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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 91-6] [April 26, 1991]

Alex Martin

University of Nebraska - Lincoln, amartin2@unl.edu

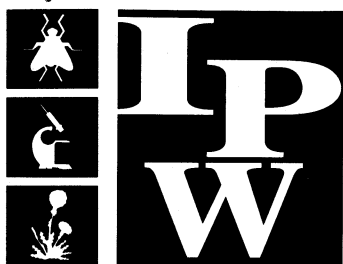
Bob N. Stougarrd

Extension Weed Specialist, University of Nebraska-Lincoln

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Insect Science Plant Disease Weed Science

NEWS

UNIVERSITY OF NEBRASKA COOPERATIVE EXTENSION • INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES

No. 91-6

April 26, 1991

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INSECT SCIENCE

Russian Wheat Aphids Spotty in the Panhandle

Wheat growers in western Nebraska should continue scouting for Russian wheat aphids in wheat. Significant infestations are beginning to develop in Colorado just south of the Panhandle and isolated infestations are becoming evident in some Panhandle areas where the aphid overwintered. In some small field areas they are approaching treatable levels (more than 5-10% of the field).

The most economical approach now is to spot-treat infestations when they have exceeded the 10-20% infested tiller threshold. This will stop further damage to infested areas and stop the spread to other parts of the field. An early spot treatment may delay and perhaps eliminate the need for later treatments. Spot treatments should target infested areas and a limited area surrounding these areas.

Di-Syston 8E and Lorsban 4E are the most effective chemicals for Russian wheat aphid control. Unfortunately, Di-Syston is too dangerous for ground application and Lorsban is not currently labelled for use on wheat in Nebraska. If significant problems develop, a crisis exemption may be requested for Lorsban. Please contact your extension agent to report significant problems since the Extension Service and Nebraska Department of Agriculture need to know of developing severe infestations to justify a crisis exemption label. For now, the only two products that

can be used for ground application are dimethoate (Cygon 400) at 0.375 lb active ingredient per acre and PennCap-M at 0.75 lb active ingredient per acre. These products provide some control, but results may be sporadic, particularly if infections are heavy.

Gary Hein

Army Cutworm Still Threatens New Alfalfa

Alfalfa and wheat growers in southern Nebraska are reporting that the army cutworm problem has run its course. Those fields requiring treatment have now been treated and are back to normal for the most part. We would expect that most army cutworms in the southern counties have ceased feeding and entered the soil for pupation.

Alfalfa and wheat growers north of Interstate 80 and the Platte River should continue to scout their fields for this pest. Special attention should be given to any alfalfa fields that were seeded last fall because these will not tolerate much cutworm feeding. Established alfalfa and wheat fields are not as susceptible to severe damage.

Steve Danielson

UNIVERSITY OF NEBRASKA-LINCOLN, COOPERATING WITH THE COUNTIES AND THE U.S. DEPARTMENT OF AGRICULTURE

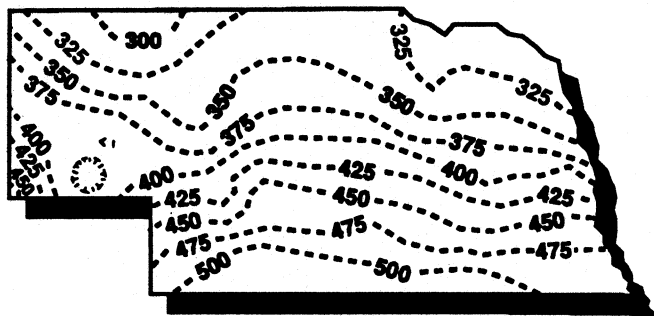


Cooperative Extension provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.

Insecticide Uses May be Eliminated

The use of three insecticides may be eliminated for specific crops, according to recent proposals to the EPA. In all three cases, alternative products are available. The alternatives, however, may be more costly or involve more severe restrictions.

Supracide 2E (methidathion) — Ciba-Geigy Chemical Co. has notified the EPA that they will not reregister Supracide 2E for use on alfalfa. Existing stocks of labeled Supracide 2E can be used until Jan. 22, 1992.



Accumulated degree days for the alfalfa weevil as of April 21.

Alfalfa Weevils Evident Across State

Alfalfa growers should be scouting alfalfa over 6 inches tall for the alfalfa weevil. This scouting should be done weekly until after normal regrowth is present after the first cutting. Peak larval feeding normally occurs when 600 degree days have accumulated, a point southern Nebraska will soon reach. Field reports indicate that weevil larvae are present and feeding in alfalfa through-out the eastern two-thirds of the state. No economic infestations requiring insecticide treatment have been reported, but it probably is too early to find such activity.

Clover leaf weevil larvae also can be found in alfalfa crowns throughout eastern Nebraska. We do not believe these larvae are causing economic damage to your alfalfa, however, watch fields with high larval infestations after the first harvest for regrowth problems when the larvae become adults.

Steve Danielson

Malathion — The EPA is proposing that the following uses of malathion be dropped from all labels: apples, asparagus, blackberries, broccoli, cabbage, melons, pumpkins, raspberries, soybeans, tobacco, greenhouse uses, stored corn and wheat, use in food handling establishments, use on pets and domestic animals, animal premises, and some forestry uses. The EPA is accepting comments on this proposal. Contact Joanne Edwards at (703) 308-8046 for details on how to make your feelings known.

Ethyl Parathion — Many uses of ethyl parathion will likely be dropped due to problems in obtaining information for reregistration. These include all dust, granular, and flowable formulations; uses on cucurbits, small fruits, grass forage, fodder, and hay (includes alfalfa), and a number of specialty crops (e.g. artichokes, avocados, hops, okra, peanuts, rape, and sweet potatoes). Contact Edwards at the EPA number previously listed to comment on this proposal.

Steve Danielson

IPW News

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Lisa Brown Jasa, Editor

For more information about a particular subject, write the authors at the addresses below:

UNL Department of Entomology
202 Plant Industry Bldg.
Lincoln, NE 68583-0816

UNL Department of Plant Pathology
406 Plant Science Bldg.
Lincoln, NE 68583-0722

UNL Weed Science
Department of Agronomy
279 Plant Science Bldg.
Lincoln, NE 68583-0915

New Computer Software Aids in European Corn Borer Management

A computer software program useful in managing second generation infestations of European corn borers (ECB) in Nebraska field corn is now available. The software is based on a program developed by Kansas State University, and was modified for use in Nebraska. It runs on IBM-PC and compatible computers equipped with at least one 5 1/4" or 3 1/2" disk drive. An 80-column printer is required for written reports.

The program has two parts: a phenology model and a management model. The phenology model predicts when second generation European corn borer moths will lay eggs. This information is useful in timing scouting for second generation corn borers. To run this part of the model, a sample of first generation corn borers must be collected from the field. Historical weather data from Nebraska counties incorporated into the program is used to predict when second generation ECB moths will emerge and lay

eggs, based on the age distribution of the sampled larvae. After a field is scouted for second generation corn borer, the management model allows you to compute a cost-benefit analysis of whether it would be profitable to treat individual fields for second generation ECB, based on a variety of information you provide (control costs, crop market value, crop stage, ECB infestation level, expected control efficacy).

The model is available for sale in Nebraska only through the UNL Dept. of Agricultural Communications for \$71.23 (\$65, plus \$4.23 sales tax, plus \$2.00 shipping) for each copy ordered. A complete user's manual accompanies the software. Make checks payable to University of Nebraska. Send orders with payment to Nebraska ECB Management Software, 108 ACB, University of Nebraska-Lincoln, Lincoln NE 68583-0918. Indicate whether you want a 5 1/4" or 3 1/2" disk.

Bob Wright

FOR MORE INFORMATION

The following new or revised publications were recently released by the University of Nebraska Department of Agricultural Communications. For a publications catalog, contact your local Extension office or write Bulletins, 105 ACB, University of Nebraska, Lincoln, NE 68583-0918.

G75-282 *Emergency Wind Erosion Control.* This NebGuide covers temporary techniques for emergency wind erosion control, when time and prior planning don't allow soil or seedlings adequate protection using more desirable methods.

G91-1021 *Managing Furrow Irrigation Systems.* Proper furrow irrigation practices can minimize water application, irrigation costs, and chemical leaching, and can result in higher crop yields.

G79-471 *Choosing Corn Hybrids. Revised.* This publication explains what factors to consider and compare when selecting a corn hybrid and how to obtain recent hybrid test data.

G91-1019 *Set up of tillage, planting and directed spray equipment.* This NebGuide discusses how to set up and operate liquid herbicide application equipment on tillage, planting and directed spray equipment.

G91-1020 *Plumbing Systems of Agricultural Sprayers.* Properly adjusting and maintaining the plumbing system of agricultural sprayers can improve the efficiency and uniformity of chemical applications.

Publications Catalog

1991 Publications Catalog. Published by the UNL Institute of Agriculture and Natural Resources for the Cooperative Extension Division, this catalog lists more than 1,500 publications on farm, home and business topics. Many are available free or at a nominal charge. Shipping and handling are extra.

Publications are categorized by the following major subject areas: crops; engineering, conservation and safety; food and nutrition; forestry; home and family; insects; lawn and garden; livestock; marketing, management, and economics; range and forage; soils; water; weather and climate; weeds; wildlife management and computer programs.

In most instances, Nebraska residents can receive single copies of up to 10 different publications for a \$1 mailorder charge. Some publications do have a charge, regardless of the number ordered. Out-of-state orders are charged differently, and individuals are encouraged to write for more information concerning specific publications.

PLANT DISEASE

Aerial Applicators Can Train at May Fly-Ins

When it comes to professional improvement and education, Nebraska aerial applicators are at the forefront. One method of achieving this increased improvement is by pilot participation at Operation SAFE Fly-In Clinics.

Aerial applicators know that by improving their spray patterns, they apply the correct amount of pesticide in a uniform manner without unduly harming the environment. Operation SAFE is a voluntary program designed to analyze spray droplet deposition in replicated flight tests under closely controlled conditions. The Nebraska Aviation Trades Association (NATA) in cooperation with the University of Nebraska has been conducting Operation

SAFE Fly-In Clinics since 1982. More than 105 aerial applicators have successfully become Operation SAFE certified pilots.

Two three-day Operation SAFE Fly-In Clinics are scheduled for this spring. The first one will be held April 30 through May 2 at the Broken Bow airport, with the second one scheduled at the Tekamah airport May 8 through May 10. Flight testing activity will start about 7:30 each morning and will continue throughout the day, weather permitting. Farmers and others interested in learning more about the program are welcome to come out to the airport and see the pilots and their planes "in action."

David Wysong

Status Still Obscure for EBDC Fungicides

About a year and a half ago, the manufacturers of mancozeb, maneb, zineb, and metiram voluntarily suspended registrations of their products on a number of vegetable and fruit crops. (These fungicides have a common chemical base known as EBDC -- Ethylene BisDithioCarbamate.) In December 1989, the EPA proposed canceling these and several other registrations and announced a "zero tolerance" standard for residues of EBDCs on all food crops affected by the manufacturer's and EPA's decisions. A market basket survey was to be conducted in 1990, and, after a careful review of all the data, the EPA "would take final action in the spring of 1991."

Despite this earlier assurance that a decision would be imminent, none is yet available. Apparently it is taking longer than expected to evaluate the studies. In the meantime, some uses of Maneb, Dithane M-22, Manzate, Mancozeb, Dithane M-45, Manzate 200, Zineb, and Polyram remain under voluntary suspension restrictions. Other label uses are still in force. Hence, it is still legal to use EBDC fungicides bearing older labels (pre January 1991 labels) on all crops specified; new products have been relabelled to reflect the reduced number of crops in compliance with the voluntary suspension. This is one more reason to always read the label.

David Wysong

Examine Pine Trees for Disease; Plan Treatment

Now's the time to determine whether your pine trees need to be sprayed for *Dothistroma* needle blight. This is a common disease on ponderosa, Austrian, and mugho pines throughout Nebraska. Left uncontrolled, premature needle drop can occur. Eventual tree death has occurred after severe infections over several years.

The symptoms to look for are a reddish-brown banding or spotting on current-year or older needles. This usually occurs first and more severely on the lower part of the tree. Infected needles die and drop prematurely, usually in late spring or early summer. Severely infected trees may only retain current-year needles.

This year's new needles are initially resistant to infection but will become susceptible about midsummer. Older

needles are susceptible throughout the season. Spores are released during rainy periods from May to October.

Research has shown that *Dothistroma* needle blight can be controlled by protecting susceptible needles with fungicides such as Bordeaux, liquid copper or fixed coppers. A mid-May application will protect susceptible older needles. A second application in mid to late June will protect new needles which are no longer resistant.

The Extension publication G81-575 *Dothistroma Needle Blight of Pines* discusses symptoms, causes, and control of this disease. Color pictures show characteristic symptoms and are helpful in disease identification.

Luanne Coziahr

WEED SCIENCE

Triazine-resistant Kochia Requires Special Plan

Kochia and Russian thistle are summer annual weeds that germinate in early spring. They are particularly troublesome in no-till systems. Kochia and Russian thistle are normally readily controlled with Atrazine, Bladex, Lexone and Sencor. However, in many areas of western and central Nebraska, kochia has developed resistance to triazine herbicides.

The following suggested treatments will control both susceptible and triazine-resistant kochia and Russian thistle.

In ridge-planted or no-till corn, Banvel, Gramoxone, and Landmaster II effectively control Russian thistle and triazine-resistant kochia. Buctril or Buctril + Atrazine are effective against Russian thistle and kochia up to 4 inches. Kochia and Russian thistle are moderately susceptible to 2,4-D.

For ridge-planted or no-till corn or sorghum, it's important to spray prior to planting while the weeds are small. Treat with Buctril, Buctril + Atrazine, or Banvel, depending on the crop and time interval before planting when kochia and Russian thistle are less than 4 inches. Debris pushed aside during planting may protect small weeds if spraying is done after planting.

In fields where a seedbed is being prepared, use a disk or other tillage implement ahead of planting to kill emerged weeds. A mixture of Banvel at 0.25 to 0.38 pounds per acre (depending on soil texture and organic matter) plus preemergence herbicides, offers good kochia and Russian thistle control in corn. Banvel in corn can only be used preemergence on medium and fine textured soils with 2% or more organic matter. Delayed planting also can be used to advantage, thus allowing additional kochia to emerge and be killed with tillage. However, corn yields may be reduced by planting later.

Buctril, Buctril + Atrazine, or Banvel may be applied postemergence on corn and sorghum. Banvel may be applied 15 or more days prior to planting in sorghum or after the sorghum is in the three-leaf stage, but before it is 15 inches tall. In corn, Banvel may be applied prior to planting, preemergence on some soils, and from the spike stage until corn is 36 inches tall. In corn over 18", use directed applications. Buctril can be applied before planting, up until corn or grain sorghum emergence, to control actively growing weed seedlings. It also may be used postemergence on grain sorghum in the three-leaf to boot stage or on corn from the three-leaf stage to tassel emergence. Buctril + Atrazine can be applied postemer-

gence before corn or sorghum are 12 inches tall. Check label for appropriate use rates. Banvel plus Buctril probably gives the most consistent control.

Kochia and Russian thistle can be controlled in ridge planted or no-till soybeans with Gramoxone applied prior to crop emergence. Command applied preemergence or preplant incorporated will control kochia in soybeans. Other treatments effective on kochia include Prowl, Pursuit Plus, Sonalan and Squadron. Soil applied treatments effective against Russian thistle include Sonalan, Treflan, Sencor, Lexone, Scepter, Preview and Pursuit.

Bob Klein, Gail Wicks, Alex Martin, and Bob Stougaard

Herbicide Carryover May Limit Alfalfa Replant Options

Severe stand loss and alfalfa injury occurred over much of Nebraska this past winter. As a result, some alfalfa stands have been lost and there is interest in planting some other crop or replanting alfalfa in those fields this spring. Carryover of certain herbicides used in the alfalfa last fall or early this spring could restrict replant crop options.

The use of Buctril or 2,4-DB (Butyrac or Butoxone) on alfalfa last fall or this spring would not limit replant options. Karmex, Lexone, Sencor, Sinbar and Velpar all carry replanting restrictions. A Lexone/Sencor treatment last fall or early this spring would not interfere with soybeans planted this spring; corn could be planted if at least 60 days had elapsed since application.

The use of Karmex, Sinbar or Velpar last fall or this spring would rule out the planting of any crop this year as specified on the product labels.

Bob Stougaard and Alex Martin

Thorough Laundering is Essential With Pesticide-Contaminated Clothing

Working with pesticides requires special handling and precautions in the field, as well as in the home at the end of the work day. The organophosphate pesticides (diazinon, chlorpyrifos, malathion, parathion) came into widespread use because they do not persist in areas of application as do organochlorine pesticides such as DDT.

Because of the reactively high toxicity of organophosphates, and because absorption through the skin is the primary route of exposure for agricultural workers, protective clothing is warranted. Washing these protective clothes requires special care.

Researchers in the UNL College of Home Economics, led by Joan Laughlin, Textiles, Clothing and Design professor, have tested the best methods for laundering pesticide-contaminated clothing. The following recommendations for laundering clothes worn while mixing or applying pesticides are based on their research.

1. **Always tell the person** washing the clothes that they were worn while mixing or applying pesticides and what kinds of chemicals were used. Keep these clothes separate from family laundry.
2. **Wear waterproof gloves** when handling pesticide-soiled clothing and dispose of them following guidelines on the chemical label. Do not use these gloves for any other household tasks.
3. **Wash clothing daily.** Residue removal is harder when the pesticide concentration increases.
4. **Always pre-treat clothes.** Use a pre-wash product, soak in water, hose down outside or use the pre-wash cycle of the washing machine. The added dose of surfactant and/or solvent in a prewash product helps remove residue. If you use the presoak cycle on an automatic washer, drain the prewash water before filling with fresh water for the detergent washing.
5. **Wash these clothes separately** from family clothes because residue can transfer from one garment to another. Wash together only garments contaminated with the same pesticide since combining pesticides may hinder removal. Use a full tub of water with a minimum number of items to increase residue removal.
6. **Use hot water, the hotter the better.** Generally, this means using water at 120 degrees and preferably 140 degrees Fahrenheit. Rinse water temperature is not as important and can be cool to save energy.

Acute pesticide poisoning was the diagnosis when three farm workers with no known exposure to organophosphates were admitted to a hospital. All three experienced nausea, vomiting, weakness, excessive sweating, and in one case, unconsciousness. The Journal of the American Medical Association reported that all three had worn the same pair of coveralls which had been worn by one worker when he accidentally spilled 76% active ingredient parathion. The garment had been laundered after the spill, and between wearing by each worker, but the residues in the garment remained exceedingly high.

7. **Use a phosphate powdered detergent or a heavy duty liquid detergent** and a normal wash cycle. Heavy duty liquid detergents are particularly effective in removing oily soils (emulsifiable concentrate formulations), and are insensitive to water hardness. Phosphate powdered detergents are particularly effective in removing particulate soils (wettable powder formulations), but are sensitive to hard water. Thus, in areas where the water hardness is 500+ ppm, use extra phosphate powdered detergent to obtain the same level of residue removal as with a heavy duty liquid detergent when laundering fabrics treated with a soil-repellent finish.

8. **Increase the amount of detergent used.** If a soil/water repellent finish (such as Scotchguard R or Zepel R) has been applied to the fabric to increase wearer protection, use 1.25 times the amount of detergent recommended on the package label. Do not use more than twice the recommended amount.

9. **Use fabric starch** on fabrics because pesticide residues cling to the starch and are easier to remove in the washing. Neither fabric softener or bleach affect pesticide absorption or residue removal in laundering.

10. **Line drying is recommended,** when possible, because many pesticides break down in sunlight.

11. **Wash clothes several times.** Clothing worn while using slightly toxic pesticides may be effectively laundered in one to three machine washings. Use more washings on clothing contaminated with more toxic or more concentrated pesticides. Discard clothing contaminated with concentrated, highly toxic pesticides, following disposal directions on the pesticide container. Do not depend on staining, odor, or color differences, or the lack thereof, as indicators of "clean" clothing.

12. **Clean washer after use.** Swab down the inside of the washer tub, and run washer through a cycle with or without detergent before laundering family clothing.