix. If other postemergence herbicides are included, it may be wise to avoid the adjuvant to reduce chances for crop injury.

Special Weed Problems and Solutions are covered in a separate article on this website.