



Pumpkins in Texas

Crop Brief on Production, Pests, & Pesticides

Pumpkin Production

- Texas is the fourth leading state in commercial pumpkin production, and generates \$2.4 million for farmers, with an economic impact of \$7.4 million in the state.
- 5,000 to 8,000 acres are planted annually in Texas. 90% are in the west Texas region.
- The pumpkin is a cucurbit, over 90% are produced for seasonal ornamental use.

Insect Pests

- Insects include squash bugs, cucumber beetles, squash vine borer, and pickleworm.
- Essentially all of the commercial acreage is treated for one or more of these pests. 80% of the pumpkin fields are scouted and IPM practices are followed.
- Two FQPA-targeted insecticides include **endosulfan (Phaser)**, and **carbaryl (Sevin - a carbamate)** which if lost, would reduce yields and quality by 10% or more.
- 90% of the insecticides are aerially applied since vine growth limits ground operations.
- Synthetic pyrethroids are alternatives for squash bug and the spotted cucumber beetle but are less effective. These two pests reduce yields and stunt pumpkin size.

Diseases

- Major diseases include powdery mildew, anthracnose, angular leaf spot and blight; other diseases are gummy stem blight, bacterial wilt, black rot, and damping off.
- Non-chemical methods are used to the fullest extent. Crop residue is disked into soil after harvest and 100% of the pumpkin fields are rotated with other crops to reduce diseases.
- Foliar diseases dramatically reduce yields. Protective and preventative fungicides are essential to protect crop foliage.

- The major FQPA-targeted fungicide is **chlorothalonil (Bravo)**, which is used on 100% of the crop. New chemistry in the strobilurin family (**azoxystrobin/Quadris** and **trifloxystrobin/Flint**) show promise but are not broad spectrum. **Myclobutanil (Nova** — Emergency Use/Section 18) is also used in rotation with chlorothalonil for excellent powdery mildew control.
- Three other FQPA-targeted fungicides include **benomyl (Benlate** — a carbamate), **maneb (Maneb** — a B2 carcinogen), and **thiophanate-methyl (Topsin** — a carbamate). These are seldom used but are some of the few fungicides labeled for pumpkin. Nematicides are expensive and rarely used in pumpkin production.

Weeds

- Weeds reduce yields and cut quality by reducing fruit size. Weeds compete for sunlight, water, and nutrients and also host pathogens, viruses, and insects.
- The most troublesome annual weeds are pigweed, cocklebur, lance leaf sage, several annual grasses, and devils claw. Perennial weeds include johnsongrass, nutsedge, black nightshade, silverleaf nightshade.
- 100% of pumpkin acreage is cultivated (early) and 70% is hand hoed to remove weeds. Rotations with cotton and grain crops to help control weeds.
- **Trifluralin (Treflan)** is applied early on 20% or more of the crop. In some cases row middles are treated before vines cover the soil.
- **Clomazone (Command)** and **ethalfluralin (Curbit)** are applied at planting on 35% of the acreage. While these herbicides are not FQPA-targeted during Phase 1, they are important since options for weed control are limited.

Outlook

- Pumpkins produce tremendous amounts of foliage, which favor insects and disease. Chemical control is essential, along with cultural control methods. Resistant varieties are not available.
- For the future, pumpkin growers have few herbicide options for weed control. Experimental herbicides that show promise in other countries cause severe injury in pumpkins, even at low rates.
- 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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