

Scout Now for Leafhoppers in Alfalfa

NEWARK, Del. — Alfalfa is an important crop for dairy farmers. Other producers have also been growing more of it recently as a cash crop. Though expensive to establish, with proper management it can be profitable to grow. Now that the first cutting of the season has been made, the challenge is to protect regrowth from potato leafhopper attack and weed competition.

Scouts for Delaware Extension's alfalfa integrated pest management program have been finding leafhoppers since late May in Delaware fields. According to University of Delaware extension agricultural agent Bob Hochmuth, over 1,000 acres are now enrolled in this program, most of them in Kent County. Participating farmers have already been alerted to the leafhopper threat, but other alfalfa producers should also be on the lookout for the pest.

"I've always felt that growers underestimate leafhopper damage," Hochmuth says. "In many instances, producers aren't familiar with this insect. They don't know how to detect or control it. We started our alfalfa IPM program two years ago to help farmers monitor this and other pests."

The county agent considers the potato leafhopper the most damaging insect on alfalfa in Delaware. Though it doesn't overwinter this far north, it can be found in Delaware in early summer. The first alfalfa cutting generally escapes damage if harvest is not delayed, but later growth is vulnerable to attack.

Potato leafhopper feeding causes the greatest loss on new spring seedlings and on the regrowth of second and third

cuttings, Hochmuth says. The insect lays its eggs in alfalfa stems and large leaf veins. During the summer, development from egg to adult occurs in three weeks, so several generations can develop during the course of one growing season.

Both adults and nymphs feed on alfalfa, but nymphs cause the most severe damage. Initial feeding appears as yellow wedge-shaped areas on leaves. This is often referred to as hopper burn. A heavy infestation may cause leaves to turn entirely yellow. Leafhopper feeding stunts plants, destroys new stands and regrowth, lowers protein content and generally reduces alfalfa quality.

"Start sampling for the potato

leafhopper shortly after harvesting the first cutting—when plants are two inches high," Hochmuth advises. Continue scouting on a weekly basis until the final cutting. Take 20 sweeps in five areas of the field to determine the average number of leafhoppers per sweep. Also take stem samples from the same five areas. Collect six stems per area and measure the length from stem base to growing tip.

Use the following guidelines to make a control decision:

Leafhoppers/ Plant Height	100 Sweeps
3" or less	20
4" to 6"	50
7" to 12"	100
12" or more	150

Oil Spray Aids in Mite Control

discoloration and distortion.

If you have access to a sprayer, the temptation is to load it up with a suitable pesticide and spray every ornamental and vegetable plant in sight.

But wait! You may end up doing more harm than good in the long run, Dr. Davidson warns. Why?

Because indiscriminate spraying with chemicals also kills the predator insects and other tiny creatures which feed on mites and help to keep them under control. Upsetting the balance of nature by killing off their natural enemies could then allow mites to multiply far faster than jackrabbits in Australia.

Consider examining the undersides of plant leaves weekly with a magnifying glass to check for mites and mite damage. If you don't have a magnifying glass, simply tap two or three leaves — or

Many insecticides are effective for leafhopper control. For recommendations, Hochmuth advises growers to call their county extension agent.

"The leafhopper is the pest of greatest problem on alfalfa as we go through the summer," he says, "but with the dry weather, there are other areas of concern this year. Regrowth from the first cutting is progressing slowly and on droughty soils may not shade the ground enough to out-compete weeds.

"If we get rain during this regrowth," he warns, "it may stimulate weeds to germinate in alfalfa fields before the second cutting is taken off. So scout fields carefully for weeds immediately

after that cutting. Grasses will be the most likely problems."

Herbicides that can be applied after a cutting include Sinbar, Paraquat and Gramoxone. Paraquat and Gramoxone kill only weeds that have emerged, and either one of these materials must be applied within five days after cutting, Hochmuth says. Sinbar will kill young emerged annual grasses and provides excellent residual control. It must be applied before two inches of regrowth occur on the alfalfa.

Paraquat, Gramoxone and Sinbar, cannot be used on alfalfa that has been established less than a year, the agent cautions. Read the label directions carefully before using any of these materials.

COLLEGE PARK, Md. — Spider mites just love hot, dry weather. So this spring has been a good one for those pesky, microscopic critters which can literally suck plant leaves to death.

With 12 major species common in Maryland, there's virtually no kind of ornamental and vegetable plant safe from attack, notes John A. Davidson, an Extension entomologist at the University of Maryland in College Park.

Usually less than 1/50th of an inch in length, mites are difficult to see with the human eye. But the damage they cause to growing plants can be severe, Dr. Davidson says.

As they feed, spider mites suck the green chlorophyll out of plant leaves. This causes small white dots to appear. Mites also appear to inject toxins into plant leaves, causing varying degrees of leaf

a small branch tip — against a sheet of white paper. Look for dislodged mites crawling on the paper. If you see five or more, consider spraying.

Instead of a chemical spray, try an oil spray. This can be very effective against mites and other soft-bodied, sucking pests. But it has a minimal effect on predators and parasites of these pests. Just make sure that plants are not drought-stressed at the time that you apply the oil spray.

Dr. Davidson admits that many persons — including even some horticulture professionals — are reluctant to use an oil spray in the summertime. This is mainly because horticultural oils have been considered primarily as dormant sprays ever since their introduction in the early 1900s.

It's true that oil sprays for many years were heavy and contained impurities. This meant they dried slowly and turned plant leaves brown.

But today's horticultural oils are much different, Davidson says. They are so light that they dry in an hour or so. And they contain few, if any, impurities. So they are no more harmful to the foliage of most plants than the insecticides formulated in petroleum carriers that are called emulsifiable concentrates.

While the recommended application rate for dormant sprays is three gallons of oil per 100 gallons of dilute spray, the University of Maryland specialist suggests using only two gallons of oil per 100 gallons of dilute spray during the growing season.

Monroe Co. Receives Conservation Education Awards

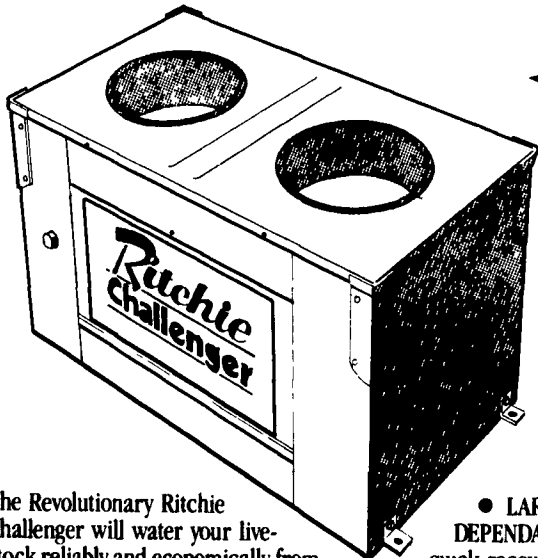
HARRISBURG — Two conservation education awards have been awarded to Monroe County under the 1986 Deutz-Allis Conservation Education Awards Contest in cooperation with the National Association of Conservation Districts.

The Monroe County Conservation District has won both the state and regional competition for the outstanding conservation district education program and will move forward into the national level contest this fall. As the Northeast Regional winner, the Monroe County Conservation District will receive a check for \$200 from NACD and will receive an award at the Northeast NACD Regional Meeting in August in Hagerstown, Maryland.

The state teacher award has been won by Donna Foulk, a high school teacher at Pleasant Valley High School, Brodheadsville, Monroe County. Both Ms. Foulk and the Monroe County Conservation District will be honored at the 39th Joint Annual Conference of the Pennsylvania Association of Conservation District Directors, Inc. and the State Conservation Commission.

The purpose of the Deutz-Allis/NACD awards program is to encourage the development of creative learning experiences in conservation for young people. The awards program also makes the community at large aware of the efforts being put forth by teachers and conservation districts in the area of conservation.

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