

Managing Common Pumpkin Insect Pests

It's August now and the pumpkins across the state are mostly a few weeks along. Based on what we've seen in our plots and the calls we've gotten in the last couple of weeks, we also have many of our usual insect pests out in full force. Below is some advice and guidance for some of our more serious pests in pumpkins.

In addition to the recommendations below, please consult the [Southeastern Vegetable IPM Handbook](#) for more recommendations. If you have any questions about symptomology on your pumpkins, contact your county agent to get samples sent to Sherri Smith at the [Plant Health Clinic](#) for identification.

Insect Management

We have seen a lot of cucumber beetles already this year beginning around planting and they don't seem to have let up yet. Some growers have already made 3-4 or more insecticide applications to achieve only moderate suppression. Squash bug is also starting to come into fields with many growers and agents reporting them beginning to establish mainly on field edges. These two pests are generally considered the two most serious pumpkin insect pests in Arkansas as they transmit bacterial diseases. These diseases are well known by most of our growers and typically lead to many unnecessary over-sprays, however, both pests are very easy to scout for and these diseases can be prevented if insecticides are on-time. Outside of our disease-causing pests, pickle worm and squash vine borer have also been known to be very serious in Arkansas but will not be the focus of this article. Those with historic issues with either of those pests should rely on diamide (Coragen, IRAC 28) based products to prevent flaring aphids.

Cucumber Beetle Management

Spotted and striped cucumber beetles are known to be an issue in Arkansas and can transmit bacteria that can cause bacterial wilt (Fig. 1 and 2). Adults feed on the foliage, flowers, and on the surface of the fruit, and plants are susceptible to wilt transmission as soon as they emerge or are transplanted. Younger plants (before 4-leaf) are most susceptible to the disease, therefore scouting twice a week is necessary early on. An insecticide application should be made when 1 cucumber beetle is found every few plants. Cucumber beetles are known to migrate into fields quickly, which warrants frequent scouting. This is especially important after an insecticide application is made, as re-infestation at densities above threshold is possible in only a few days.

Many products can be used to control cucumber beetles, but considering that most can flare aphids, scout to make sure applications are necessary. Effective insecticides include pyrethroids (IRAC 3A - bifenthrin, lambda cyhalothrin, etc.), neonicotinoids (IRAC 4A - imidacloprid, acetamiprid, dinotefuran, thiamethoxam, and clothianidin), carbamates (IRAC 1A - carbaryl), and organophosphates (IRAC 1B - malathion). Neonicotinoids such as imidacloprid and dinotefuran can also be applied as drip applications and may provide some aphid and squash bug suppression. If you didn't use a neonicotinoid drip application at planting and are seeing high numbers of cucumber beetles, I recommend getting out an imidacloprid application ASAP to help rotate effective insecticide mode of action (MOA – IRAC Code).



Fig. 1 – Spotted and striped cucumber beetles. Photo courtesy of Ric Bessin, University of Kentucky Entomology.



Fig. 2 – Bacterial wilt disease symptomology.

Squash Bugs

Like cucumber beetles, squash bugs are an issue as soon as plants are in the field and can vector bacteria that cause cucurbit yellow vine disease, also known as yellow vine decline (Fig. 3, 4, and 5). Smaller fields are most susceptible, and numbers generally are the highest on field edges and during fruit-set and bloom. Fields should be monitored at least once a week and monitoring should be focused on the underside of leaves, at the base of plant, and under fallen leaves where squash bugs often concentrate. Adults are extremely hard to control and applications should target young nymphs or eggs. Apply an insecticide when egg masses or nymphs are observed on every few plants. Effective insecticides include pyrethroids (IRAC 3A - bifenthrin, lambda cyhalothrin, etc.), neonicotinoids (IRAC 4A - imidacloprid, acetamiprid, dinotefuran, thiamethoxam, and clothianidin), and carbamates (IRAC 1A - methomyl). Neonicotinoids such as dinotefuran and imidacloprid can also be applied as drip applications and may provide some aphid and cucumber beetle suppression.



Fig. 3 – Squash bug adult.



Fig. 4 – Squash bug eggs.



Fig. 5 – Yellow vine disease symptoms.

Aphids

Melon aphids are considered a secondary pest in Arkansas pumpkin production. Insecticides such as pyrethroids, pyrethrins, or organophosphates that are used to control cucumber beetles, squash bugs, and other pests, kill the natural enemies that usually keep aphids suppressed. If you have used broad-spectrum insecticides in your pumpkin patch this year, including many organic options, then you need to be scouting for aphids (Fig. 6). There are many product options for aphid control such as acetamiprid (IRAC 4A- Assail, Tristar, and Anarchy), flupyradifurone (IRAC 4D - Sivanto Prime), sulfoxaflor (IRAC 4C - Transform), and Flonicamid (IRAC 9C - Beleaf). Acetamiprid, sulfoxaflor, or flupyradifurone are likely going to be the easiest products to find locally. Aphid control is necessary when populations are building on every few plants and the natural enemy complex was collapsed by recent broad spectrum insecticide sprays.



Fig. 6 – Melon Aphids on the underside of pumpkin leaves following a pyrethroid spray.

Management Plan

Many of the insecticides mentioned here will control both cucumber beetles and squash bugs, and in most production areas of the state, these pests are likely to both be present. Due to the risk of flaring melon aphids, a good strategy is to start early with a drip application of imidacloprid (Admire Pro) or dinotefuran (Venom or Scorpion) to prevent flaring aphids. These products usually give at least 3 weeks of suppression that should help protect from bacterial wilt or yellow-vine disease. Foliar applications of pyrethroids are usually relied on for cucumber beetle and squash bug suppression, but it is important to rotate in other **Modes of Action** like carbamates, neonicotinoids, or organophosphates where possible. Repeated use of one chemistry is likely to lead to lowered success of control. This is especially important when considering squash bug, as it is difficult to suppress this pest once infestations are excessive.

If you have any questions give me a call at 479-249-7352.

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