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### INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 90-15] [July 13, 1990]

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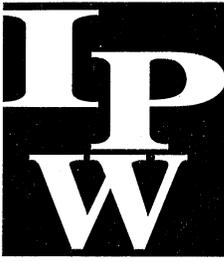
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# Insect Plant Disease Weed Science

# NEWS

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

No. 90-15

July 13, 1990

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## WEED SCIENCE

### Rescue Treatments for Soybeans

Most broadleaf weeds taller than 6 inches cannot be consistently controlled in soybeans with postemergence herbicides. No soybean herbicides perform like 2,4-D and Banvel.

**Rescue** from Uniroyal is a combination of Alanap and 2,4-DB registered for control of escaped sunflowers 12 inches tall to flowerbud and cocklebur 8 to 24 inches tall in soybeans. Applications should be made after soybeans are 14 inches tall or first bloom. Use crop oil concentrate or a nonionic surfactant with Rescue. Spray pressures of 40 to 50 psi result in better coverage and weed control. Aerial application and spot spraying also are possible. Under dry

conditions, soybeans may wilt and suffer setback after using Rescue. Recovery may not be complete if the weather stays dry. Weeds under dry conditions may not be completely controlled.

**Butyrac 200** (2,4-DB) is registered as a broadcast treatment for cocklebur control from 10 days prebloom to midbloom. Some control of morning glory also may occur. Cocklebur must form a protective canopy over the soybeans or considerable soybean injury may result. Soybeans may show some effects of the herbicide for several days after treatment.

Bob Stougaard and Alex Martin



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



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## Timing Vital to Late Season 2,4-D Use

Corn should not be sprayed with 2,4-D from a week before tassel emergence until after the silks turn brown. Treatments during this critical time often interfere with pollination and cause yield reductions. After the silks turn brown, pollination is complete and 2,4-D use can safely resume. The early planted corn in Nebraska is now in the stage where it should not be sprayed with 2,4-D.

Grain sorghum should not be sprayed with 2,4-D from the boot through the dough stage. As in corn, pollination problems and yield reductions result from spraying sorghum during this sensitive period. Resume 2,4-D spraying after the soft dough stage. Between a 12-inch height and boot stage, a drop extension should be used to direct 2,4-D away from the sorghum whorl. Banvel should never be used on grain sorghum after it is 15 inches tall.

**Bob Stougaard and Alex Martin**

## Spray Winter Wheat Stubble 5-30 Days After Harvest

Winter wheat stubble should be sprayed with herbicides soon after harvest to prevent weeds from using soil water and producing weed seed. Controlling volunteer winter wheat and other grassy weeds now also may reduce wheat streak mosaic.

Apply herbicides 5 to 30 days after harvest. Successful post harvest fall treatments have followed a good stand of a competitive winter wheat variety. Better control is obtained if winter wheat was fertilized according to the soil tests because this helps the winter wheat compete with weeds. The after-harvest herbicide treatment can be delayed if herbicides were used in growing winter wheat. This eliminates large broadleaf weeds. However, if weeds like barnyardgrass and sandbur are present, the post harvest herbicides must be applied early enough to keep these weeds from producing seed and using large amounts of moisture. Volunteer winter wheat is a larger problem in fields not harvested in a timely manner. For best control of volunteer winter wheat, spray after some volunteer wheat has emerged.

For ecofallow corn, sorghum and proso millet (only certain labels list this use) spray atrazine and a contact herbicide, if needed, in July, August or September. Landmaster BW or Landmaster II and atrazine were the most efficient combinations last year. The July to mid-August treatments have not been as successful as later treatments in controlling volunteer winter wheat and downy brome. Apparently atrazine dissipates under high temperatures. Remember, if you have your field commercially sprayed, not all fields may be sprayed in a short time, depending on the weather. Also, if the temperature is 95 degrees and above for two to three days, spraying may not be advisable. (Using a high rate of atrazine for the earlier treatments seems to help.) When going from winter wheat-fallow or continuous winter wheat to winter wheat-corn or sorghum-fallow, increase the atrazine rate to improve downy brome control. If downy brome and volunteer winter wheat appear, re-treat with atrazine in the fall.

Many farmers now use split treatments. The first treatment is applied soon after harvest and the second in late August or September. The second treatment always includes at least 1 pound of atrazine, which provides good control of volunteer winter wheat and downy brome.

In a winter wheat-fallow rotation, the label limits use to only 1 quart of atrazine applied 12 months before seeding wheat. (This rate may be too high on some soils.) On most soils this rate gives good results when combined with Cyclone, Landmaster or Command and applied after mid-August or in early September. July and early August treatments have not given good, consistent weed control the next spring. Later treatments have given good control to June 1 most years and even to July 1 some years. To control weeds earlier in the summer, a contact herbicide treatment such as Landmaster or 2,4-D may be needed, depending on weed species and amounts.

When using the winter wheat-fallow rotation, start tillage in June to prepare for the fall winter wheat seeding. This is for two reasons: without tillage the soil may get so hard during a hot dry summer that penetration with tillage tools and/or drills is impossible; second, this is an excellent time to apply anhydrous ammonia and/or phosphorus. Some producers dual inject the fertilizers in bands 12 inches apart. The initial tillage trip should be with a blade (many now prefer the 24- to 36-inch blade) to maintain crop residue.

**Robert Klein and Gail Wicks**

## Correction

On page 82 of the June 22 Insect, Plant Disease, and Weed Science News, sorghum was inadvertently included as a replant option following Treflan. The only replant options after Treflan are soybeans or sunflowers.

**Bob Stougaard and Alex Martin**

# Attack Weeds Directly with Wipers, Bean Bars

Wiper applicators are popular for controlling tall weeds in shorter crops. The weeds should be at least 10 inches taller than the crop. Roundup is the herbicide of choice for wiper applications in sorghum and soybeans. Use a concentration of 25% Roundup in water to control broadleaf and grass weeds. Shattercane and volunteer corn are very susceptible to Roundup. Roundup concentrations of 20% work well on these plants.

Roundup is less effective against broadleaf weeds than grasses. Sunflower and pigweed control is usually good but velvetleaf is not readily controlled. Some have suggested adding 2,4-D to Roundup for improved broadleaf control with wiper applicators. Our experience is that adding 2,4-D reduces control compared to Roundup alone. Dense weed stands make good herbicide coverage difficult with a wiper. Two passes in opposite directions are required for good control.

Bean bars have become quite popular for controlling weed escapes in soybeans. Weeds need not be taller than the crop since they are individually sprayed with hand held spray nozzles. Roundup is registered at a 5% concentration for straight stream nozzles and a 2% concentration for spreading nozzles. For shattercane and volunteer corn reduce these concentrations.

Some crop damage occurs with Roundup in a bean bar since spray droplets contact the crop. Growers have searched for treatments that are safer to soybeans than Roundup. Using Assure, Basagran, Blazer, Fusilade and Poast in bean bars provides weed control with less crop injury than Roundup. These herbicides are generally mixed at 1 quart in 25 gallons of water plus 1 quart oil concentrate or with Blazer 1 pint surfactant.

Bob Stougaard and Alex Martin

# INSECT SCIENCE

## Turfgrass Field Day, Equipment Show July 24

The 15th Annual UNL Turfgrass Extension Field Day and Equipment Show will be held Tuesday, July 24, from 8 a.m. to 3 p.m. at the John Seaton Anderson Turfgrass Research Facility near Mead (see map).

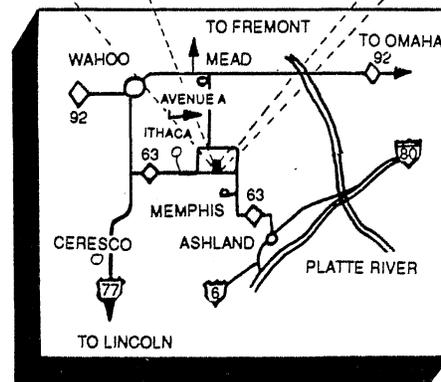
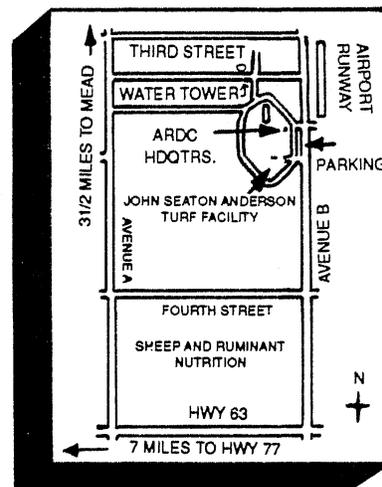
This year's field day will offer a "smorgasbord" of useful information with invited speakers, University researchers and Extension specialists addressing a wide range of turf related topics. The program will provide participants with an opportunity to learn more about basic principles of turfgrass management as well as recent developments. In the afternoon, industry representatives will demonstrate the latest turf maintenance equipment.

Preregistration for the Field Day is \$15 and includes lunch. The preregistration deadline is July 17. Lunch is not included when registering after July 17 or at the Field Day.

For more information or to preregister for the Field Day contact:

Dr. T. P. Riordan  
Dept. of Horticulture  
University of Nebraska  
377 Plant Science  
Lincoln, NE 68583-0724

Fred Baxendale



John Seaton Anderson Turf Facility  
Agricultural Research and Development Center, Mead

## Baythroid 2 Exemption Continued

Rich Reiman of the Plant Industry Division of the Nebraska Department of Agriculture has notified us that growers can continue to use Baythroid 2 insecticide to control chinch bugs on sorghum past July 2. That formerly was the expiration date for the Baythroid crisis exemption. A continuation request for this use was just forwarded to the EPA. This effectively extends the use allowed by the crisis exemption until the EPA makes a formal determination.

Permits are required for using Baythroid 2. Permit applications are available from Baythroid 2 dealers, distributors, manufacturer representatives and the Nebraska Depart-

ment of Agriculture. Specifically, those who actually apply the product must complete a *Use Permit* application. Wholesalers and manufacturers must complete applications for *Class I Permits*, while dealers and other retailers must complete *Class II Permit* applications.

We would appreciate learning about your experiences using Baythroid 2 for chinch bug control. Please let your local extension office know how it worked for you. They will pass the information on to us.

Steve Danielson

## Don't Let Flies Ruin County Fair Festivities

Plan now to control fly problems at county fairs. One or two days before the fair starts, spray livestock buildings, barns, and sheds with a residual insecticide. Do not contaminate feed or water. Recommended sprays include Atroban, Ectiban, or Permethrin II (synthetic pyrethroid products) and Baytex, Methoxychlor, or Rabon (organophosphates). Sprays applied to ceilings and walls, to the point of run-off are effective for one to two weeks. Insecticidal baits should NOT be used anywhere on the fairgrounds. Weeds and tall grasses should be mowed to eliminate resting areas for flies. If flies become a problem in livestock facilities after animals are present, Vapona, Dibrom, or insecticides containing pyrethrins can be applied using a small, portable fogger or mister. This should be done in the morning before people arrive. Show animals can be treated with insecticide wipes (containing Atroban,

Ectiban, Methoxychlor, Permethrin II or Rabon). Read the label for mixing instructions.

Odors from food stands and food-handling establishments are particularly attractive to flies. Laws restrict the type of control measures that can be used in these areas. Sticky fly ribbons (containing no insecticide) can be hung in food stands. Use garbage cans with tight-fitting lids where people are present. During the fair, after the foodstand closes for the night, aerosol sprays containing pyrethrins can be used according to the manufacturer's directions. Food, utensils, and handling surfaces should be covered with a nonabsorbent material, such as plastic, before applications. Finally, fair officials should have manure and garbage removed daily.

Jack Campbell

### Gardeners Beware:

#### Hoppers Invited to Lunch

Grasshoppers are beginning to cause damage to garden crops in some areas of Nebraska. Generally, grasshoppers move into gardens from surrounding vegetation where they have completed their first weeks of development. To minimize damage, remove excessive weedy growth around gardens. Treat border areas with an insecticide while hoppers are still small. Carbaryl (Sevin) and diazinon are registered for use on several vegetable crops and may give some control of grasshoppers, especially before the hoppers are half grown. **Consult the insecticide label to be sure the product is registered for use on your crop and follow all label directions.** Harvest restrictions apply in many cases and should always be observed. Retreatment may be necessary because grasshopper control is seldom complete and there will likely be more grasshoppers moving in.

Fred Baxendale

#### Fall Webworms Not Harmful

Webs of the fall webworm are beginning to appear on cottonwoods, willow, apple and other hardwood trees. These webs are constructed around leaves and twigs at the ends of branches. Larvae groups feed within the web, expanding it to enclose more leaves as needed. Many webs eventually will reach three to four feet. Control is easiest when larvae are small. When possible, simply cut out the small webs and burn them. Webs that can not be reached can be sprayed with Sevin, Orthene, diazinon, Dursban or *Bacillus thuringiensis* (B.t.). Treat the webs and the surrounding foliage. Unless enough pressure is used to penetrate the webs, B.t. may not give satisfactory control. Although the webbing is unsightly, very little harm is done to the tree.

Ackland Jones

# PLANT DISEASE

## Barley Yellow Dwarf Analyzed in 11 Oat Cultivars

In June eleven oat cultivars were evaluated for barley yellow dwarf virus at plots in Boyd and Knox Counties. The Boyd County plot was planted March 26 and the Knox County Plot March 27. Barley yellow dwarf was severe on susceptible cultivars at both locations. The following table shows BYDV ratings made June 27. The rating scale is 0 (no disease) to 5 (severe disease).

Don, Hazel, and Ogle showed the lowest barley yellow dwarf ratings at both locations; Bates, Otee, Settler, and Starter were intermediate; Kelley and HyTest were high intermediate, and Burnett and Trucker had the highest ratings. The strain of barley yellow dwarf virus present in both locations was PAV.

John E. Watkins

| Cultivar                | Knox Co. | Boyd Co. | Average |
|-------------------------|----------|----------|---------|
| Ogle                    | 1.0      | 1.3      | 1.2     |
| Hazel                   | 1.5      | 1.3      | 1.4     |
| Don                     | 1.5      | 1.5      | 1.5     |
| Bates                   | 2.3      | 1.7      | 2.0     |
| Settler                 | 2.3      | 2.0      | 2.2     |
| Starter                 | 2.0      | 2.3      | 2.2     |
| Otee                    | 3.0      | 2.3      | 2.7     |
| HyTest                  | 4.0      | 3.7      | 3.9     |
| Kelly                   | 4.3      | 3.5      | 3.9     |
| Trucker                 | 4.7      | 4.5      | 4.6     |
| Burnet                  | 5.0      | 4.5      | 4.7     |
| Least Significant Diff. | 0.6      | 0.6      |         |

## Phytophthora Root Rot Identified in Soybean Samples

Phytophthora root rot of soybeans has been identified in several samples examined in the Plant Disease Diagnostic Clinic. This disease is caused by a soil-inhabiting fungus which attacks the roots. It usually is a problem in low, poorly-drained areas and compacted or heavy clay soils.

Soybeans, which can be infected at any growth stage, become stunted and less vigorous. Leaves may turn yellow and wilt. The best diagnostic clue of Phytophthora root rot is the chocolate-brown discoloration of the stem and lower

branches. The tap root also will become brown and roots will rot. The field disease pattern can vary. In some cases, the pattern corresponds to poorly drained areas or it can involve groups or individual plants in a row.

Control is limited to next year's crop. Resistant varieties are available. The use of metalaxyl fungicide as a seed treatment or in furrow application can be used with resistant varieties in problem fields.

Luanne V. Coziahr

## Not All Yellow Turf is Diseased

The Plant Disease Diagnostic Clinic has received numerous samples of yellow turfgrass. After examination, the problem was not attributed to pathogenic organisms. The following conclusions were reached:

1. Abundant rains have encouraged fast growth and at the same time may have leached nitrogen fertilizer beyond the reach of the roots. The turf is not in any serious danger. Fertilizer can be applied with cooler weather.

2. Many turfgrass samples have shallow roots. This is probably due in part to last year's drought situation not favoring good root regeneration and some damage due to winter conditions. As conditions become more stressful with summer heat and drier weather, shallow-rooted turf will show more injury. Less frequent, but adequate, watering will help encourage root development and recovery.

Luanne V. Coziahr

## Plant Disease Clinic Services Reduced for One Week

The Plant Disease Diagnostic Clinic will be short of staff July 16-20. Luanne Coziahr will be out of the office and Dr. Dave Wysonog will be covering the Clinic. All samples received will be stored in refrigerators until they

can be examined, and phone messages will be answered as soon as possible. When possible, please delay sample collection and calls until July 23. Thank you for your consideration.

## Leaf Spots Threaten Tomatoes

The recent warm, moist weather can create the perfect environment for development of tomato leaf spots. These diseases start low in the plant and work up. The result is early leaf loss, poor fruit quality and reduced yields.

Early tomato blight is easy to identify. The spots have a target-like appearance due to the formation of concentric rings within the lesion. These lesions are brown, irregular in shape, and up to 1/2 inch in diameter. Infected leaves turn yellow, dry up, and drop.

Septoria leaf spot has a much smaller lesion, and there are usually more lesions on a leaf. The center of a Septoria lesion turns tan or gray while the margin is dark. Small, black, pimple-like fruiting bodies may develop in the center of the lesion. These can be seen with a magnifying glass.

If you find any evidence of these leaf spots on lower leaves, act immediately. First, use drip or furrow irrigation to keep leaves dry and reduce disease development. If overhead irrigation is necessary, water early in the day to aid in leaf drying. Staked tomatoes usually have less leaf spot development. Also, mulched tomatoes seem to develop less disease. Effective fungicides also are available. Begin applications at the first sign of disease development and repeat every 7 to 10 days. Fungicides containing chlorothalonil, maneb, zineb, metiram, and anilazine are recommended. Currently, chlorothalonil is the easiest to find in garden centers. Be sure to read and follow all label instructions.

Luanne V. Coziahr

## Environmental Programs: National Ground Water Survey Taken

The EPA has completed a two-year sampling of drinking water wells in all 50 states. Their goal is to develop national estimates of the frequency and concentration of pesticides in drinking water wells and examine the relationships among pesticide contamination, groundwater vulnerability, and pesticide use. Since April 1988, EPA collected 30,000 samples from 566 community wells and 783 domestic wells. Extension agents provided pesticide use informa-

tion for the area surrounding the wells. They hope these samples will represent the nation's 13,000,000 domestic and 51,000 community wells. Each water sample is being tested for 127 pesticides, pesticide byproducts, and nitrates using eight laboratory methods. A preliminary report will be available this fall.

Larry Schulze, Extension Pesticide Coordinator

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