UPCOMING EVENTS

Canola Field Day
Lahoma, Oklahoma
North Central Research Station
April 22, 2010

Brush Management Workshop
Noble County Fairgrounds
Women’s Building
April 23, 2010 • 1:00 pm

Marshall Research Station Wheat Field Day
Marshall Research Station
Just West of the HWY 51 & 74 Jct.
May 4, 2010 • 10:00 am

Noble County Winter Crop Stops
1 mile West of Lucien on HWY 64
May 4, 2010 • 11:00 am to 3:00 pm

Lahoma Wheat Tour
Lahoma, Oklahoma
North Central Research Station
May 14, 2010

Kay County Wheat Tour
May 19, 2010

Community Garden Seminar
Ponca City, Oklahoma
Pioneer Technology Center, Seminar Room
June 2, 2010 • 9:00 am to 4:00 pm

Mailing List Update
If you wish to remain on the mailing list please call our office (580) 362-3194. If you would rather be sent the newsletter electronically please call or email (cori.woelk@okstate.edu).

We will be updating the mailing list over the next several months, so please let us know if you would like to continue to receive our newsletter.

Thanks, Cori

FACT SHEETS

Oklahoma State Extension Service has recently added some new fact sheets.

PSS-2258 “The Evolution of Reference Strips in Oklahoma”

PSS-2260 “The History of the GreenSeeker™ Sensor”

An updated fact sheet that might be of interest to many is CR-205 “Oklahoma Farm and Ranch Custom Rates, 2009-2010”.

Oklahoma Cooperative Extension Fact Sheets are available online at http://osufacts.okstate.edu

For further information about any of the upcoming events please call our office (580) 362-3194 or see our website www.oces.okstate.edu/kay

Unless otherwise indicated; all photos in this newsletter are courtesy of Oklahoma State University.
Another title for this article could very well be: “A lesson nearly learned the hard way”. Quite a few years ago, at the Eastern Oklahoma Pasture Research station we were involved in a field study using synchronized mature cows in a natural breeding pasture. At the time not much was known in the scientific literature about cow:bull ratios when estrus synchronization was involved. Therefore we observed very closely as a mature experienced bull was placed in a pasture of full of 25 cows synchronized to come into heat together. He had passed a breeding soundness exam. What I observed was a lesson for all commercial cow calf ranchers AND had nothing to do with the original purpose of the study. The bull selected to mate with this group of heat synchronized females could not, or would not, physically inseminate any of them. He was successful at impregnating cows the year before, but something had changed since the previous breeding season. Fortunately, we observed the problem and found a replacement bull within hours of the start of the breeding season. In many herds this bull may have caused a partial or complete loss of a calf crop.

A good manager keeps an eye on his bulls during the breeding season to make sure that they are mounting and inseminating cows. Occasionally a bull that has passed a breeding soundness exam may have difficulty serving cows in heat, especially after heavy service. Inability to complete normal service and low fertility are more likely to be detrimental to calf crop percentage than failure to detect cows in heat. Many physical problems or low semen quality can be detected by breeding soundness exams. Low libido or inadequate sex drive probably will not be detected before the breeding season. Such problems can best be detected by observing bulls while they work. Therefore producers should (if at all possible) watch bulls breed cows during the first part of each breeding season. If problems are apparent, the bull can be replaced while salvaging the remainder of the breeding season and next year’s calf crop. Likewise a small proportion of bulls can wear out from heavy service and lose interest. These, too, will need to be replaced. The greater the number of cows allotted to each bull in the breeding pasture the more critical it is that every bull be ready to work every day of the breeding season.

Injuries to bulls during the breeding season are relatively common. When a bull becomes lame or incapable of breeding, because of an injury to his reproductive tract, he needs to be removed from the breeding pasture and replaced with another bull. No one can watch all of the bulls all of the time, but the “lesson learned” was to be as observant as possible as bulls are turned out to the breeding pasture this spring.

Spring Weather Favors Lice Infestation in Cattle
Gene Parker, Jr. DVM

Lice populations build up on cattle in the winter months, and are mainly a problem from November through March in Oklahoma. Lice are not a problem on cattle in the summer months because the lice are not able to tolerate hot temperatures in populations high enough to cause noticeable symptoms on livestock. Dry weather also favors lice buildup. A half inch soaking rain on cattle will kill (drown) all adult and nymph stages of the parasite; however, the egg stage will still hatch out in about 14-16 days. Warm, rainy weather will not cure the lice problem, but it can keep populations low enough not to cause severe rubbing and hair loss. Lice pierce the skin and take blood from the animal. Even a small infestation of lice can cause significant irritation. This irritation causes the animal to scratch and rub, thus losing hair. Hair loss will eventually contribute to energy loss and reduced gains when it occurs with low environmental temperatures.

Lice spend their entire life cycle on the host animal. Lice are not very resistant to the environment. They can only survive on the animal, and are spread by direct contact between cattle while grazing or loafing. If treatment is implemented, all the animals in the herd must be treated. If all animals are not treated at the same time, they will pass the lice back and forth to each other resulting in less than favorable control.

Several pesticide formulations specifically made for control of lice work very well. Lice are easy to kill, but very difficult to control. Two treatments for lice must be made three weeks apart to break the life cycle and prevent re-infestation by the hatching eggs. Pour-on topical treatments are popular due to ease of administration and relatively low cost per head. The self-use devices such as back-rubbers and dust
2004, The Henry Ford Organization declared 2, 4-D as one of the 75 most important innovations in the previous 75 years. Its uses in agriculture are on wheat and other small grains, grain sorghum, corn, rice, sugar cane, rangelands, pastures, and numerous minor crops. It is also used largely in our no-till production systems because of its short residual length. It is also used in right-of-ways, roadsides, non-crop areas, forestry and lawn and turf care. A major use of 2, 4-D today is in combinations with other herbicides to improve the performance of the tank mix at economical levels and enhances the weed control spectrum of many popular herbicides. After nearly 60 years of use 2, 4-D is still the most widely used herbicide in the world and third most in the United States and Canada.

While we can focus on all the good things about 2, 4-D and the benefits of its uses, we must also recognize that this herbicide does not always stay where it is intended. 2, 4-D can move off target by misapplications (particle drift) or can volatilize and move off target. Applicators need to use caution with this product so that all the benefits of this product can...

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**Use Caution with 2, 4-D in Oklahoma**

Roger Don Gribble, OCES Area Agronomist

2, 4-D is a member of the phenoxy family of herbicides and was the first successful selective herbicide developed. Researchers in the United Kingdom and the United States discovered this class of hormone herbicides in the early 1940s. Their discovery transformed agriculture and is considered among the greatest scientific discoveries of the twentieth century.

In February of 1942, Dr. Franklin D. Jones was researching ways to find an agent to kill poison ivy. Dr. Jones was motivated not only by commercial interests but also by the fact that his children were highly sensitive to this poisonous plant. Dr. Jones began experimenting with plant growth hormone, indoleacetic acid, a natural occurring compound that is found in most plants but was unstable to work effectively with. Dr. Jones then developed a synthetic version, namely 2, 4-D.

In testing, 2, 4-D didn’t increase plant growth as expected, but instead Dr. Jones found that at higher doses it killed broadleaf plants and did not affect grass plants. The introduction of 2, 4-D as an herbicide has increased the world’s food supply and preserved the foundation for a cheap food policy. In 2004, The Henry Ford Organization declared 2, 4-D as one of the 75 most important innovations in the previous 75 years.

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**CONTINUED:** 2, 4-D

be maintained. A couple of thoughts might help re-
duce the chances of off target mistakes.

First, when using 2, 4-D, select a nozzle type that produces larger coarser droplet sizes. Larger dro-
plet sizes reduce the chances of drifting off target. Along the same line, reducing the pressure also in-
creases droplet sizes. Wind speeds increase as the height of the release point increases, so lowering the release point will help reduce movement off target.

More sprays will move off target as wind speed increases. Some 2, 4-D manufacturers label their products with a maximum wind speed tolerance. To insure wind speed and direction, check the Oklahoma Mesonet Station nearest you to determine speed and direction so that off target movement is reduced.

The use of lower volatile formulations where sen-
sitive plants are located will help reduce off target damage. Ester formulations of 2, 4-D or other prod-
ucts can easily volatilize when warmer tempera-
tures persist. The amine formulations are less likely to volatilize but can still cause some particle drift damage.

Use of the Oklahoma Department of Agriculture, Food and Forestry monitor to be aware of sensitive crops nearby can also assist you. Taking appropriate measures to protect these crops will help. A site to help you recognize locations with sensitive crops and no-spray areas are is located at http://maps.oda.state.ok.us/website/pestvuln/viewer.htm.

Most importantly for those using 2, 4-D, read and follow the label to protect yourself and those around you.

**HORTICULTURE TIPS**

**April**

**Fruit and Nut**
- Don’t spray insecticides during fruit tree bloom or pollination may be affected. Disease sprays can continue according to schedule and label directions. (EPP-7319)
  - Control cedar-apple rust. When the orange jelly galls are visible on juniper (cedar), following a rain, begin treating apple and crabapple trees with a fungicide. (EPP-7319, EPP-7611)
  - Fire blight bacterial disease can be controlled at this time. Plant disease-resistant varieties to avoid diseases.
- Continue spray schedules for disease prone fruit and pine trees.

**Trees and Shrubs**
- Proper watering of newly planted trees and shrubs often means the difference between success and replacement.
- Remove any winter-damaged branches or plants that have not begun to grow. Prune spring flowering plants as soon as they are finished blooming. (HLA-6404, HLA-6409)
- Control of powdery mildew disease can be done with early detection and regular treatment. Many new plant cultivars are resistant. (EPP-7617)
- Leaf spot diseases can cause premature death of foliage and reduce plant vigor.

**Lawn**
- Warm-season grass lawns can be established beginning late April from sprigs, plugs or sod. (HLA-6419)
- Fertilizer programs can begin for warm-season grasses in April. The following recommendations are to achieve optimum performance and appearance of commonly grown species in Oklahoma.
  - Zoysiagrass: 3 lbs N/1,000 sq. ft.
  - Bahiagrass: 3 lbs N/1,000 sq. ft.
  - Buffalograss: 2 - 3 lbs N/1,000 sq. ft.
  - Buffalograss/grama mixes: 3 lbs N/1,000 sq. ft.
  - Bermudagrass: 4-6 lbs N/1,000 sq. ft.
  - Centipede grass: 2 lbs N/1,000 sq. ft.
  - St. Augustinegrass: 3-6 lbs N/1,000 sq. ft.
When using quick release forms of fertilizer, use one pound of actual nitrogen per 1,000 sq.
ft. per application; water in nitrate fertilizers. (HLA-6420)
- Mowing of warm-season lawns can begin now
(HLA-6420). Cutting height for Bermuda and zoysia should be 1 to 1½ inches high, and buffalograss 1½ to 3 inches high.

- Damage from Spring Dead Spot Disease (SDS) becomes visible in bermudagrass (EPP-7665). Perform practices that promote grass recovery. Do not spray fungicides at this time for SDS control.

- Grub damage can be visible in lawns at this time. Check for the presence of grubs before ever applying any insecticide treatments. Apply appropriate soil insecticide if white grubs are a problem (EPP-7306). Water product into soil.

**Flowers**
- Most bedding plants, summer flowering bulbs and annual flower seeds can be planted after danger of frost.
- Harden off transplants outside in partial protection from sun and wind prior to planting.
- Let spring flowering bulb foliage remain as long as possible before removing it.

**Vegetables**
- Wait a little longer for it to warm up before planting cucurbit crops and okra.
- Plant vegetable crops in successive plantings to ensure a steady supply of produce rather than harvesting all at once.
- Cover cucurbit crops with a floating row cover to keep out insect pests. Remove during bloom time.
- Watch for cutworm damage and add flea beetle scouting to your list of activities in the vegetable garden.

**Horticulture Tips**

**May**

**Trees and Shrubs**
- Prune and feed azaleas immediately after blooming.
- Insect Alert: (EPP-7306)
  Bagworms on juniper and arborvitae. (Late May)
  Elm leaf beetles and larvae on elms. (Late May)
  Mimosa webworms on mimosa and honeylocust.
  Lace bugs on sycamore, pyracantha and azalea.
- Soak new transplants and newly planted trees unless rainfall is abundant.
- Pine needle disease treatments are needed in mid-May. (EPP-7618)

**Turfgrass**
- Cool-season lawns can be fertilized again. If you did not fertilize cool-season grasses in March and April, do so now.
- Warm-season lawns may be fertilized again in May. (HLA-6420)
- Dollar spot disease of lawns can first become visible in mid-May. Make certain fertilizer applications have been adequate before ever applying a fungicide. (EPP-7658)
- Nutsedge plants become visible during this month. Post-emergent treatments are best applied for the first time this month (HLA-6421). Make certain warm-season grasses have completed green-up.
- The second application of pre-emergent annual grass herbicides can be applied in late-May or early June, depending upon timing of first application (HLA-6421). Check label for details.
- Vegetative establishment of warm-season grasses can continue. (HLA-6419)

**Flowers**
- Annual bedding plants can be set out for summer color.
- Plant summer bulbs such as cannas, dahlias, elephant ear, caladiums and gladiolus.

**Fruits and Vegetables**
- Plant watermelon, cantaloupe, cucumber, eggplant, okra, sweet potatoes, etc.
- Fruit spray programs should be faithfully continued during the next several weeks. (EPP-7319).
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