



The Agriculture Program

The Texas A&M University System



Carrots in Texas

Crop Brief on Production, Pests, & Pesticides

Carrot Production

- Texas ranks 5th in U.S. production.
- 9,400 acres are grown in Texas; annual revenue exceeds \$20 million.
- 60% is for fresh market and 40% is for processing.
- Carrots are planted in August to November for staggered harvest from December to May. Primary production is in the Lower Rio Grande Valley; the Winter Garden and High Plains also practice sequential production.

Insect Pests

- No carrot varieties are specifically resistant to insects. Soil insects are major problems. Carrot weevil mostly affects the processing carrots since food quality standards do not permit any weevil larvae presence or root damage over 1%.
- White grubs and wireworms cause root damage and quality loss. Nematodes are more troublesome in carrots than most other vegetables.
- All of these pests can cause crop losses up to 25% but can be controlled with insecticides/nematicides. Biological controls are seldom used since quality is essential.
- **Diazinon, dichloropropene (Telone), and oxamyl (Vydate)** are three FQPA targeted products that, if withdrawn, could negatively impact the industry by 25% in yield and quality losses. Currently there are no commercial replacements for diazinon for soil insects or alternatives for dichloropropene and oxamyl for nematode control.

Diseases

- Major leaf spot diseases include *Alternaria* and powdery mildew. Some carrot varieties are more tolerant to *Alternaria* than others. Growers may use gibberellin to regrow new tops if *Alternaria* or weather severely damages foliage.
- Soil-borne diseases cotton root rot and *Sclerotium rolfsii* are favored by high soil temperatures and excessive moisture. Bacterial pathogens cause root decay in some soil conditions.
- Field rotation is practiced to reduce soil-borne problems. Thinner spacings improve air circulation and reduce leaf spot disease. No biological agents control carrot diseases.
- **Chlorothalonil (Bravo)** is an FQPA targeted product that if withdrawn could negatively impact the industry by 30% in yield and quality. There is no commercial replacement but **azoxystrobin (Quadris)** and **propiconazole (Tilt)** are being tested.

Weeds

- Problem weeds include winter annual broadleaves such as ragweed, wild parsley and london rocket plus some perennials such as bermudagrass and yellow nutsedge.
- Cultural controls include fields rotations and mechanical cultivation. There are no biological control agents for weeds in carrot production.
- Currently, carrot producers rely heavily on **linuron (Lorox)** for postemergence broadleaf control and **sethoxydim (Poast)** and others for grass control.

Outlook

- Crop breeding continues to provide improved cultivars.
- Pesticides are essential to sustain production. Use is based on scouting, pest presence, and market quality expectations.
- For latest information regarding these issues and status of risk assessments visit ipmwww.ncsu.edu/opmppiap and www.epa.gov/pesticides.

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