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**Regional
Wheat
Meetings**

Grady Co. Fairgrounds - Chickasha July 24 - 12 Noon
Cameron University - Lawton July 24 - 6:30 p.m.

Program

- | | |
|--------------------------|--|
| Gordon Johnson | <i>Using soil available phosphorus & nitrogen</i> |
| Gene Krenzer | <i>Cost benefit ration of wheat management decisions</i> |
| | <i>The 1997 freeze in wheat</i> |
| Tom Royer | <i>Aphid management in wheat - future challenges</i> |
| Lonnie D. Sellers | <i>Crop Rotation and Herbicides used on wheat</i> |

All wheat producers are encouraged to attend. If they want to send in one sample per producer, it will be analyzed free of charge if:

1. The sample is received in the soils lab one week prior to the meeting.
2. Both surface (0-6") and subsoil (6-24") samples are included
3. The producer attends the educational meeting

Two CEU's for the certified crop advisory have been requested for each meeting.

This newsletter was developed by your team of Area Specialists in the Southwest District. Our goal is the dissemination of research-based information.

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Blister Beetles and Alfalfa

Wes Lee

It is the time of year for blister beetles to become common in alfalfa fields. In Oklahoma, the most common species is the striped blister beetle. This beetle has several orange and black stripes running lengthwise along its back. Several other species including spotted, black, and gray blister beetles are often found but usually in low numbers.

All of these blister beetles contain the blistering agent “cantharidin” in their bodies. This substance is highly toxic to horses when it is ingested causing illness and even death in severe cases. Although the exact number of beetles required to produce toxic reactions in horses is highly variable, as few as 15 beetle could cause problems.

Fortunately, blister beetles complete only one generation per year. Adult beetles lay eggs in the soil during summer months. These eggs hatch in the fall and the larvae immediately begin searching for grasshopper eggs to consume (making them a beneficial insect during their immature stage). After devouring clusters of grasshopper eggs, they overwinter in the soil and emerge as adults the following spring or early summer. The earliest date stripped beetles have been collected in Oklahoma is May 14. Blister beetle adults will feed on alfalfa foliage but prefer to feed on blooms. They are often economic pests to producers trying to produce a seed crop.

Because of their late spring emergence, the first cutting of alfalfa, and sometimes the second cutting should be free of blister beetles. Their activity also ceases in the fall and should ensure an October cutting free of beetles. All other cuttings have the potential of being infested. If alfalfa producers are dealing in horse hay cut during the summer months fields should be scouted thoroughly for beetles. If necessary, individual swarms can be sprayed with a backpack sprayer. Entire fields can also be sprayed using a short residual chemical. Sevin at 1.0 lb. of active ingredient /acre has proven to be effective. It has a 7 day waiting period before harvest. A recent study by the OSU Entomology Dept. showed that Sevin was still highly effective on blister beetles even after six days (laboratory conditions). Due to the cost of spraying entire fields a “premium” may have to be obtained to justify the added expense. For more

information on blister beetles refer to OSU fact sheet 2072.



Herbicide Updates

Lonnie D. Sellers

Authority is a new herbicide from FMC that has been approved for use in soybeans. Authority will not be sold as a stand alone product, and will be available only in combinations. DuPont and FMC have reached a marketing agreement to market a mixture of Authority and Classic herbicides. FMC will sell the premix of Authority and Classic as **Authority Broadleaf**, while DuPont will sell the same mixture as **Canopy XL**. Authority Broadleaf/Canopy XL can be applied early preplant (up to 30 days prior to planting), preplant incorporated, or preemergence to soybeans at a rate of 5.1 to 7.9 ounces per acre depending on soil texture and organic matter. It should not be applied to soils with a pH greater than 6.8. The general use rate on a medium textured soil is 6.4 to 6.8 ounces per acre. Authority Broadleaf/Canopy XL provides good control of many broadleaf weeds, including the pigweed species (including ALS resistant waterhemp and Palmer amaranth), morning-glories, black nightshade, cocklebur and velvetleaf. It also provides good control of yellow nutsedge and suppression of several annual grass weeds. Authority Broadleaf/Canopy XL may have a good fit in those soybean fields with a serious waterhemp or Palmer amaranth problem. Soybeans generally have good tolerance to Authority Broadleaf/Canopy XL, but some injury has been reported in other states if heavy rainfall occurs just as soybeans are emerging through the soil. Both herbicides provide residual weed control and can carry over to the following season. Do not rotate to wheat for 4 months, corn for 10 months, alfalfa or grain sorghum for 12 months or sunflower and cotton for 18 months following application. Authority Broadleaf/Canopy XL should not be applied aerially, or through any type of irrigation system. Authority may be available in other combinations in the future. Authority is currently being marketed in other states as a co-pack with Reliance STS and Synchrony STS under the trade name of Cover.

Skirmish and **Matador** are new products being sold by FMC under a marketing agreement with DuPont. Skirmish has the same active ingredient and label

recommendations as Classic herbicide. Matador has the same active ingredient and label recommendations as Assure II.

Treflan herbicide has recently been approved for weed control in alfalfa seedling establishment. Treflan is already used in established alfalfa, and was previously approved for use in establishment of alfalfa in set-aside acres, but not in establishment of alfalfa for forage production. Treflan controls many summer annual grasses, such as foxtails and crabgrass, plus certain small seeded broadleaf weeds like pigweed. Treflan should be applied at 1 to 1.5 pints per acre depending on soil type, and incorporated into the soil prior to planting alfalfa. The herbicide must be incorporated to mix it in the soil and avoid loss from the soil surface. Some crop stand reduction can occur following treatment, especially if cool, wet weather occurs after planting, and the alfalfa is seeded too deep. The Treflan treatment will probably be most useful in establishment of spring-seeded alfalfa because of the weeds it controls. Treflan does not provide good control of winter annual mustards, volunteer wheat, or weeds that have already emerged. Consequently it may have limited benefits for weed control in fall-seeded alfalfa.



pH, Crop Production and Liming

Mark Gregory

Acid soils are commonly found in Eastern Oklahoma, but we are seeing them show up more and more in Western Oklahoma. Soil type may have something to do with the pH, but not always. pH problems seem to be found more often on sandy soils. But, there are silt loam wheat fields in Custer County with pH's below 5.0. There are sandy soils even in Beckham and Harmon Counties, that have lower pH's.

And what is considered acid for one crop is not necessarily acid for another crop. An ideal pH for continuous wheat is 5.5 - 6.0. That same pH is too low for alfalfa, either for establishment or production from established stands.

The best way to know what the pH is, is to do a good job in getting a soil test and following the

recommendations. The obvious solution for low pH soils is liming, but other options, for wheat production, do exist. The time required for lime to react with soil and show a pH change is at least six months. As you can see, any pH problems currently existing where alfalfa will be planted this fall cannot be adequately changed with a lime application done now. A good time to get the pH corrected before establishing alfalfa, is to lime before a wheat crop the year before establishing the alfalfa. That is a whole year in advance.

There are specific wheat varieties that do better under low pH conditions than others. A rating of wheat varieties can be found in PT 97-17, Wheat Variety Comparison Chart, 1997.

pH problems are a fairly new problem for some areas of Western Oklahoma, but don't let them catch you short.



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Common Conversions

(Lifted from the Texas A&M University *Reference Guide for Ranchers - Common Conversion* from the Internet site at <http://texnat.tamu.edu/ranchref/guide/>.)

Area:

1 acre = 43,560 square feet, 209 feet X 209 Feet, 69.5 X 69.5 yards
 1/10 acre = 4,356 square feet, 66 feet X 66 feet, 22 yards X 22 yards
 1/100 acre = 436 square feet, 21 feet X 21 feet, 7 yards X 7 yards
 1 hectare = 2.471 acres

Length:

1 mile = 5,280 feet, 1,760 yards or 1.61 kilometers
 1 rod = 16.5 feet
 1 chain = 66 feet
 1 kilometer = 0.62 miles
 1 roll of barbed wire = 1/4 mile or 1,320 feet
 1 roll of net wire = 330 feet or 20 rods

Weight:

1 short ton = 2,000 pounds
 1 long ton = 2,240 pounds
 1 pound = 453.6 grams or 16 ounces
 1 kilogram = 2.2 pounds

Liquid Measure:

1 gallon = 128 ounces, 3,785.4 milliliters, 16 cups, 4 quarts, 8.355 pounds or 256 tablespoons
 1 quart = 0.946 liters, 2 pints or 32 ounces
 1 pint = 16 ounces or 2 cups
 1 cup = 8 ounces
 1 milliliter = 1 cubic centimeter (cc)
 1 tablespoon = 3 teaspoons
 1 teaspoon = 5 milliliters
 1 cubic foot of water = 62.43 pounds or 7.48 gallons
 1 acre inch of water = 27,154 gallons
 1 barrel of water = 55 gallons
 1 barrel of oil = 40 gallons

Calculation at Water Storage Capacity:

Round tank (gallons) = $3.1416 \times \text{radius squared (ft.)} \times \text{height (ft.)} \times 7.48$
 Rectangular tank (gallons) = $\text{height (ft.)} \times \text{width (ft.)} \times \text{length (ft.)} \times 7.48$

Pressure:

1 foot lift of water = 0.433 psi
 1 psi will lift water 2.31 feet