MINNESOTA EXTENSION SERVICE UNIVERSITY OF MINNESOTA

PLANT PEST Newsletter

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ALFALFA

ALFALFA WEEVIL (AW)—Reports of damage from AW larvae this season are just starting to come in, and so far all but reports from northern Faribault and southern Blue Earth counties are below economic levels. In Rice county very young larvae 1/8" - 1/16" long were found in 3 fields in which approximately 10% of the terminals showed shothole damage, or shredding of upper leaves. In the Cannon Falls area of Goodhue county, where weevils have caused economic damage in each of the past 4 seasons, only about 20% of the terminals show damage, but larvae range in size from 1/8" - 1/4". Full grown AW larvae seldom exceed 3/8" long. In Scott, Dakota and parts of Rice county, weevil damage to 15 - 25% of terminals in some fields is being reported.

UNIVERSITY OF MINNESOTA, U.S. DEPARTMENT OF AGRICULTURE, AND COUNTIES COOPERATING

ALFALFA WEEVIL—*CONTINUED*

But in Faribault county, one of 3 fields with weevils showed severe damage - the other two had 20% or fewer of the terminals damaged. The bad damage (90% or more of terminals with shotholing or shredding of leaves) occurred on the low-lying, stunted and heavily aphid damaged part of the field. Several fields across the southern third of Blue Earth county near Amboy and Mapleton also have fairly heavy infestations of AW with a high percent of the terminals damaged. High aphid populations often coincide with the weevil infestations.

It appears that in general AW larvae are hatching later relative to the maturity of the alfalfa this season. This bodes well for controlling them by cutting, so long as fields are harvested soon. Young AW larvae are less likely to be able to survive harvest, and any eggs that have not yet hatched will be removed from the field in the harvested alfalfa stems.

Fields that won't be cut within a few days should be checked for signs of weevil feeding damage. Pick 30 to 50 alfalfa stems (6 to 10 at random from 5 parts of the field) and examine their growing tips for shotholing. Also notice shredding of the upper leaflets. If 35% or more of the stems show either sort of damage, and weevils are present, economic yield losses will probably occur unless the field is cut or sprayed before the larvae get much bigger.

If cutting is not an option, contact your local county extension agent for spray advice. If weevil damage or high numbers of weevils were present before harvest, it is advisable to check the stubble after the hay is picked up. Especially under the windrows, alfalfa weevil larvae sometimes survive, and feed on the new growth, delaying greenup. A stubble spray may then be necessary. The risk of this is lower if larvae are very young at harvest time.

—Penny Ives, Extension Entomologist

PEA APHIDS (PA)—Quite a number of pea aphid populations have now crashed, due to parasites especially, but in some cases due to a combination of parasites and predators, or predators alone. Some other alfalfa fields, however, still have high numbers of aphids and are suffering damage each day they are left uncut. Most hay is now in the early bud stage, and can therefore be cut. Except in populations composed mostly of winged individuals, pea aphid abundance will be drastically reduced by cutting. Thus there is no value in spraying to control them just before harvest, unless it appears necessary to prevent mass movement of winged aphids into an adjacent uncut field, such as a new seeding.

More reports of aphid infestations on newly seeded alfalfa under oats have come in, and I would like to modify what I said about aphids on new seedings in last week's newsletter. Given the warmer weather, and greater abundance of parasites and predators in alfalfa growing areas now, it seems more reasonable to be guided by information from other, warmer states. Hence it is probably overcautious and would induce unnecessary sprays to be concerned about aphids at levels of 2-3/stem on new seeded alfalfa, unless the plants are actually showing damage symptoms. The plants have plenty of time to recover from a slight set back, and are not likely to be killed unless they are water stressed and have a really heavy infestation of aphids. Damage symptoms would be visible in time to control the aphids. To spray when no damage symptoms are present, probably only serves to reduce populations of beneficial insects and so lengthen the interval during which we have to rely on chemicals to control aphid infestations.

Thus it is important to keep a close watch on these new seedings for aphid damage symptoms. Should new seedings under oats show such symptoms, and still have aphids present at 2-3 or more per stem, then malathion 5E at 1 1/2 pts is registered for use both on alfalfa and on oats.

—Penny Ives, Extension Entomologist

POTATO LEAFHOPPER (PLH)—Minnesota Department of Agriculture survey personnel picked up PLH in alfalfa in Pipestone (0-3/100 sweeps), Rock (0-10/100 sweeps) and Nobles (0-28/100 sweeps) counties late last week (5/18 through 5/

20). So far PLH have not been reported from further east in the state. Please let me know if you find any green leafhoppers in alfalfa, and if only 1 or 2 are found, please collect them and send for positive identification. Once many are found in an area we can be confident they really are PLH, rather than the related rare species sometimes found earlier in the season.

—Penny Ives, Extension Entomologist

POTATO

TERRACLOR REINSTATED—Potato label for Terraclor has been reinstated at the federal level status of Minnesota SLN. Special local needs unknown, Not important, given there is a federal label now.

—Ward Stienstra, Extension Plant Pathologist

COLORADO POTATO BEETLE (CPB)—Adults were reported the week of May 9th and were observed and collected the week of May 16th. Potatoes were being planted at that time. Because potato emergence is still a week or so away, CPB adults will be "waiting" for them.

For those who experienced pyrethroid failures with CPB in 1987 adult numbers this spring may be unseemly high. Even so it is not advisable to direct insecticide control against adults, whatever the insecticide choice, for two reasons. First, newly emerging potato can stand a lot of defoliation without any yield effect. Second, treating adults increases insecticide selective pressure and will increase the rate of resistance development, all other things being equal.

We should wait for initial egg hatch before CPB control is started. For those who experienced pyrethroid failures with CPB in 1987 you should switch insecticides. Use either a phosphate or aryl hydrocarbon. Pyrethroids and carbamates should probably be used a single time, or less, under the current situation. Present alternative choices (non-pyrethroid) will not perform as effectively as the pyrethroids but if defoliation is kept near zero during bulking earlier modest defoliation will not cause yield reduction.

There is considerable interest by chemical companies in providing acceptable insecticides for resistant CPB control. At this time none of the tentative alternatives appear to be as effective, cheap and easy to handle as were the pyrethroids however.

—Dave Noetzel, Extension Entomologist

SMALL GRAIN

APHIDS IN SMALL GRAIN—Surveys of small grain in central, west central and northwest Minnesota reveal low numbers of bird cherry-oat aphid in nearly every field. English grain aphid was also occasionally present. None of the infestations were economic but grain is very small at this time.

Bruce Potter (Plant Pathology) notes that grain aphid numbers are high in the states south and southwest of us and that barley yellow dwarf (BYD) is present (and common) in winter wheat in those same areas. This would appear to raise the potential for BYD in Minnesota. We do not, however, have the comparable winter wheat reservoir for BYD the states south of us have. Thus the potential threat in Minnesota would be migrant viruliferous aphids.

Because BYD is a fairly rapidly vectored virus, aphid control is not a practical procedure to stop it. One can only hope for reduced aphid migration. The early wide-spread presence of aphids suggest we also should monitor small grains for aphid populations which might directly injure plants.

—Dave Noetzel, Extension Entomologist

SMALL GRAIN—*CONTINUED*

CEREAL LEAF BEETLE -- Dr. Dharma Sreenivasam, of the Minnesota Department of Agriculture reports finding cereal leaf beetle adults in Houston and Fillmore counties. Numbers reported were 1 to 2/200 net sweeps. He indicated they had yet to check in Dodge and Fillmore counties where it was also reported in 1987.

—Dave Noetzel, Extension Entomologist

VEGETABLES

ASTER LEAFHOPPER (ALH)—The second Aster Yellows Report for this season from University of Wisconsin Entomology Department was issued on 5/19. At that time the level of infectivity of ALH with Aster Yellows was still very low - less than 0.5%. At this level 50 ALH/100 sweeps would be required before even susceptible cultivars of carrots would need to be sprayed. So far we have not heard of such high numbers of ALH.

—Penny Ives, Extension Entomologist

WEED CONTROL

Weed Control in Forage Sorghum, Sorghum-Sudan Crossws, Sudangrass, Proso Millet

Because of the dry conditions throughout the state, forage sorghum, sorghum-sudan crosses, sudangrass and proso millet are being planted as emergency forage crops. Following is a list of labelled herbicides that can be used for weed control in these crops.

Forage Sorghum, Sorghum-Sudan Crosses, and Sudangrass

Cultural Practices—Sorghum, sudangrass, and crosses of these two are warm season crops and should not be planted until about May 20 to June 5 in Minnesota. Delayed planting until soil temperatures are warm enough for rapid crop seed germination provides an excellent opportunity for early weed control by tillage. The use of a rotary hoe or harrow will kill small weeds as they are emerging. A row cultivator with shovels set for shallow cultivation should be used after the crop and weeds emerge.

Herbicides—Atrazine may be used to control many annual grass and broadleaf weeds in forage sorghum and sorghum-sudan hybrids. Atrazine is *not* registered for use on sudangrass. Application may be made preplanting (within 2 weeks of planting), preemergence, or postemergence. Do not use atrazine on sandy soils. On medium and fine textured soils with organic matter levels of more than 1.5 percent, atrazine can be used at 2 to 3 pounds per acre. However, some crop injury may occur at the higher rate, especially if heavy rains follow application or if sorghum or sorghum crosses are under certain stress conditions. Postemergence treatments with atrazine alone should be made before weeds are more than 1.5 inches tall. If an emulsifiable oil is used with atrazine for postemergence control of broadleaf weeds, use no more than 1.2 pounds of atrazine per acre and apply before broadleafs are 4 to 6 inches tall.

CAUTION: Do not graze or feed forage from treated areas for 21 days following applications.

Propazine (Milogard) may be applied preemergence for annual grass and broadleaf weed control in forage sorghum (but not in sorghum-sudan crosses or sudangrass) at 2 pounds per acre. Do not use propazine on sandy soils.

Metolachlor (Dual) may be applied preplant incorporated or preemergence for annual grass and some broadleaf weed control in forage sorghum (not sorghum-sudan crosses or sudangrass). However, the forage sorghum seed must be treated with the

seed safner Concep, or serious injury will result. On medium and fine textured soil with organic matter levels of more than 1.5 percent, metolachlor can be used at 2 to 2.5 pounds per acre. Do not use metolachlor on sandy soils.

For the control of broadleaf weeds in forage sorghum, sorghum-sudan crosses or sudangrass, 2,4-D amine or ester may be used when these crops are 4 to 12 inches tall. Application at earlier or later stages of the crop may result in serious crop injury. Use 2,4-D amine at 0.25 to 0.50 pound per acre or 2,4-D ester at 0.16 to 0.33 pound per acre.

CAUTION: Do not graze or harvest for 14 days after 2,4-D treatment.

Proso Millet

Herbicides—Atrazine may be used to control many annual grasses and broadleaf weeds in proso millet. *Do not* use atrazine on foxtail millets. Application may be made preemergence or preplant incorporated. Atrazine can be applied at 0.6 to 1.1 pound per acre on soils with organic matter levels of less than 2 percent, and at 1.1 to 2.2 pounds per acre on soils with organic matter levels of 2 percent or higher.

—Bev Durgan, Extension Agronomist - Weed Control

MISCELLANEOUS

DIAL U HIGHLIGHTS—Week of May 15-21, 1988

Planting—The last week of May ought to be safe for planting warm season vegetables in the southern half of the state. Don't mulch them, though, for several weeks. This allows soil temps to continue to warm up, accelerating early growth. (Warm season crops include tomatoes, peppers, eggplants and vine crops such as melons, squash, pumpkins and cukes.

Carpenter ant swarms—People recently have been finding swarms of winged carpenter ants. These are new queens, which are about 1 inch in size, and males. After mating, the queens fly in search of a site to start a new nest. If a swarm of ants is found indoors, it is a sure sign of a nest being inside for at least 2-3 years. Finding only a few queens inside, however, may not indicate a nest but only some incidental ants that entered into the building. See AG-FS-1015, Carpenter Ants, for further details.

Anthracnose has been reported on ash and oak trees this past week. Anthracnose is caused by a group of closely related fungi which infect a variety of shade trees. Fungicides are usually not recommended.

Direct sunlight—Don't put houseplants outdoors in direct sunlight, even though they've been in a sunny window indoors. Chances are, leaves will burn. Instead, put them in the shade of a tree or building, where they receive direct light only early or late in the day.

Birch leafminer damage—Callers are describing birch leaves that are turning brown. These are defoliated areas due to birch leafminer feeding. In most cases it is too late for control. If the mines are still small, an application of Orthene can be made. Birch leafminer defoliation normally affects the appearance only, not the health of the birch.

Patch disease on sodded lawns continues to concern homeowners. Lawns which have a thick thatch layer and are poorly rooted are good candidates for patch disease when the lawn goes into drought and heat stress. For more information refer to AG-FS-3034, *Patch Diseases of Lawns*.

Broadleaf weeds—You can still use herbicides for broad-leaf weeds on your lawn, provided it is not in poor condition due to moisture stress. Herbicide sprays are probably a better idea than weed and feed products, since they can be applied directly to the troubled areas, rather than being spread throughout the entire lawn.

DIAL U HIGHLIGHTS—*CONTINUED*

Sawflies on conifers—Sawfly larvae have commonly been found feeding on evergreens, especially the European pine sawfly on pine. In most cases the larvae are full grown. Control is still justified, even if the larvae are full grown, if the damage is not extensive. Insecticides such as malathion, Sevin, and Orthene effectively control sawflies.

Other common calls include verticillium wilt, oak wilt, Dutch elm disease, black knot, turf, pruning, and hardwood defoliators.

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