

2007 Disease Prevention and Spray Guide (Summer Squash)

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Soilborne diseases. There are some soilborne diseases that affect summer squash. These diseases can attack the crop from seedling stage through harvest and are referred to as crown-rot diseases. Many of these diseases, however, attack the foliage and pods and are deposited there by water splash or by physical contact between the fruit and the soil. Early, seedling crown rot can be caused by either *Rhizoctonia solani*, and species of *Pythium*. **Phytophthora crown and fruit rot** (*Phytophthora capsici*) can damage the roots, crown, foliage and fruit. **Cottony leak** (*Pythium* spp.) can be severe on fruit during periods of wet weather.

Recommended practices in chronological order are as follows:

1. Rotation with non-cucurbit crops reduces potential inoculum of all of the above diseases except Phytophthora crown and fruit rot.
2. Avoid low-lying, wet areas and poorly drained conditions that favor Phytophthora crown and fruit rot.
3. Deep turning with a moldboard plow will help with all diseases except *Phytophthora* and *Pythium*.
4. Fumigation with methyl bromide will suppress all soilborne diseases. Alternatives to methyl bromide that suppress diseases are Telone C-35, K-Pam, Vapam, and chloropicrin. Telone products are nematicidal.
5. Products containing mefenoxam (Ridomil, UltraFlourish) can suppress losses to *Phytophthora*.
6. Acrobat tank-mixed with copper applied intensively at fruit set may protect some fruit.

Foliar diseases. There are several foliar diseases of summer squash. **Downy mildew** (*Pseudoperonospora cubensis*) is a problem on squash almost every year and can cause severe losses if left unchecked. Warm, wet weather generally precedes epidemics of downy mildew. Few cultivars have any real resistance to downy mildew. Preventive fungicide applications of mancozeb, Gavel, Previcur Flex, Cabrio, Forum, Ranman, Tanos, chlorothalonil, Ridomil Gold Bravo and Reason have been key in suppressing losses to downy mildew. Tank-mix Previcur Flex, Forum, Ranman, and Tanos with chlorothalonil or mancozeb. **Powdery mildew** (*Sphaerotheca fuliginea*) is a disease that regularly shows up on squash but rarely causes severe losses. Unlike downy mildew, there are some varieties of summer squash that have good resistance to powdery mildew. Powdery generally appears after fruit set and is easily suppressed with Pristine, Nova, or Procure. **Aphid-transmitted viruses** also occur to some extent every year and are dependent on the populations of their aphid vectors. Generally, spring crops suffer less due to higher aphid populations and fall crops suffer more due to higher aphid populations and an increased virus host reservoir. Fall virus suppression is achieved by planting virus-resistant squash or using the intensive stylet oil spray program. The stylet oil spray program consists of three major components. These are: 1) begin sprays when any host tissue is visible; 2) stay on a 2 – 3 spray a week program; and 3) use high pressure (200 psi+) and enough water to completely cover the plants.

Recommended practices in chronological order are as follows:

1. Destroy harvested squash crops immediately as they serve as inoculum sources for all foliar diseases.
2. Use powdery mildew and virus resistant (mainly fall) varieties that yield quality fruit.
3. Stick to the 3 components of the stylet oil program if resistant varieties are not used.
Use fungicides preventively. Spray at disease onset for downy; just prior to fruiting for powdery.
Note (be sure to follow label on high fungicide resistance risk products).

Spray Schedule for Summer Squash

<u>Transplanting/Emergence</u>	<u>Blooming</u>	<u>Fruit Set</u>	<u>Harvest</u>
(Spring) mancozeb at 3.0 lbs/acre.....			Begin Powdery sprays (Pristine rotated with Nova or Procure) Begin downy fungicides at disease onset (rotate Pristine, Cabrio, Reason, Ranman, or Tanos with PrevicurFlex, Gavel, Dithane, Forum, or chlorothalonil) Tank-mix Nova or Procure with downy mildew materials as necessary. Spray for Phytophthora fruit and crown rot with Ridimil Gold products or Acrobat.
(Fall) stylet oil spray 2 – 3 times a week.....			Use above fungicide schedules.