



PLANT PEST *Newsletter*

MINNESOTA EXTENSION SERVICE

UNIVERSITY OF MINNESOTA
DOCUMENTS

UNIVERSITY OF MINNESOTA

MAY 29 1990

PPST06

May 25, 1990

ST PAUL CAMPUS LIBRARIES

IN THIS ISSUE

PAGE

ALFALFA.....	38
ALFALFA WEEVIL	38
CORN	38
HOP VINE BORERS ACTIVE	38
CUTWORM	38
GRASSHOPPERS	39
GRASSHOPPER EGG HATCH	39
ASAN XL EMERGENCY EXEMPTION	39
PRESENT STATUS OF ASANA XL	39
ENVIRONMENTAL WARNING STATEMENTS FOR HONEY BEES	39
SEVIN XLR PLUS 4F	40
ORTHENE 75W	40
MALATHION 5E	40
LORSBAN 4E	40
DIAZINON 4E	40
METHYL PARATHION 4 & 6E (ALSO PENNCAP-M 2F)	40
MALATHION ULV 95	40
CYGON 4E	40
ETHYL PARATHION 8E	40
FURADAN 4F	40
SCOUT XTRA .9E	40
ASANA XL .66E	40
REENTRY INTERVALS	40
MISCELLANEOUS	41
BEACON HERBICIDE	41
DIAL U	41

For more information regarding the Plant Pest Newsletter
contact Extension Plant Pathology at 612-625-6290

ALFALFA

ALFALFA WEEVIL—Alfalfa weevil populations remain very low throughout the state with a maximum of 1-2 larvae/100 sweeps being detected. Minnesota Department of Agriculture did find an average of 61 larvae/100 sweeps from 10 fields in Winona Co.; one field had up to 600 larvae/100 sweeps. I will continue to compare field counts with the degree-day (DD) forecast to refine the model. DD accumulations for the past week are shown below. A reasonable period to expect peak activity of young larvae (1st & 2nd instar) is between 300-400 DDs. It is still too early to determine what impact the below-zero weather last Dec. 11-22th had on adult weevil mortality.

ALFALFA WEEVIL DEGREE DAYS (as of May 20, 1990)

<u>West</u>		<u>Central</u>		<u>S. Central</u>		<u>S. East</u>	
Alexandria	- 286	St. Cloud	- 331	Faribault	- 341	Rosemount	- 413
Morris	- 344	Becker	- 348	Mankato	- 439	Redwing	- 427
Montevideo	- 362	Hutchinson	- 336	Waseca	- 365	Rochester	- 318
Willmar	- 324	Cambridge	- 320	Winnebago	- 354	Winona	- 417
Olivia	- 373	St. Paul	- 414			Caledonia	- 307
						La Crosse	- 428

—Bill Hutchinson
Extension Entomologist

CORN

HOP VINE BORERS ACTIVE—Hop vine borer (HVB) generally move into corn from quackgrass each year about Memorial Day weekend. The cool, wet weather in SE Minnesota has slightly slowed HVB development. Symptoms of HVB attack on quackgrass, were observed this week by Fritz Breitenbach, Assistant Extension Specialist—IPM, near Rochester. These larvae were in the first and second stages. Movement into corn from roadside ditches, grassed waterways and fencerows generally begins in the third stage. This movement should be underway next week and peak the first week of June.

Insecticides should be applied before this HVB movement occurs for maximum effectiveness. Although no insecticides are specifically labeled for HVB, these products and rates have proved effective in recent trials:

Asana XL 0.66E at 0.05 lb AI/acre

Ambush 2E at 0.2 lb AI/acre

Pounce 3.2E at 0.2 lb AI/acre

For infestations arising along field edges, treat at emergence or when symptoms of HVB attack first occur in the bordering corn row. However, excellent soil moisture may delay the appearance of wilting symptoms in attacked corn. Infield infestations associated with quackgrass or woolly cupgrass should be treated at emergence. Note the results of a study completed last year.

Timing Insecticides Against Hop Vine Borer

<u>Asana Timing</u>	<u>Surviving Stand</u> (1000s/acre)	
	<u>1988</u>	<u>1989</u>
Emergence	19.50a	23.11a
Emergence + 7 days	-	21.66a
Emergence + 14 days	10.21b	19.81b
Untreated	6.47b	19.74b

Entire fields usually do not require treatment since the patchy HVB infestation occur in the same general areas year after year. Just treat field margins and infield grassy spots where HVB infestations were noted last year. Tank mixing with herbicides to control these problem grasses may be advantageous.

—Ken Ostlie
Extension Entomologist

CUTWORM—Infestations of cutworms from a variety of crops were reported last week. Generally, these infestations seem to be dingy or possibly darksided cutworms.

Populations as high as 1-2 larvae per row ft were reported from corn following soybean and alfalfa.

On emerging corn, leaf feeding can reach high levels with little or no resulting stand loss. For example, a Missouri study followed 45 dingy cutworm infestations and found none reached treatable levels of stand loss. So it's generally wise to wait and see if cutting begins before you decide to treat. Patience is the key! To determine whether cutting is taking place, stake out 100 plants in several areas with abundant leaf feeding. In sunny, windy weather, cut plants wilt and dry

quickly and may blow away. Monitor every 2-3 days and treat if cutting approaches 3%.

Black cutworms from April 27-29 flights and from May 8-15 flights have not yet reached sufficient size for cutting to begin. Leaf feeding should begin to appear this week with cutting not appearing until the first two weeks of June.

—Ken Ostlie, Dave Noetzel and Bill Hutchinson
Extension Entomologists

GRASSHOPPERS

A number of you have sent in adult grasshoppers this past week. The two most common are *Arphia conspersa*, a small medium sized dark brown hopper commonly with a light brown stripe down its back and *Chortophaga viridifasciata*, a green-appearing medium-sized hopper. *A. conspersa* (the speckled rangeland grasshopper) feeds on grasses and sedges, especially needle and thread, needlegrass and western wheat grass. *C. viridifasciata* (northern greenstriped locust) prefers to feed on bluegrass. We found both of these in Sibley Co. at their county park and several of you have submitted speckled rangeland grasshopper specimens. Both species winter as nymphs and neither is considered a cropland pest.

GRASSHOPPER EGG HATCH—Hatch of two-striped grasshopper now appears to be statewide. Numbers of nymphs, however, is usually low, suggesting much of the hatch is still ahead. We have had only two reports of crop injury, one on sugarbeet and the other on sunflower. I had a couple of calls from growers that did find low numbers of nymphs across cropland. This might be more common in 1990 than it was last year just due to greater population pressure. A few warm days (70°F+) should bring the hatch along dramatically, so crops should be watched closely.

ASANA XL EMERGENCY EXEMPTION—Minnesota's request for the use of Asana XL on CRP and small grains for control of grasshoppers was denied by the EPA early this week. The reasons cited included the lack of a mesocosm study which essentially is a method of quantifying the environmental effect of the especially high aquatic (fish) toxicity of Asana XL. In addition, it was speculated that field runoff and drift would exceed acute/chronic toxicity values for fish and aquatic invertebrates. The indirect effects of reduction in food supply might occur for ducks and the endangered Least tern and Piping plover. Sevin (carbaryl) is suggested by EPA as an acceptable alternative.

My evaluation of all this is that our 1989 experience suggests a nearly total lack of risk to aquatics despite use of Asana XL on more than 1.5 million acres in Minnesota. Furthermore, the comparative treatment costs mitigate against

the use of Sevin and malathion when most other insecticides are labeled on the crop (site) to be treated.

I quite frankly believe that the risk to upland game in Minnesota is considerably increased as a result of this decision and I do not understand how they (EPA) can say there will be an equal or reduced risk to waterfowl. This decision is more than a little disturbing in view of the unusual emphasis we have placed on wildlife and environmental concerns in our educational effort.

PRESENT STATUS OF ASANA XL—As indicated above, at this point we do not have use of Asana XL on CRP, small grains, and wildlife lands because of the decision by EPA.

However, Asana XL can be used for grasshopper control on corn, soybean and noncrop lands. Thus you can use Asana on roadsides provided they are not harvested for hay. You could also use Asana on sites such as prairie if these sites are not used for recreation and/or grazing.

ENVIRONMENTAL WARNING STATEMENTS FOR HONEY BEES—I have excerpted all of the honey bee warning statements from all of the insecticides labeled for use against grasshoppers. These warnings apply to all crops upon which the insecticide is labeled.

You should note that all labeled compounds are highly toxic topically to the honey bee. Thus all crops in bloom upon which bees are foraging are not to be sprayed.

Furthermore, Furadan, ethyl parathion, methyl parathion, diazinon, Lorsban and Orthene have statements which suggest that a crop in bloom which honey bees could forage after treatment should not be treated.

It is my suspicion that it will be virtually impossible to adhere to label limitations of these compounds and still treat blooming alfalfa, sweet clover, etc. for grasshopper control. I believe that the current climate of legal action suggests major consideration had better be given to this situation.

Asana XL, malathion and Sevin XLR, once they are dry, should be least harmful to honey bees. However, they too cannot be sprayed on foraging bees.

GRASSHOPPERS/Continued

Sevin XLR plus 4F

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. However, field studies have shown that Sevin brand XLR plus carbaryl insecticide is less hazardous to honey bees than other carbaryl products when direct application to bees is avoided and the spray residues have dried. For maximum honey bee hazard reduction, apply from late evening to early morning or when bees are not foraging. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging in the treatment area. However, applications may be made during foraging periods if the beekeeper takes one of the following precautionary measures prior to bee flight activity on the day of treatment: 1) confine the honey bees to the hive by covering the colony or screening the entrance; or 2) locate hives beyond bee flight range from the treated area. Precautionary measures may be discontinued after spray residues have dried. Contact extension.

Orthene 75W

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Contact extension.

Malathion 5E

This product is highly toxic to bees exposed to direct treatment or residues on crops.

Lorsban 4E

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Avoid use when bees are actively foraging. This product is highly toxic to bees exposed to direct treatment on alfalfa. Do not apply if nearby bees are clustered outside of hives and bees are foraging. Contact extension.

Diazinon 4E

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply when bees are actively visiting the crop, cover crop, or weeds blooming in the treatment area. Applications should be timed to provide the maximum possible interval between treatment and the next period of bee activity. Contact extension.

Methyl parathion 4 & 6E (also PennCap-M 2F)

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops and weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Do not apply to alfalfa if the crop or weeds in the treatment area are in bloom. Contact extension.

Malathion ULV 95

This pesticide is highly toxic to bees exposed to direct treatment or to residues remaining on the treated area. Do not apply this product or allow to drift when bees are actively visiting the treatment area. Applications should be timed to provide the maximum interval between treatment and the next period of bee activity. Contact extension.

Cygon 4E

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Contact extension.

Ethyl parathion 8E

This product is extremely toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow to drift to blooming crops or weeds if bees are visiting treated area. Do not spray legumes during bloom period to avoid injury to honey bees. Contact extension.

Furadan 4F

This product is highly toxic to bees exposed to direct treatment or residues on crops. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treated area. Do not move bees to alfalfa fields within 7 days of application. Observe the indicated number of days after application before cutting or grazing. Contact extension.

Scout xtra .9E

This pesticide is highly toxic to bees exposed to direct treatment. Do not apply it or allow it to drift to crops or weeds on which bees are actively foraging. Notify state or federal authorities and Hoechst Roussel Agri Vet immediately if you observe any adverse environmental effects due to the use of Scout xtra insecticide. Contact extension.

Asana XL .66E

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply Asana XL or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area. Contact extension.

REENTRY INTERVALS—The reentry interval I listed for Lorsban in the last newsletter should have been 1 day instead of 2 days. This really isn't terribly critical since Lorsban fields have a reentry interval and must be posted according to MDA guidelines.

—Dave Noetzel
Extension Entomologist

MISCELLANEOUS

BEACON HERBICIDE, A FOLLOW UP—Details about the use of Beacon were published in the last newsletter (May 18, 1990). Since that time, more details have arrived from CIBA-GEIGY regarding the use of Beacon in corn. At this time it appears that there will be enough Beacon to treat 1,000 acres of corn in Minnesota. Since CIBA-GEIGY is targeting the sorghum weeds, Southeastern Minnesota should be the primary use site. The product should be available at the dealer

level around June 1. The only corn hybrids that are registered for sale in Minnesota that are classified by CIBA-GEIGY as potentially susceptible to Beacon injury are DeKalb DK 291, Funk's 4010, and Pioneer 3953. Tank mixtures of Beacon with 2,4-D, Banvel, or Buctril must include a non-ionic surfactant. Do not use a crop oil concentrate or liquid nitrogen fertilizer in these tank mixtures.

—Jeffrey L. Gunsolus
Extension Agronomist —Weed Control

DIAL U

County Agents: Please Alert Master Gardeners of the Following Items

Cankerworms were anticipated in early May. Due to the cool weather, most eggs did not hatch until early last week (week of May 20) in the Twin Cities. Effective control should be applied when cankerworms are still small (1/2 inch or less) and before defoliation is severe (when more than 50% of the leaves are present). In most cases in the Twin Cities that is right now. This will be earlier in southern Minnesota and later in the north. Target control particularly for young, recently transplanted trees, unhealthy trees, and trees that have been heavily defoliated in one or consecutive years. *Bacillus thuringiensis* (Dipel, Thuricide), carbaryl (Sevin), malathion, and acephate (Orthene) are effective insecticides, if control is desired. See AG-FO-0876, *Cankerworms*.

Winter injury—Reports continue to come in about trees, shrubs, flowering bulbs and perennials that failed to survive the winter or are leafing out slowly or only partially, or perhaps leafing out, then dying back. Chrysanthemums, hosta lilies, groundcovers such as snow-on-the-mountain, pachysandra and creeping phlox, hydrangeas, sumacs and lindens (basswood) join the list that has been dominated by arborvitae and maples. Much of this plant material will have to be replaced.

Bacterial leaf spots have shown up on numerous shrubs and perennials. Symptoms are dark brown to black spots bounded by tiny veins in the leaf which limit the spread of the infection and result in an angular appearance to the spot. Warmer temperatures and less rain will limit further development. Chemicals are seldom necessary. Bordeaux mixture could be used for some plants but leaf burn can result under warmer wet conditions.

Birch leafminer egg hatch was first noticed May 14 but the cool weather prevented most eggs from hatching until May 22. Effective control can be applied for about week after egg hatch. There will be less time to treat the further south you are from the Twin Cities and more time going north. Watch for the presence of small mines before treating.

Spring lawn care—Despite the blessing of abundant moisture in much of the state, we continue to receive many questions regarding repair and renovation techniques to deal with problems leftover from the terrible drought two summers ago. We're also getting lots of weed control calls.

Crabgrass preventer can still be watered into the lawn, even where the first few crabgrass sprigs are making their way through the soil.

It will stop those seeds that haven't yet sprouted.

It's a little tougher to use broad-leaf weed killer since you don't want it to be washed off by rain within 48 hours after application. But when it's dry (and not windy), you should get good results.

Red spots on rhubarb—Several fungi cause reddish colored leaf spots on the rhubarb leaves and occasionally the petioles during wet weather. **NO** control is necessary. Picking infected leaves will help limit the spread should cool wet weather continue.

Galls—We are just starting to get calls about various galls, including maple bladder gall, maple velvet gall, hackberry witches' broom gall, and gouty vein midge gall. Because

DIAL U/Continued

some galls are confused with diseases, be sure that the malady is correctly identified. Galls are cosmetic problems in nearly all cases. Once the galls are seen there is no effective control anymore this year. See AG-FS-1009, *Plant Galls*.

Transplanting—It's late to plant or transplant anything bare-root. Once trees leaf out, it's late to just dig them out of one location to move them to another in your yard. Roots will be damaged or diminished in the process, and will be unable to meet the moisture needs of the tree. Balled and burlapped or container-grown specimens are a different story, as are pro-

fessionally grown trees moved by a tree spade. They'll have enough roots to handle the warmer weather that's just around the corner.

Other common questions include poison ivy, carpenter ants, failure to bloom and/or set fruit, and pruning safety.

Jeffrey Hahn
Entomology

Deborah Brown
Horticulture

Cynthia Ash
Plant Pathology

The information given in this publication is for educational purposes only. References to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Minnesota Extension Service is implied.

Department of Plant Pathology
University of Minnesota
495 Borlaug Hall
St. Paul, MN 55108

St. Paul Campus Library
Documents Department
University of Minnesota
St. Paul, MN 55108