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## CropWatch No. 95-5, April 14, 1995

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# CROP WATCH

University of Nebraska Cooperative Extension  
Institute of Agriculture and Natural Resources

No. 95-5  
April 14, 1995

## Panhandle watches for wheat pests

It's time to monitor the wheat crop for Russian wheat aphid infestations, which may be more numerous because of a mild dry winter in the Panhandle. Some economic infestations and treatments have been reported in southeast Wyoming.

Recent scouting in the Panhandle has indicated spotty infestations ranging from 0% to 100% in hotspots within fields. There seem to be more Russian wheat aphids than the last two years and it will be important for wheat growers and barley growers to monitor their fields closely, particularly paying attention to the weaker stands of wheat where Russian wheat aphids usually appear first.

Weather will play an important role in buildup of the Russian wheat aphid this spring. Given a moderately warm and dry spring, a current 1% to 2% non-economic infestation could become economic and need treatment. Monitor the

crop every one to two weeks, depending on weather, through the soft dough stage.

Pale western cutworm is another wheat pest that needs to be watched this spring. Pheromone traps in the southern Panhandle last fall indicated significant numbers of moths during peak flight times. These moths lay their eggs in the loose soil in the fall and the larva hatch early in the spring as soil temperatures rise. Pale western cutworm infestations over

the last few years have been limited to the southern third of the Panhandle.

Growers should watch for cutworm feeding damage. In early spring the small pale western cutworm creates shothole damage in the whorl of the emerging leaves. Later the larger cutworms will completely cut the tiller below the soil surface leaving a standing dead tiller. A slight pull on the

*(Continued on page 32)*

## *Furadan 15G approved as special local need in sorghum*

The Nebraska Department of Agriculture has approved the use of Furadan 15G insecticide as a Special Local Need (24c) for use as a planting time seed furrow treatment to control chinch bugs in sorghum. This is only permitted in the following southeastern Nebraska counties: York, Seward, Lancaster, Cass, Fillmore, Saline, Gage, Otoe, Thayer, Jefferson, Johnson, Pawnee, Nemaha, and Richardson. This treatment should only be used: 1) when monitoring reveals the chinch bugs in maturing small grains or, 2) in fields of earlier planted grain sorghum within the district, or 3) bunch grass surveys indicate 1,000 or more chinch bugs per square foot. This use is only approved until

August 31, 1996. Only one application can be made per season, and there is a 75-day waiting period before grazing or forage harvest.

Tom Hunt, Extension entomology technologist, has conducted surveys in these counties and has not found chinch bugs at levels approaching 1,000 per square foot of bunchgrass. We are not expecting large amounts of damage from this insect except in localized areas, most likely near the Kansas-Nebraska border. Growers are encouraged to monitor small grain fields for chinch bugs and the possible need to use this product to protect seedling sorghum plants.

**Steve Danielson**  
Extension Entomologist

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



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## Panhandle

(Continued from page 31)

tiller will lift it from the plant exposing the pale western cutworm feeding area.

The economic threshold for this cutworm is one to two per linear foot of row depending on the wheat yield potential. When scouting scratch the loose soil near the plant base and between the wheat rows.

**John Thomas and Gary Hein**  
Extension Entomologists

## Wheat update

Soilborne wheat mosaic is causing many eastern Nebraska wheat fields to appear yellow. This virus disease is common to eastern Nebraska and the incidence has steadily increased in the last five years. Yield losses in infested fields can vary from 0% to 50% depending on disease severity and susceptibility of the variety.

In the field, the disease appears as irregular patches of yellow or pale green wheat. The pattern may conform to low areas or drainage paths, or just be generally distributed across the field. Infected leaves show a light green mosaic pattern on the youngest leaves and a yellow mosaic pattern on older infected leaves.

Growing resistant or tolerant varieties is the only method of control. Resistant varieties include Abilene, Hickok, Ike, Karl 92, Ponderosa, Thunderbird, Tomahawk and 2163.

Soilborne wheat mosaic incidence increases in fields continuously cropped to susceptible varieties. Crop rotation often reduces the incidence, but does not eliminate it.

**John E. Watkins**  
Extension Plant Pathologist

## UNL pesticide training manuals on World Wide Web

If you enjoy browsing the World Wide Web, you may want to stop and view some of the resources available through the University of Nebraska-Lincoln Environmental Programs' homepage.

Items listed on the home page include:

1. the national pesticide applicator training core manual, *Applying Pesticides Correctly*,
2. UNL Extension NebGuides,
3. the *Nebraska Private Applicator Self-Study Manual*,
4. the Label newsletter, and
5. other pesticide-related sources of information. Pesticide applicators studying for certification would benefit from the manuals. Interactive self-tests are included in each chapter of the *Applying Pesticides Correctly* to test your understanding.

The Environmental Programs WWW home page is located at:

[HTTP://IANRWWW.UNL.EDU/IANR/PAT/EPHOME.HTML](http://IANRWWW.UNL.EDU/IANR/PAT/EPHOME.HTML)

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# CROPWATCH

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Lisa Brown Jasa, Editor

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*Begin scouting now*

# Alfalfa weevils active in Kansas

Alfalfa weevil larvae are causing some damage to apical leaflets in Missouri and Kansas alfalfa fields. I have not observed this activity in Nebraska yet, but would not be surprised it is happening.

Now is a good time to scout alfalfa for the weevils and their damage, although it may be a bit early to initiate controls.

The recommended scouting technique is to pick 50 stems at random from across the field and place them in a bucket. Beat the stems against the sides of the container to dislodge the larvae from the plants. Count the larvae in the bottom of the bucket and measure the stem height.

Compare the number of larvae per stem and the average stem height in the field to the numbers on the chart below that corresponds most closely to the price you expect to get for your hay. Where your numbers cross on the chart will help you decide what management

option to follow. If you are undecided, wait a few days, resample the field and reassess the situation.

Growers often ask what are the good and bad reasons for waiting to initiate management or control procedures (even though there are weevils and weevil damage in the field). Obviously, waiting allows those weevils in the field to continue to feed and cause damage. Waiting also moves the insecticide treatment closer to harvest and may eliminate some insecticide options because of preharvest waiting intervals. Positive reasons for waiting include: 1) waiting can allow the natural weevil enemies to eliminate the weevil and the need for controls; 2) weevils can continue to hatch from eggs in the stems for several weeks and waiting allows more of this to happen, thereby reducing the likelihood of further damage and perhaps a retreatment after the initial control effort; and 3) in some years, when

the weather and other conditions favor plant growth more than weevil development, waiting will allow the plants to "outgrow" the weevil damage without control or management.

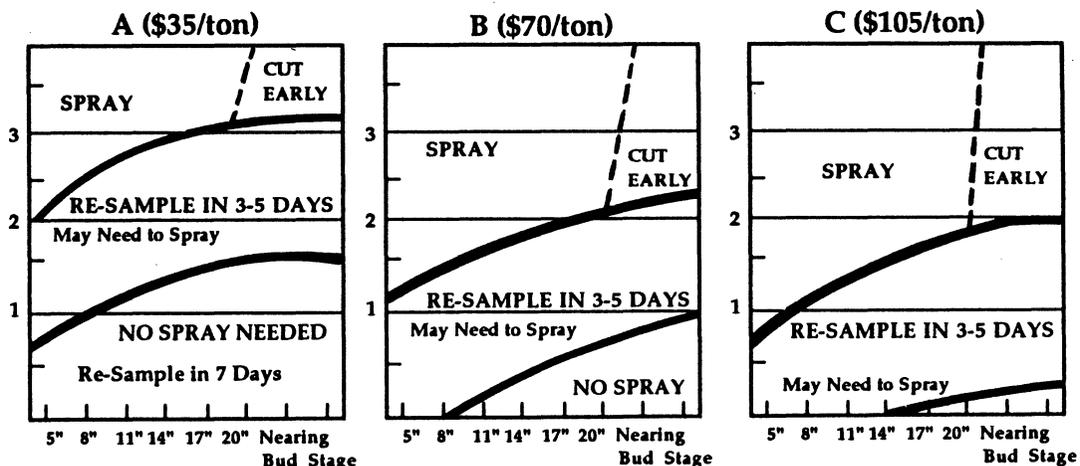
Steve Danielson  
Extension Entomologist

## Kansas update

Spring black stem of alfalfa was common in some south central counties. Speckled leaf blotch of wheat has progressed with infection of mid canopy leaves and loss of new lower leaves. New leaf rust pustules were observed in south central Kansas. Infection was described as scattered and light. Barley yellow dwarf will become more apparent as wheat in southern Kansas nears flag stage.

Plant Disease Survey  
Kansas Dept. of Agriculture

### ALFALFA WEEVIL STEM COUNT METHOD



Height of Alfalfa

Estimating alfalfa weevil economic treatment thresholds by the stem count method.

# Liquid nitrogen-herbicide combinations riskier after corn or sorghum emergence

Corn and sorghum in fields intended for liquid nitrogen-preemergence herbicide combinations sometimes emerge before herbicide application. While certain preemergence herbicides can be applied after crop emergence, they are not labeled for application with fluid fertilizer after emergence, due to risk of injury. Emerged corn is more tolerant than sorghum of fertilizer-herbicide mixtures. Some growers may accept the injury in return for accomplishing two jobs at once.

Dual and Lasso applied with liquid nitrogen on emerged corn

and sorghum would result in injury similar to the fertilizer alone. Injury is more serious with atrazine combinations and even more severe with Bladex. The tolerance of emerged corn and sorghum to liquid nitrogen and these herbicides is greatest in the spike stage and decreases as the plant grows.

Minnesota experiments have shown that atrazine applied to four-leaf corn with 60 lbs nitrogen per acre caused heavy burning with widespread necrosis on the 2nd, 3rd and 4th leaves. This injury, from which the corn recovered, was similar to injury caused

by 150 lbs N/acre applied by itself. Injury to emerged corn is usually more severe with herbicide combinations in liquid nitrogen than fertilizer alone and is particularly severe with Bladex or Extrazine in liquid nitrogen. If liquid nitrogen must be applied to emerged corn, apply early post herbicides in water several days before applying liquid nitrogen. Cool, wet weather can be expected to increase the injury caused by such treatment

John McNamara  
Extension Asst, Weed Science  
Alex Martin  
Extension Weeds Specialist

## Testing liquid fertilizer-herbicide combinations for compatibility

Combining liquid nitrogen with a preemergence herbicide may be a time-saving approach farmers are considering in this "rushed" season. Compatibility of liquid nitrogen with most herbicides is usually acceptable, but should be checked before mixing large quantities.

Use the following procedure to test the compatibility based on 25 gallon per acre application:

1. Add 1 pint of fertilizer to each of two jars.
2. To one jar add 1/4 tsp (1.2 ml) of a compatibility agent and stir.
3. To both jars add the appropriate amount of herbicide(s). Add dry herbicides first, flowables second, and emulsifiable concentrates last. Stir after adding each material.

*Dry herbicide:* For each pound per acre to be applied, add 1.5 level tsps.

*Liquid herbicide:* For each pint per acre to be applied, add 1/2 tsp or 2.5 ml.

4. Shake or stir the contents of each jar thoroughly and let the mixtures stand for 15 minutes.

If either mixture separates but can be readily remixed, the mixture can be sprayed with good

agitation. Comparing the two jars will indicate if a compatibility agent is needed.

Compatibility of mixtures often can be improved by 1) mixing the dry fertilizer with water before addition 2) adding one-half of the compatibility agent to the fertilizer, and adding the other half to the emulsifiable or flowable herbicide before adding to the mixture.

General mixing procedure: Fill the spray tank 1/4-1/2 full with liquid fertilizer and start the agitation. Add a compatibility agent if needed. Add the dry herbicide to the spray tank. Dry herbicides and flowables often mix more readily if mixed with a small quantity of water before adding them to the fertilizer. Continue filling the tank with liquid fertilizer until it is 90% full. At this point add flowable herbicide, followed by emulsifiable concentrates and oil concentrates.

John McNamara  
Extension Asst, Weed Science  
Alex Martin  
Extension Weeds Specialist

## Resistant plants identified

# Control shattercane early

Control shattercane in corn and soybeans with a combination of herbicides and cultivation (*Table 1*). Usually sorghum herbicides will not provide acceptable preemergence control, so it is best to rotate to corn, soybeans, small grain, alfalfa, or set-aside. Dual and Lasso herbicides which must be used with seed safeners (Concep and Screen) to protect sorghum, can suppress low shattercane populations (scattered plants) if used at the highest labeled rates. Using these herbicides in conjunction with ridge-planting will improve control.

Sutan+ and Eradicane in corn provide about four weeks of shattercane control under normal conditions. Repeated annual use may lead to shortening of the control period to a week or less, thereby rendering them ineffective for shattercane control. This enhanced soil degradation effect can develop during the first year of use and persist for 12 to 18 months. Rotate Eradicane and Sutan+ with other herbicides to maintain their effectiveness.

Pursuit and Pursuit Plus, which contains Prowl and Pursuit, can be used in soybeans and corn if the corn hybrid is imidazolinone resistant (IR) or tolerant (IT). Pursuit is effective on shattercane as a soil-applied or postemergence treatment. Do not incorporate Pursuit Plus in corn. Pursuit usually controls weeds more consistently when incorporated than when surface applied. Because of the potential for development of resistant weeds, herbicide rotation and herbicide combinations are recommended as standard practices.

Pursuit Plus and Passport, which contains trifluralin and Pursuit, are excellent for shattercane control in soybeans. Passport must be incorporated. Do not use Passport in corn.

Treflan, whose active ingredient is trifluralin, and Prowl generally provide good full-season shattercane control in soybeans. Trifluralin is also sold under other brand names. Application rates for shattercane control should be about 30% to 50% higher than for general grass control. Delayed planting of soybeans until early June will often allow the first flush of shattercane seeds to germinate. Eliminating this early flush with tillage or postemergence herbicides in no-till will help the soil active herbicides work better on the remaining seeds.

Selective postemergence herbicides control shattercane up to 18 inches tall. Control shattercane by three to four weeks after planting to prevent crop yield loss. If shattercane numbers are moderate to high, this early removal is especially important.

Accent and Beacon are effective herbicides for shattercane control in corn (*Table 1, page 35*). Nebraska studies have shown that applications at half of the normal dosages required to control other weeds will control 4 to 6-inch shattercane. The Beacon label permits application at .38 oz/A, which is a half dosage, on 4 to 12 inch shattercane when conditions are favorable for control.

UNL researchers have recently identified a shattercane biotype that is resistant to Beacon and Accent. This biotype was collected from a field in which Accent had been applied for three years. The extent of distribution of this resistance is not known, but it is probably limited. This discovery is significant, however, because it shows shattercane's potential to develop resistance. Management to retard the development and spread of herbicide resistant shattercane is important to Nebraska corn growers.

Soybean is an ideal crop for shattercane control. In high cane populations, preplant soil incorporation of Treflan or Prowl followed by cultivation and a postemergence herbicide (*Table 1*) applied over the row should provide excellent control.

Roundup applied with a wiper applicator, such as the rope wick, can effectively control shattercane escapes in soybeans and sorghum if the shattercane is 8 to 12 inches taller than the crop. Several applications may be needed. Avoid having Roundup contact the crop, especially sorghum.

Many postemergence herbicides can be spot applied to shattercane for significant cost savings and effective control of scattered plants. Apply these only in crops for which they are registered. Roundup will also kill crop plants which are sprayed.

**Fred Roeth and Alex Martin**  
Extension Weeds Specialist  
**Robert Klein**  
Extension Crops Specialist

## Register for grasshopper control program

The adult grasshopper counts from late last season indicate that severe grasshopper damage problems could develop this year in western and northern Nebraska. Landowners and managers should be aware that the sign-up deadline to apply for cost share assistance to control grasshoppers is May 30. For applications and additional information, contact your local University of Nebraska Extension Office or call USDA-APHIS at (402) 434-2345.

**Steve Danielson**  
Extension Entomologist

**Shattercane** (Continued from page 35)

Table 1. Herbicides for shattercane control

<i>Herbicide</i>	<i>Per acre rate</i>	<i>Application time<sup>a</sup> and crop</i>	<i>Remarks</i>
Accent 75DG	.67 oz	Post in corn	Add a nonionic surfactant or crop oil concentrate. Apply on 4 to 6-inch shattercane. <sup>b</sup> Half rates such as .38 oz/A of Beacon have given good control if shattercane is small and growing well.
Beacon 75DG	.38 oz		
Eradicane 6.7E	7.3 pt	PPI in corn	Incorporate immediately by cross tandem discing or equivalent soil mixing. Label claims suppression of shattercane only. Repeated annual use may result in poor control.
Sutan + 6.7E	7.3 pt		
Pursuit 2AS	.25 pt	PPI, PRE or Post in corn and soybeans Pre or Post in corn & soybeans	Use only on a imidazolinone resistant (IR) or tolerant (IT) corn hybrid. For post control add a nonionic surfactant and apply on 4 to 6-inch shattercane. <sup>b</sup> Pursuit Plus can be soil incorporated in soybeans but not in corn.
Pursuit Plus	2.5 pt		
Passport	2.5 pt	PPI in soybeans	Incorporate immediately by cross tandem discing or equivalent soil mixing for best results. An incorporation delay of 24 hrs for Treflan and seven days for Prowl is allowable.
Treflan 4E	2 to 2.5 pt		
Prowl 4E	3.0 pt		
Assure II	7.0 oz	Post in soybeans	Apply when shattercane is 4 to 6 inches tall. <sup>b</sup> Add 1 qt/A of crop oil concentrate. These herbicides can also be applied in a bean bar sprayer at a 1% herbicide concentration with 1% v/v COC or .25% v/v non ionic surfactant.
Fusilade 2000	.75 pt		
Fusion	.38 pt		
Poast Plus	1.0 pt		
Select	0.5 pt		
Roundup in wiper	20% sol.	Post in soybeans and sorghum	Shattercane at least 8 to 12 inches above crop canopy. Keep solution off crop. Wiping in both directions may be needed.
Roundup in Bean Bar	5% sol.	Spot treatment in soybeans	Soybeans will be killed in sprayed areas.

<sup>a</sup> PPI = preplant incorporated; PRE = preemergence, Post = postemergence

<sup>b</sup> Although many of these herbicides will control taller shattercane, it is important to control the shattercane before serious crop loss occurs. That usually begins at three to four weeks after planting when the crop and shattercane are still small.

**Next issue:** Evaluating snow and storm damage  
Weed control strategies