

Crop Profile for Parsley in Ohio

Prepared: December, 1999

General Production Information

(Umbelliferae *Petroselinum crispum*)

- Acres in Ohio: 290 (5) - 80% for fresh market, 20% for processing
- Percent of US Acreage/Rank: 5.3%/5th (3)
- Number of Growers: 26 (3)
- Per Acre Value: \$8500 - \$9000 (2)
- Value of Production in Ohio: \$2,465,000 - \$2,610,000 (2)

Location Of Production

The main location of production for the fresh market is found in northeast Ohio on muck crop soils of Huron and Stark counties. Growers for the processing market are located in the northwest region of the state.

Production Methods⁽¹⁾

Parsley is grown in Ohio on muck soils. Field seeding of parsley begins in March and extends through early June. Soils should be maintained at a pH of 5.5 – 6.0. Fertilizers (100 –120 lb. per acre each of N, P₂O₅ and K₂O) should be broadcast and disked into the soil prior to planting. Approximately 15 pounds of seed is planted per acre, mostly in beds. Parsley is harvested by cutting 1.5 – 2 inches from the soil to allow for re-growth. Three to four cuttings are usually made per season.

Insect Pests

1. Carrot Weevil

The only significant insect pest of parsley in Ohio is the carrot weevil. The carrot weevil overwinters in the adult stage in plant debris of the previous year's crop or in the upper 2-3 inches of the soil. Adults become active in late April or May and begin to lay eggs about a month later. The adult beetles are brown-gray and approximately ¼ inch long. They have a distinctive snout and a domed-shaped back. Damage is caused to the parsley by the larvae that are legless, white grubs and have an orangish-brown head. The larvae tunnel down into the roots, where they feed for 2-4 weeks and either kill the plant or significantly reduce yields. The full-grown larvae leave the roots to pupate in the soil for 1-2 weeks. The new adults emerge beginning in July.

CHEMICAL INSECT CONTROLS

- **Azinphos-methyl** (Guthion)

Percent acres treated: 95%

Target pests: carrot weevil (1)

Average rate and frequency of application of most common formulations:

Guthion 50WP – 1lb/A, 3 times (2)

Guthion 2S – 1 pt/A, 2-3 times (2)

Method of application: ground foliar application, typically boom sprayers

PHI: 21 days (2)

Efficacy rating: Very Good.

Rational for use: Most effective control of adult weevils as they appear in parsley fields which prevents damage by larval populations.

- **Permethrin** (Ambush, Pounce)

Percent acres treated: 0% in 1998

Target pests: carrot weevil (1)

Average rate and frequency of application of most common formulations:

Ambush 2EC – 12.8 oz/A (2)

Pounce 3.2 EC – 8 oz/A (2)

Method of application: ground foliar application, typically boom sprayers

PHI: 1 day

Efficacy rating: Only effective in colder weather.

Rational for use: Used only if control measures are needed in cold weather. None of the

growers reported using permethrin during the 1998 growing season.

- **Imidacloprid (Provado)**

Percent acres treated: 10% (2)

Target pests: aphids and whiteflies (1)

Average rate and frequency of application of most common formulation:

Provado – 7oz/A, once (2)

Method of application: ground foliar application, typically boom sprayers

PHI: 7 days

Efficacy rating: Very good for aphid control

Rational for use: Seldom needed, but important to have available if problems with sucking insects exist.

CULTURAL CONTROLS

Rotate crops and maintain good control of weed hosts in rotated field for 1-2 years after infestation.

Remove all culled material from fields.

BIOLOGICAL CONTROLS

None known

Diseases

1. Septoria Blight (4)

Septoria is the only disease for which treatment is regularly applied in the parsley fields of Ohio. This leaf blight is caused by the fungus *Septoria petroselini*. The fungus overwinters on and in infected seed and in residue from diseased plants. Infected leaves and petioles will develop a yellowish speckling that turns tan to yellowish gray over time. The margins of the spots may be slightly darker. The size of the spots varies but the maximum diameter is about ½ inch. Wet weather promotes the reproduction of the fungus and splashing rain is important for spreading the disease. Control of this disease is important since the parsley leaf is the marketable portion of the plant.

CHEMICAL DISEASE CONTROLS

Azoxystrobin (Quadris)

Percent acres treated: 49% (2)

Target disease: Septoria blight (1)

Average rate and frequency of application of most common formulation:

Quadris – 4.67 oz/A, 2-3 times (2)

Method of application: ground foliar application, typically boom sprayers

PHI: 7 days

Efficacy rating: Very Good

Rational for use: Quadris is the only fungicide labeled in Ohio for control of Septoria blight of parsley. It is very effective in reducing disease incidence and severity.

CULTURAL CONTROLS

Crop rotation is important for disease management as is limiting the amount of movement through the fields by workers, animals and implements, especially during wet weather.

Weeds

Purslane, Red-root pigweed, Vivid amaranth, Oak leaf goosefoot, Nutsedge, Shepards purse, Pineapple weed and Giant crabgrass.

CHEMICAL CONTROLS

Linuron (Lorox)

Percent acres treated: 58% (2)

Target pests: broadleaf and grasses

Average rate and frequency of application of most common formulations:

Lorox DF – 1.75 lb/A, once (2)

Efficacy rating: Good

Rational for use: Labeled product

CULTURAL CONTROLS

Hand hoeing, and mulching with straw or black plastic.

CRITICAL PEST CONTROLS ISSUES

Important pesticides used for which there are few or no other alternatives or the only alternatives are

organophosphates, carbamates or B2 carcinogens include:

Azinphos-methyl – It is very effective at killing adult carrot weevils. Malathion, although not preferred by Ohio growers, can also be used.

CHEMICAL AND NONCHEMICAL ALTERNATIVES

Both spinosad and chlorfenapyr, third generation pyrethroids, have showed promising activity against carrot weevils in laboratory screening tests.

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References

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Compiled by: C. Hoy and M.F. Huelsman, June 1999.

Database and web development by the [NSF Center for Integrated Pest Management](#) located at North Carolina State University. All materials may be used freely with credit to the USDA.