316 E. Oxford, Enid, OK 73701 Phone: 580-237-1228 Fax: 580-242-1955

Garfield County Agriculture Newsletter

Spring Edition 2008

Spring Schedule of Extension Agricultural activities

OSU Wheat Pasture Research Unit Field Day
12:00 – 3:00 p.m. Friday April 25th, 2008
OSU Wheat Pasture Research Unit Headquarters
1 mile west of intersection of SH 51 and 74

Agroterrorism: Can it happen here?
Wednesday, April 30, 2008
1:30-3:30 p.m. for Community Leaders/First Responders
6:30-8:30 p.m. for Ag producers and general public
Autry Technology Center
1201 West Willow Street

Lahoma Wheat Tour
Friday May 16th, 2008
Registration begins at 8:30 a.m.
Central Research Station, Lahoma
1 mile west of Lahoma on SH 412.

Garfield County Booster Club Golf Tournament
1:00 p.m. Sunday, May 18, 2008
Turkey Creek Golf Course
West of Hennessey on SH 51

Lahoma Wheat Tour—May 16th, 2008

The annual Lahoma Wheat Tour will again feature a diverse venue of crop management options for producers to learn more about. The following are Crop Production Topics that will be available during the tour:

- Correct N Rate for the year
- Costs of Fertilizer
- Wheat Marketing
- Crop Rotations with Wheat
- Wheat Improvement Team
- Weed Control Options
- Lime Strips
- Wheat Variety presentation
- Use of Fungicides in Wheat
- Wheat Insect Management
- Fallow Weed control
- Canola Production
- Soybean Production Considerations

Registration will begin at 8:30 a.m. at the Central Oklahoma Research Station just West of Lahoma on SH 412. Lunch will again be provided following the tour. I will see YOU there on the 16th of May!!!

Sunflower Production in Oklahoma

Chad Godsey, OSU Plant & Soil Science Specialist

Several producers in the state have gained interest in planting sunflower since we now have a local market in Oklahoma. Sunflower can be planted as either a full season crop or double crop following wheat harvest. Sunflower is a crop that is well suited for the summer growing conditions of the state. The tap root crop will extract water and nutrients from deeper in the profile (6 ft. or greater) than most crops we produce. Another characteristic of sunflower that makes it well suited is the planting window. Sunflower can be planted from April 1 to Aug. 1 in most fo the state. This wide planting window gives producers the flexibility to plant when soil moisture is available.

Hybrid Selection

Sunflower hybrids are divided between oilseed and confection hybrids. Oil-type sunflower hybrids can be divided into three types: linoleic (regular oil type), NuSun (mid-oleic), and high oleic. Linoleic oil processed from sunflower oil is used as a low saturated fat cooking oil. Linoleic types were the predominant oil sunflower hybrid produced, but acreage of this type has decreased. Currently, NuSun is the predominant oil-type sunflower planted. NuSun is a healthier oil and contains 20 percent lower saturated fats than traditional linoleic-type oil. Also, high oleic sunflower hybrids also have been developed. High oleic hybrids produce a specialty oil very low in saturated fats used in lubricants (both food grade and industrial) and foot coatings. Confection sunflower hybrids are used primarily for in-shell and hulled kernel markets. Confectionary sunflower production is similar to oil type, with the exception of two areas: plant population and insect pest control. Confection

(Continued on page 2)

CONSIDER FEEDING THOSE MOTHER COWS JUST A LITTLE WHILE LONGER THIS YEAR!

I have had an alarmingly high number of conversations with cow / calf producers that are very concerned about the body condition of their spring calving cows. Producers are recognizing a lower than normal body condition on these cows with some cows becoming weak and going down one or two weeks post partum. With breeding season just around the corner, there is certainly cause for concern considering the impact that cow body condition at calving and early post partum has on cows cycling into heat and ultimately re-breeding.

Research has shown that for cows to have the greatest opportunity to cycle into heat post partum and conceive, they most likely were a Body Condition Score of 5.5 or greater at calving and have lost less than 1 BCS in the first 45 days post partum.

This winter and subsequent calving season has taken a toll on many Spring Calving cows and first calf heifers. The extra moisture that we have received beginning in December set the tone for a damp, cold winter where cows were below critical temperature for several days at a time. Critical temperature is the value that considers factors of air temperature, wind chill and moisture impacts on cattle ambient body temperature and their need to consume extra energy to withstand temperature stress and not loss weight.

To complicate the issue of winter cold stress, producers have been faced with the quality issues of standing forage as well as hay that is/ was available to supplement cattle from last season's production. The forage quality in our standing forage was not great before frost and the winter moisture took its toll on the qualities of digestable protein and energy available to cattle. In many cases the hay available for supplementing cattle through the winter had reduced quality as well depending on weather and plant conditions when the hay was put up. In both cases I noted reduced digestable protein and energy values in both standing forage and hay samples that have been tested for these values.

With all that having been said, this may be a year where the cow / calf management might be a bit more intense through the early spring than in most years given that many cows are below 5 on body condition and still falling as they progress through the end of calving season.

Management strategies that should be considered include excellent parasite control of both internal and external parasites. Cattle that are uncomfortable from biting and sucking insects are slow to recover body condition. Likewise cattle that have an internal parasite load will be very inefficient at recovering body condition as spring and summer forages develop. I would suggest that fecal evaluations be a part of the deworming process to verify the efficacy of the treatment. Resistance to certain deworming products may become a problem in this time of more abundant moisture so follow up on treatment of worms with fecal evaluation.

Many producers calculate very accurately, the supplemental protein needed by gestating cows but sometimes forget to take into consideration the increase demand on nutrition that calving has on females. A cow's nutritional needs increase 40-45% the day that she delivers a calf! This extra nutrition is used to not only provide milk for the calf but to also provide for metabolic and reproductive activities that the reproducing cow continues to go through during this stressful time.

Adding energy to the cows / heifers diet is the quickest way to improve chances to have as high of percentage of females exposed as possible pregnant when you pregnancy test next fall. Feeding lactating females relatively small amounts of grains or low protein supplemental processed feeds can help to stimulate cycling and reduce the amount of body condition lost immediately after calving. Energy supplementation works best if done daily. The early grass we get each year is usually very high in protein but often does not meet a lactating cow's needs for digestable energy.

Don't forget about the sires that are to be used this season as well. Monitor body condition on bulls and conduct a breeding soundness exam 30 days pre-breeding which should include semen test, sexual functionality exam, condition score, feet and leg evaluation and parasite evaluation. Remember these guys count for ½ of your calf crop. Mid-breeding season can be a very tough time to be finding out that a sire is not getting the job done and a very challenging time to locate and purchase a replacement.

Please Contact the Garfield County Extension Office or go to the Garfield County website to obtain production tips from Cow / Calf Corner and other Animal Science Fact Sheets that are available.

(Continued from page 1)

hybrids should be planted slightly thinner than oil seed types and insect threshold levels are lower for confectionary sunflowers. Hybrids can have two different growth habits, semi-dwarf or full height. Semi-dwarf sunflower is 25 percent to 35 percent shorter than normal height hybrid sunflower. Research results show seed yield and oil content of semi-dwarf and normal height sunflower are similar in some years but not always. In drought stress years, seed yield of semi-dwarf sunflower was significantly less than full height hybrids. Most semi-dwarf sunflower have early maturity ratings, thus the potential for high yields is limited, compared with full height sunflower. The following recommendation will focus on oil-type sunflower production. Perhaps the four most important things to consider when selecting a hybrid are:

- Yield
- Oil Content
- Resistance/tolerance to disease and/or herbicide
- Maturity

You want to select a hybrid that performs well in your area. Oil content is another characteristic that needs to be considered. Oil content can vary between 38-50% and you usually receive a premium when oil contents are high (<40%). Maturity is important depending on planting date and if you intend to plant wheat in the fall. This may influence your hybrid selection.

Plant Population

Seedbed preparation, including herbicide application, is important to get the crop established properly. Sunflowers should not be planted into wheat stubble if Glean, Ally, Ally

(Continued on page 3)

Monitor Wheat Pests Closely as This Year's Crop Enters Reproductive Stages

It appears that much of the 2007-08 Wheat crop in Garfield and surrounding counties is showing promise to be an average or much better than average crop. After last years disasters with weather, disease and insect pests, as well as the significant investment made by farmers in this years crop for seed, fertilizer and fuel have most producers closely observing wheat stands to monitor crop condition.

Some areas of the State have experienced recent increases in greenbug numbers in wheat fields. Even though few producers have treated fields based on these aphid insect pest's exceeding economic thresholds, other producers have not had to treat because of the presence of "Lysiphlebus testaceipes", a parasitic wasp which feed on developing aphid nymphs killing them and eventually impacting a population of greenbugs in a wheat field.

A system developed by OSU Extension Entomologists, incorporates the impact of "Lysiphlebus testaceipes" on a greenbug population and assists producers with decision making on whether to treat fields based on economic impact of the greenbug. "Glance .n Go Sampling" is the name given to this method of determining whether or not greenbugs in wheat need to be treated. Glance 'n Go Sampling is a method of counting the presence of Greenbugs on wheat tillers as well as the number of greenbug mummies (which result from the presence of the parasitic wasps) while making field observations. After several years of research, Entomologists have determined economic thresholds that can aid farmers in the decision making process of when to treat and when to wait to see if natural enemies of the greenbug will suppress the increase in population and bring them back to a level that wheat can tolerate. Glance 'n Go sampling forms can be accessed through the Greenbug Expert System on the internet at *http://entoplp.okstate.edu/gbweb/* . Once on the website, click on "Links", the "Cereal Aphids Pest Management" in the list under "Agricultural Models" and you will find the Greenbug Expert System. By following the instructions given on the site, you can use the Greenbug Calculator to determine an economic threshold based on the cost of treating the field and the price of wheat. Once a threshold is determined, a scouting form can be printed and used to record your sampling results and make a treatment decision. When scouting with the Glance 'n Go system, just keep a running count of tillers that have aphid mummies on them as well. When enough samples have been taken to make a decision to treat, look at the total number of tillers that had mummies on them. If there is enough mummy activity, you will be directed to NOT TREAT, even if you have exceeded the treatment threshold for greenbugs!

Because the price of wheat is so high, greenbug treatment thresholds in March should fall around 1-2 greenbugs per stem (tiller). However, Lysiphlebus may have already taken care of your greenbug infestation, so check your fields to determine the appropriate management strategy regarding greenbugs. With insect pests like Greenbugs, it is wise to make multiple visits to fields over 3-4 week period to make sure environmental and other conditions don't cause a significant population shift.

In addition to insect pests, producers are concerned about diseases that impacted wheat production so dramatically last season. It is important to remember that for a repeat performance of last season's disease pressures we must have, a) a susceptible host, b) favorable environmental conditions and c) the disease inoculum in significant enough presence to cause plant infection. If these three components of the disease triangle all exist, it is very possible to have loss of wheat yield from diseases like tan spot, septoria, striped rust and powdery mildew.

If you are a producer that was fortunate enough to have been able to plant a wheat variety that has documented genetic resistance to one or all the diseases that I mentioned above, you should be much less concerned about these yield robbing diseases in your wheat. However, because of the very short supply of seed at planting, many producers where unable to select and purchase wheat varieties that have genetic resistance to these diseases and should remain vigilante as to the potential devel-

---

(Continued from page 2)

Extra, Peak, Amber, Rave, Finesse, Maverick, Olympus, Beyond, or Tordon herbicides were applied in the preceeding small grain crop because of the risk of sunflower injury from herbicide carryover. Applying Prowl H_2O and Spartan pre-emerge is probably the best weed control option you have for conventional sunflower production. The ideal plant population will vary depending on climatic conditions of the growing season but a target population of ~20,000 plants per acre at harvest would be sufficient. The range that would be acceptable would be 17,000 to 23,000 plants per acre. Sunflower is a good compensator for a thin stand. Planting depth for semi-dwarf hybrids should be no deeper than 1.5", while full height sunflower can be planted from 2/2.5" deep. Soil temperatures should be from 55-60^{o}F at a 2" depth to get rapid germination.

Fertility

Soil pH should be from 5.8 to 8.0 to obtain optimum yields. Soil pH less than 5.8 can greatly reduce yield potential. Nitrogen should be applied at a rate of 50 lbs N per 1000 lb sunflower. Phosphorus and potassium are also critical for sunflower production. For full fertility recommendations visit one of the following websites:

- http://www.oznet.ksu.edu/library/crpsl2/MF2384.pdf
- http://www.sunflowernsa.com

(Continued on page 4)

AGROTERRORISM: CAN IT HAPPEN HERE?

The threat of terrorism is very real to all Americans today. Agroterrorism implies deliberate attack with a variety of bacteria, viruses, and fungi on commercial crops or livestock populations, either as targets or as a vehicle to attack humans through the food supply. The agriculture industry is perilously vulnerable to attack by foreign livestock viruses. By targeting U.S. agriculture, terrorists have the potential of attacking our economy, our food supply and our social structure simultaneously. One only has to look at the devastation of the Foot and Mouth Disease (FMD) in Great Britain in 2001 as an example of what could happen. Even though this had no ties to terrorism the results were the same and it has brought a very real awareness of how devastating an event such as this could be either by accident or by terrorist effort. When all was said and done the cost was over $25 billion dollars and 11 million head of livestock had been killed in an area the size of Oregon. These losses were felt not only by the individual producers, but the communities as well with loss of business including tourists and travelers that stayed away from the affected areas, even though FMD is generally not spread to humans.

The threat to the U. S. agriculture industry is very serious because we are the largest agricultural market in the world and this depends on very large populations of domestic livestock and poultry. Just 2% of the feedlots produce 75% of the cattle and for economic a market reasons different industries have become clustered in a handful of states: 75% of swine are in the Midwest, 80% of broiler chickens are in the Southeast, and over 80% of the feedlot cattle are in the Midwest and Southwest states. As you know Oklahoma ranks high in the production of these animals.

So how do you learn more about these possible threats? Oklahoma Cooperative Extension Service and the Oklahoma Department of Food and Forestry are teaming up to conduct a series of seminars that will provide information for you to position yourself and your community to come through such a potential disaster with minimal impact. Each day of the seminars will consist of two meetings. The first meeting will be from 1:30- 3:30PM and will be for community leaders and first responders such as: county commissioners, sheriff and police departments, emergency managers, fire responders, hospitals and public health officials, local veterinarians, sale barn operators, key ag producers, and anyone else that might be included in developing a plan for your county. The second meeting each day will be from 6:30- 8:30 PM and will be a general public meeting for all interested parties including civic groups, ag producers and producer groups, chamber of commerce, ministers, media and local representatives. The main focus of the seminars are awareness of; could it happen here, how would it affect Oklahoma, how would it affect you, and understanding and preparing for the impacts of foreign animal diseases and agroterrorism on Oklahoma communities, industries and individuals. There will be presentations on Foreign Animal Diseases (FAD) threats to Oklahoma, Economic Impacts of FAD and other agricultural emergencies, FMD control/eradication, social impacts of FMD, agroterrorist threats and emergency planning.

This series of awareness and preparedness meetings and will be held at the following locations in Western Oklahoma:

April 28 Pioneer Technology Center,
2101 North Ash Street, Ponca City
April 29 High Plains Technology Center,
3921 34th street, Woodward
April 30 Autry Technology Center,
1201 West Willow Street, Enid

If you have any questions or need more information feel free to give me a call at (580) 237-7677 or email me at stan.ralstin@okstate.edu. Or as always you can get more information by contacting the Garfield County Extension Office.

(Continued from page 3)

Sunflower is a crop that has potential to fit our cropping systems. The rotational benefits of sunflower have been well documented. A lot of the benefit to following crops can be given to improved soil physical properties due to the rooting characteristics of sunflower. This broadleaf crop provides diversity to our grass based crop rotations.

Editor, Jeff Bedwell, Extension Educator, Agriculture/4-H , Garfield County

This newsletter is printed quarterly by the Garfield County OSU Office Agriculture/4-H Programs at a cost of 1 cent per page for a total of $27.82. This is one way of communicating educational information. For subscriptions contact the local office. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement is implied. The Oklahoma Cooperative Extension Service offers its programs to all eligible persons regardless of race, color, national origin, religion, gender, age, status as a veteran or disability in any of its policies, practices or procedures and is an Equal Opportunity Employer. USDA-Oklahoma State University and County Commissioners Cooperating.