

# SQUASH BUG

## INTEGRATED PEST MANAGEMENT

EXTENSION 

UtahStateUniversity.



## SANITATION

Minimize populations of overwintering adults. After harvest, till or remove cucurbit crop debris (including vines and fruits). Remove woodpiles, plastic mulch (or other synthetic ground covers, and ground debris near fields where insects may seek protection for the winter.

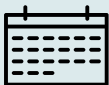


## RESISTANT VARIETIES

**Plant squash varieties** that are more tolerant of squash bug feeding than others. Resistant: *Butternut*, *Royal Acorn*. Moderately Resistant: *Sweet Cheese*, *Green Striped Cushaw*. Susceptible: *Pink Banana*, *Black Zucchini*. Highly Susceptible: *Yellow Squash*, *Hubbard*, *Pumpkins*

## CROP ROTATION

Rotate to non-cucurbit crops in alternating years to reduce the number of immigrating adult squash bugs. Crop rotation will be most effective in larger fields.



## TIMING OF PLANTING

Peak egg-laying by adult squash bugs typically occurs in late May in northern Utah and in late April to early May in southern Utah. Seed or transplant before or after this timing to laying to reduce potential injury.

## HOME-MADE TRAPS

During the growing season, trap adults and nymphs seeking protection by using wooden boards, shingles, and heavy cardboard placed on the ground next to host crops. Squash bugs will tend to aggregate under the traps at night. In early morning, turn the boards over and destroy the bugs.



## MECHANICAL DESTRUCTION

Hand-picking adults and nymphs, and smashing egg clusters on leaves can reduce squash bug populations. Options to remove eggs include cutting them out of the leaf, sticking them to duct tape rolled around the fingers, or smothering them with oil or petroleum jelly. Mechanical destruction will be most successful if started early in the season and done every 2 to 3 days..

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## MULCHES

In general, mulches (particularly plastics) can harbor squash bugs and are not recommended. However, mulches (straw, wood chips, paper, etc.) suppress weeds, attract beneficial insects, and reduce soil moisture loss. Therefore, the numerous benefits may outweigh the negatives.



## TRAP CROPS

Trap crops are cucurbit cultivars that are attractive to adult squash bugs. Several weeks before planting the main cucurbit crop, plant the trap crop along field borders or interspersed as clumps throughout the field. Target squash bugs by applying an insecticide or destroying the trap crop before eggs begin to hatch to reduce damage to the later-maturing main crop. Hubbard squash is a common trap crop used.

## NATURAL ENEMIES

The most common natural enemies of squash bugs are parasitoids. These include a tachinid fly, *Trichopoda pennipes* whose larvae feed on older nymphs and adults, and several wasps that parasitize eggs in the family Encyrtidae and Scelionidae.

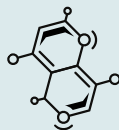


## ORGANIC INSECTICIDES

- pyrethrins (Monterey® Bug Buster-O, GardenTech® Worry-Free)
- pyrethrins + sulfur (Bonide® Tomato and Vegetable 3 in 1, Ortho® Insect Mite & Disease 3 in 1)

## SYNTHETIC INSECTICIDES

- zeta-cypermethrin (GardenTech® Sevin)
- permethrin (Bonide® Eight Garden Dust)



\*Products for commercial growers can be found in the Utah vegetable Production & Pest Management Guide.

To be effective, insecticide sprays must penetrate the plant canopy and thoroughly cover the top and underside of leaves, fruits, and vines. Apply insecticides in the early morning or late evening when sprays will dry more slowly and result in better coverage of the vegetation. In the morning hours, leaf position may be more upright and allow for better coverage of leaf undersides. Don't spray during the day when plants are blossoming to avoid harming pollinators.

Precautionary Statement: All pesticides have benefits and risks, however following the label will maximize the benefits and reduce risks. Pay attention to the directions for use and follow precautionary statements. Pesticide labels are considered legal documents containing instructions and limitations. Inconsistent use of the product or disregarding the label is a violation of both federal and state laws. The pesticide applicator is legally responsible for proper use.

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