Announcer ([00:03](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

The Missouri State Journal, a weekly program keeping you in touch with Missouri State University.

Adair Seifert ([00:09](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

Tending to a summer garden can be a peaceful time to unwind and connect with nature. Unfortunately, garden pests and diseases can wreak havoc on your perfectly pruned garden. Harmful pesticides and bug repellants are frequently used, but they can cause damage to your plants and cause health issues. What are some safe and natural ways to prevent garden pests? I'm Ada Seifert and today Dr. Clydette M. Alsup-Egbers, associate Professor of Environmental Plant Science at Missouri State University joins me today to share ways to naturally prevent garden pests.

Dr. Clydette M. Alsup-Egbers ([00:43](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

The pests that people are going to deal with in their summer garden basically depends on what you're growing. There are a few kind of insects that we'll eat on practically any vegetable such as grass hoppers, snails, slugs, leaf hoppers, and if it's hot and the plants are dry spider mites. In most cases, these pests do a limited amount of damage and I seldom try to control them in my gardens. Insects that cause the most damage tend to be a little more host specific. For instance, tomato horn worms on tomatoes, cabbage worms on plants in the brassicaceae family, which includes cabbage, broccoli, kale, and cauliflower squash bugs and cucumber beetles can be bad for squash, cucumbers and melons in the cucurbitaceae family, leaf hoppers they tend to favor the leafy green crops. Aphids love lettuce. And then I guess asparagus beetles on asparagus,

Adair Seifert ([01:37](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

Alsup-Egberss shares what to look for when assessing garden damage.

Dr. Clydette M. Alsup-Egbers ([01:41](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

Here's the things I look for. Holes in other chewing damage on leaves frass, that's a fancy name for caterpillar poop, which is green to brown pellets on the leaves. And you're gonna see that mostly on those, cabbages and kales and such. You can have bites taken out of fruit like peppers and tomatoes from varmits like rabbits and squirrels, spiderwebs if you have spider mites. Silver trails of slime when slugs are snails are there seedlings that topple over from the base? If cut worms have girdled the stem by feeding on it? I've talked mostly about insect pests, but there are some diseases that can cause problems in vegetable gardens. Some of the symptoms for them are leaf spots, wilting, yellowing foliage, stunted plants.

Adair Seifert ([02:27](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

She shares simple steps you can take to stay ahead of any possible garden pests.

Dr. Clydette M. Alsup-Egbers ([02:32](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

First, you have to correctly identify the insect or the disease so you can look up the proper treatment options. If you have some damage, you have to decide whether to try to control it or kill the insect. I'm thinking here of some caterpillars that just devour my parsley and some of the parsley cousins, such as carrots. Every summer, they eat a huge amount of the leaves, but then they go off and become black swallowtail butterflies. The parsley will regrow after a few weeks, and I try to always plant a little extra of any of my crops to have enough for the critters plus food for us. And then next, you have to scout regularly. That means looking closely at your crops as often as possible so you can catch a problem in its early stages when it's easier to treat,

Adair Seifert ([03:13](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

She shares natural and cost effective ways to prevent and tend to garden pests.

Dr. Clydette M. Alsup-Egbers ([03:17](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

One of the things to do is minimize contact between the plants and the pests. There's a product called floating row cover can be put over vegetable crops so insects can't get to the plants. You can wash off some insects such as spider mites and aphids with a water spray handpick insects and drop them into a bucket of soapy water. Put boards near squash plants since the squash bugs will hide under them at night and then turn over the boards in the morning to trap and kill the bugs. Use chemical sprays or dusts. There are a lot of natural and organic products. You can find many recipes online to make your own. One example is using a hot pepper spray for insect repellent. Another example is mixing old milk with water and spraying it on plants to control powdery mildew. If you are going to spray, make sure you thoroughly spray the plants foliage.

Dr. Clydette M. Alsup-Egbers ([04:04](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

Top and bottom. Don't grow the same plant in the same location. Pests of a particular crop, such as potatoes tend to build up if the plants are in the same place every year. Plants in the same family are also typically susceptible to the same pests. If you've got a problem with the tomato horn worms, you can pull them off. Or if you're squeamish, like most of us are, cut 'em in half. I keep an old pair of scissors reserved just for this task. Encourage natural insect predators and parasites. Grow some plants with numerous small flowers, which provide food and pollen for beneficial, helpful insects. Another thing, turn under crop debris as soon as you can after the cold kills the plants in the fall. This way, they aren't there to provide an overwintering site for insects, their eggs or their larvae, as well as disease organisms for diseases. The number one method to prevent them is to grow resistant plants. If they are available. Seed catalogs usually specify whether a vegetable variety is resistant to certain diseases.

Adair Seifert ([05:02](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

That was Associate Professor of Environmental Plant Science from Missouri State University, Dr. Clydette M. Alsup-Egbers. I'm Adair Seifert for the Missouri State Journal.

Announcer ([05:12](https://www.temi.com/editor/t/sK8mJQ-gAxdTQ4kRv2SVK5hJ9loeOxV07pgQe1g9CvN1S3HMU-M-OYGibDsL_Tdzchb1xEwRWK1iOiSDTf_AYeZZct4?loadFrom=DocumentDeeplink)):

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