TEXAS A&M AGRILIFE EXTENSION

Swisher County
310 W. Broadway
Tulia, TX 79088
806-995-3721
Fax 806-995-2364

Ag Newsletter

We're on the Web!
swisher.agrilife.org

Volume 15/ Issue 4

Swisher County Ag Day Set for Dec. 8 in Tulia

Inside this issue:

Explore the Texas A&M AgriLIfe Extension bookstore at the following web address https://agrilifebookstore.org

John Villalba, County Agent Agriculture & Natural Resources.

Writer: Steve Byrns, 325-653-4576, s-byrns@tamu.edu

Contact: John Villalba, 806-995-3726, john.villalba@ag.tamu.edu

TULIA – The Texas A&M AgriLife Extension Service's Swisher County Ag Committee will host its annual Swisher County Ag Day beginning at 8 a.m. Dec. 8 in Tulia.

The event will be held in the basement of the Swisher County Memorial Building, 127 Southwest 2nd Street.

"We'll be showcasing topics important to farmers and ranchers on the High Plains," said John Villalba, AgriLife Extension agent in Swisher County. "A mix of cotton, sorghum, wheat, cattle and agricultural law will be offered at the program."

Villalba said the program will also offer a number of continuing education units and credits. They will include five Texas Department of Agriculture continuing education units: two general, one integrated pest management, one laws and regulations and one drift. It also will offer six and a half Certified Crop Advisor credits: one nutrient management, 0.5 soil and water management, three integrated pest management, one crop management and one professional development.

Individual registration is $10. Lunch will be sponsored by Happy State Bank. RSVP by Dec. 1 to the AgriLife Extension office in Swisher County by calling 806-995-3726.

Topics and speakers will include:

– Wheat disease management, identifying rusts and using fungicides effectively, Dr. Ron French, AgriLife Extension plant pathologist, Amarillo.

– Application timing of nitrogen topdress in wheat and nutrient management practices in grain sorghum, Dr. Calvin Trostle, AgriLife Extension agronomist, Lubbock.

– Sugarcane aphid update and roundtable discussion, by the following AgriLife Extension personnel: Blayne Reed, integrated pest management agent for Hale, Swisher and Floyd counties; Dr. Jourdan Bell, agronomist, and Dr. Ed Bynum, entomologist, both at Amarillo.

– Texas Department of Agriculture, Cheryl Goswick, Texas Department of Agriculture inspector, Groom.

– 2015 Agriculture law review and hot topics for 2016, Tiffany Lashmet, AgriLife Extension agriculture law specialist, Amarillo.

– 2015 Cotton residual herbicide trial summary, Reed.

– Veterinary feed directive-How does it affect cattlemen?, Dr. Ted McCollum, AgriLife Extension beef cattle specialist, Amarillo.

– 2015 Cotton soil/water relationship result demonstration summary, Villalba.

Also included will be updates from the commodity groups that serve the area.

For more information, call Villalba at 806-995-3726.

-30-

Find more stories, photos, videos and audio at http://today.agrilife.org

Upcoming Programs

Amarillo Farm and Ranch Show

Tuesday, December 1 (1PM-5PM) – Ranching 4 Tomorrow

Grand Ballroom - Amarillo Civic Center $10.00

RSVP by November 23 to Potter County Ext. Office 373-0713

An In-depth look at the advantages of proper management of range and income for a sustainable operational! Highlighted by a producer and expert panel of the following:

Tim Steffens – Extension Range

Ted McCollum – Extension Beef

Morgan Russell – Extension Range

PRODUCER: Jay O'Brien

Donna Hughes – Daniels Trading Company

Tiffany Lashmet – Extension Ag Law

Wednesday, December 2 (1PM-6PM) – Seeking Solutions to Profitability with Small Grains

$10.00

Speakers:

Steelee Fischbacher - Director of Policy and Marketing - Texas Wheat

Dr. Steve Amosson - Economist, Texas A&M AgriLife Extension

Dr. Jackie Rudd - Wheat Breeder, Texas A&M AgriLife Research

Dr. Clark Neely - Agronomist, Texas A&M AgriLife Extension

DeDe Jones- Risk Management Specialist, Texas A&M AgriLife Extension

Dr. Calvin Trostle - Agronomist, Texas A&M AgriLife Extension

Dr. Ron French - Plant Pathologist, Texas A&M AgriLife Extension

This program will offer 3 CEU's (2 general and 1 IPM)

TEXAS A&M AGRILIFE EXTENSION

Survey Shows Expanded Acreage & Yield Boost from Cover Crops

For the third year in a row, a national survey of farmers has shown that cover crops improve corn and soybean yields while providing a host of other benefits. The survey of more than 1,200 farmers revealed that cover crops boosted 2014 corn yields by an average of 3.7 bushels per acre (2.1 %) and soybeans by 2.2 bushels per acre (4.2 %). Cover crop acreage per farm more than doubled over the past five years.

The survey was conducted by the CTIC with funding from USDA's SARE program and the American Seed Trade Association (ASTA). While the survey showed yield increases among growers who use cover crops, they are interested in more than the yield benefit. The three most-cited benefits of using cover crops were:

increased soil health (22 %)
increased organic matter (20 %)
reduced soil erosion (15 %)

"This shows a strong appreciation for the wide range of long-term benefits cover crops deliver," says Chad Watts, CTIC program director. The survey also provided insight into why growers use or do not use cover crops. Growers cited the top challenges to growing cover crops as:

establishment (22 %)
cover crop seed cost (20 %)
time and labor required for planting and managing cover crops (19 %)

The survey provides powerful insight on the role of markets and financial programs in influencing cover crop decisions. "Nearly three-quarters of the cover crop users in the survey said commodity prices have little or no influence on whether they plant cover crops," says Rob Myers, regional director of Extension programs for North Central Region SARE. "Many people speculate that low corn and soybean prices would stall the growth of cover crops, but the farmers in the survey are telling us—and demonstrating—that the benefits of cover crops outweigh lower commodity price considerations." On the other hand, 92 percent of the farmers who do not currently plant cover crops say economic incentives would somewhat or always influence cover crop adoption. "These results illustrate that economic incentives can help encourage farmers to consider cover crops, but once they start using them, the multiple benefits they are seeing will motivate them to continue using covers," Myers notes.

Distributed by SARE Outreach for the Sustainable Agriculture Research and Education (SARE) program, which is funded by the U.S. Department of Agriculture National Institute of Food and Agriculture (USDA-NIFA).

EPA issues Cancellation Order for Transform®

On November 12, EPA issued an order of cancellation for all previously registered sulfoxaflor products. This was in response to a September 10th Ninth Circuit Court of Appeals ruling "vacating" product registrations. This does not affect the sale of crops that have

already been treated with Transform® under the Section 18 label. What does this mean regarding future use of existing products?

1. Distribution or sale by persons other than the registrant. Distribution or sale of the cancelled products listed below already in the possession of persons other than the registrant is permitted only for the purposes of proper disposal, lawful export, or to facilitate return to the manufacturer.
2. Use of the cancelled products listed below, other than sulfoxaflor Technical, is permitted until such stocks are exhausted, provided that such use of existing stocks is consistent in all respects with the previously-approved labeling accompanying the product and the use is covered by any necessary tolerances.

For statement number 1, a dealer or supplier can not sell any existing products in stock to the end user. For statement number 2, current on farm stocks can continue to be used to control all pests on all crops as long as the use is in accordance of the previously-approved labeling of the product, such as the 2015 Section 3 label. These crops can still be sold legally. However, sulfoxaflor products, Transform®, that were under a Section 18 emergency exemption label, can only be used if the Section 18 label has not expired.

For us in Texas that Section 18 label for Transform® use on sorghum expired on October 31st. So sorghum is no longer a labeled use and future use of Transform® on sorghum is currently prohibited. Dr. Mo Way, Texas A&M AgriLife Research at Beaumont, has taken the lead in the state to initiate new requests for Section 18 labels. He submitted a Sec. 18 request for Transform® to TDA on Friday. And, a Sec. 18 is being written for Strafer® (the old Intruder from Gowan). Strafer® is a neonicotinoid insecticide that is relatively safe on honey bees. However, it is EPA and not TDA that approves Sec. 18 requests, and there is no way to know if EPA will approve our Texas request.

Dow AgroSciences has responded with a press release regarding EPA's cancellation of Transform® insecticide (http://www.dowagro.com/en-us/newsroom/ pressreleases/2015/11/sulfox-epadecisionVkoD8IRnW-K).

Dr. Ed Bynum, Extension Entomologist

Texas A&M AgriLife Extension Service,

6500 Amarillo Blvd., West, Amarillo, TX 79106

Ebynum@ag.tamu.edu,

806.677.5600 ext. 612

Irrigation Efficiency

Irrigation Efficiency:
The ratio between irrigation water actually utilized by growing crops and water diverted from a source in order to supply such irrigation water.

In the previous newsletter we talked about pumping plant efficiencies, and this time we'll review irrigation efficiency. Its odd to be talking about this during harvest, yet it is a good time to make plans for next year and in winter/early spring to know what you need to do to be more efficient irrigators.

Irrigation efficiency can be better coined as the planned management of water. It prevents waste, over use, and contamination of the water. Also, it is the least expensive form of conserving water, and encourages farmers to do more with less. For the sake of what the majority of irrigated farms in this area rely on, we'll take a look at center pivot efficiency.

The following are the different systems associated with center pivot irrigation and ideas for optimizing efficiency:

Low Energy Precision Application or **LEPA**: This type also applies as much to a type of management philosophy as well as the actual hardware. It can operate in a spray or chemigation mode, and includes a surface tillage system that enhances surface storage. LEPA also delivers water directly to the ground in an amount designed not to exceed the surface storage volume.

Low Elevation Spray Application or **LESA** and **Mid-elevation Spray Application** or **MESA**: These describe similar irrigation application systems that embody the LEPA technology but do not meet one or more of the criteria to be called LEPA. These systems are designed to operate either on a center-pivot or a lateral-move sprinkler machine. Typically LESA systems are one to two feet above the ground while MESA systems can vary from five to 10 feet above the ground. Low pressure systems offer cost savings due to reduced energy requirements as compared with high pressure systems. They also facilitate increased irrigation application efficiency, due to decreased evaporation losses during application. Considering high energy costs and in many areas limited water capacities, high irrigation efficiency can help to lower overall pumping costs, or at least optimize crop yield/quality return relative to water and energy inputs. LEPA irrigation applies water directly to the soil surface through drag hoses (primarily) or through "bubbler" type applicators, (such as the LEPA mode of Senninger Irrigation Inc. Quad-SprayÒ products.) Notably LEPA involves more than just the hardware through which water is applied. It involves farming in a circular pattern (for center pivot irrigation systems) or straight rows (for linear irrigation systems). It also includes use of furrow dikes and/or residue management to hold water in place until it can infiltrate into the soil. LEPA irrigation generally is applied to alternate furrows; reducing overall wetted surface area, and hence reducing evaporation losses immediately following an irrigation application. Because relatively large amount of water is applied to a relatively small surface area, there is risk of runoff losses from LEPA, especially on clay soils and/or sloping ground. Furrow dikes and circular planting patterns help reduce the runoff risk. Still, LEPA is not universally applicable; some slopes are just too steep for effective application of LEPA irrigation. Low pressure spray systems – LESA, MESA and LPIC – offer more flexibility in row orientation, and they may be easier for some growers to manage, especially on clay soils or sloping fields. Objectives with these systems include applying water at low elevation (generally 1-2 feet from the soil surface for LESA; often 5 – 10 feet for MESA) to reduce evaporation losses from water droplets (especially important in windy conditions); applying water at a rate not exceeding the soil's infiltration capacity (preventing runoff); and selecting a nozzle package that provides good distribution uniformity and appropriate droplet size and wetting pattern. In sloping fields, pressure regulators may be warranted to improve irrigation distribution uniformity in the field. This reduces occurrence of "wet spots" and "dry spots" in the field. Good distribution uniformity is also essential to effective chemigation/fertigation. In many semi-arid areas, including the Texas Southern High Plains, pre-season irrigation or excess early season irrigation is used to provide moisture from crop establishment and to fill soil moisture storage capacity to augment often deficit irrigation during peak crop water use periods. Pre-season irrigation water losses through evaporation and deep percolation can be quite high. Hence it is important for growers to understand how much water their soil root zone will hold, taking into account effective root zone depth and soil moisture storage capacity per foot of soil. Applying more water than the soil can hold can result in deep percolation losses or runoff; starting irrigation too early increases opportunity for evaporation losses. These risks need to be balanced with irrigation system capacity issues. Properly managed, LEPA is potentially more water-efficient than LESA. Both systems, properly managed, can be very efficient. LEPA allows for alternate furrow irrigation – there are alternate dry "traffic" furrows that are more accessible for timely field applications. By limiting field operation traffic to the dry furrows, infiltration capacity of soil in the "wet" irrigated furrows is maintained. LEPA allows for irrigation without foliar wetting. For some crops this can offer reduced foliar disease risk. If water quality (salinity) is an issue, LEPA can reduce salt damage to foliage. In very coarse soils, there sometimes may be insufficient lateral soil water movement from alternate furrow LEPA applications. This is mainly a concern for seed germination, shallow rooted crops and peanuts that require a moist zone near the soil surface for pegging and pod development. Spray irrigation (LESA and MESA) wet the soil surface more uniformly than LEPA. It is possible to apply LESA for crop germination / establishment, then convert to LEPA to take advantage of the higher irrigation application efficiency in season, and convert back to spray applications for chemigation or for uniform wetting of the shallow root zone as needed.

The benefits of advanced technology are also to be considered. First, start with a good design. Work with a qualified designer. Design for realistic well capacities; be realistic, not optimistic. Consider whether the water delivery is likely to decrease during the season. Compare "apples to apples" on designs; a cheaper package may not be better. Things to look for in a design include adequate pressure/vacuum relief; flexibility to accommodate crop rotations and well capacity fluctuations as needed; ease of maintenance; and appropriately sized underground pipelines (consider friction losses, especially in longer pipeline runs). Consider whether pressure regulators are needed; they are more likely to be justified in sloping fields. With these ideas to consider, hopefully you can become a more efficient irrigator on your farm.

Source: Texas A&M AgriLife Extension Irrigation

Why Should We Irrigate Cotton? A Look At the Economics

The majority of U.S. cotton (about 65%) is currently produced under non-irrigated conditions. In the South and the Southeast, non-irrigated cotton systems dominate, while in the arid West nearly all of the crop water requirements are met by irrigation water. With rising production costs and the devastating effect of drought on yield, adopting irrigation to supplement rainfall in the humid areas, and improving irrigation water management in the drier areas, is becoming increasingly essential to stay competitive. Irrigation has economic benefits to the producer by increasing yield per unit land area, and benefits to society by providing a consistent and dependable source of food and fiber. Irrigation offers safeguards against poor crop performance and/or failure due to insufficient and/or untimely rainfall. Safeguarding against rainfall uncertainties is highly desirable in today's competitive markets where substantial investment has been committed at cotton planting time. Irrigation also facilitates agro-chemical management through the use of fertigation and chemigation practices. For the Cotton-Belt, cotton ET increases by about two-fold from the humid East to the arid West. For example, cotton in the desert Southwest requires as high as 40 inches of water per season for long season varieties, about 30 inches in Lubbock, Texas, while as low as 18 inches and mostly between 20 and 25 inches in the humid Southeast (for details, see Section 4: "Cotton Water Requirements"). In the Southeast, the probability of receiving 20 to 25 inches of rainfall evenly distributed during the four-month cotton growing season is quite low, meaning non-irrigated cotton yields rarely achieve their full potential due to inadequate soil water. For example, on average, cotton's peak daily water use is about 0.25 to 0.3 inch, or about 2 inches per week, during summer near Columbia, South Carolina. The probability of receiving 2 inches of rainfall weekly during August in Columbia is only 30%, implying not only production uncertainty and risk, but also suggesting lost yield potential under non-irrigated farming. While water requirements are higher in the West, so are yields. A useful relationship between yield produced per unit ET or crop water used is water use efficiency (WUE). Modern, high water use efficiency (WUE) cotton varieties tend to provide at least 60 pounds of lint and 90 pounds of seed for every inch of water used. On a global basis, a recent summary of the past 25 years of cotton data (that included some data from the Cotton Belt) lists average WUE for seed cotton (fiber plus the seed) as 147 pounds per acre-inch or, just considering the fiber, 52 pounds of fiber per acre-inch. On a smaller scale and based on a limited study in south Georgia, the addition of 4 to 6 inches of supplemental irrigation above the seasonal rainfall increased lint yield by 250 to 620 lbs., suggesting 60 to 100 lbs. of lint per inch of irrigation above rainfall. Water use efficiency (WUE) is computed either as yield (lbs. per acre) per seasonal crop water use (or ET) or as yield per total applied water (seasonal irrigation plus rainfall). The former is more of a biological indicator (basically describes biomass production per transpiration) and there is limited control on the part of the irrigator to alter this efficiency. Since ET is soil evaporation plus crop transpiration, biological WUE can be increased by reducing soil evaporation and increasing crop transpiration. Conservation tillage (i.e., no-till) leaves substantial residue on the surface, which reduces soil evaporation (E) and consequently increases transpiration (T) and thus yield per unit of water input. The latter water use efficiency of yield per unit of applied water is largely influenced by the performance of the irrigation system and the degree of water losses beyond crop transpiration. Irrigators should strive to increase yield per total water applied by employing efficient irrigation water management practices that reduce losses due to deep leaching and runoff, and by improving irrigation system efficiency and application uniformity through system upgrades. Irrigating cotton with the correct amount at the right time can boost yield and reduce input costs. This requires a firm understanding of the critical cotton growth stages and water use. The use of high WUE varieties also helps with securing greater crop per applied water. Increasing WUE and drought tolerance in cotton is highly valuable to U.S. and world agriculture by helping growers to maintain or increase crop production with less water. Currently, traditional crop breeding and advanced gene technology methods are being used by the seed industry to develop cotton varieties with higher WUE and drought tolerance. Irrigation delivery methods continue to be refined to make sure producers get the "most crop per drop." Within the last few years, new technology has also become available that allows individual sections of an irrigated field to be turned on or off. This leads to more water savings. If there is a portion of the field that does not need irrigation (for example, a low spot where rainfall collects) the pivot is programmed to turn off the sprinklers over that area. In spite of all the advances, over – and untimely-irrigation is widespread. In many instances, over-irrigation is used as a management strategy to guard against risks associated with inadequate water management plans. But over-irrigation is also a major contributor to excess leaching of water, nutrients and crop protection chemicals. This is not only costly to the farmer but could also lead to adverse environmental effects. Efficient irrigation starts with a sound irrigation water management, or scheduling. While only about 35% of the cotton acreage in the U.S. is irrigated, for those acres that are irrigated, we must practice wise use of water and ensure that in water-limited regions we get the "most crop per drop," or simply increased "water productivity." In areas with abundant rainfall, proper use of supplemental irrigation is needed to reduce waste, avoid under-watering, and ensure "most crop per unit of land," or simply increased "land productivity."

Source: Cotton Incorporated

High Plains Ag Conference Set for Dec. 11 in Lubbock

Writer: Steve Byrns, 325-653-4576, s-byrns@tamu.edu

Contact: Robert Scott, 806-775-1740, rj-scott@tamu.edu

LUBBOCK – The Texas A&M AgriLife Extension Service will conduct the annual High Plains Ag Conference from 8:30 a.m.-3 p.m. Dec. 11 at the Texas A&M AgriLife Research and Extension Center, 1102 E. Farm-to-Market Road 1294, Lubbock.

"As is our custom with this event, the curriculum will cover an array of topics of interest to producers throughout our region and offer a number of Texas Department of Agriculture continuing education units," said Robert Scott, AgriLife Extension agent in Lubbock County.

Individual preregistration, which includes lunch, is $35 by Dec. 9 and $45 thereafter and at the door, with no lunch guarantee. For more information, contact Scott at 806-775-1740 or rj-scott@tamu.edu.

Five Texas Department of Agriculture continuing education units – one integrated pest management, one laws and regulations and three general – will be offered.

Topics and presenters will include:

- New Technologies in Resistant Weed Management – new chemicals to be used for pigweed control. How and when to apply chemicals for best pigweed control, Dr. Peter Dotray, AgriLife Extension weed specialist, Lubbock.

- Evaluation of Transgenic Cotton Varieties-discussion of new variety traits regarding bollworm resistance, Dicamba and 2,4-D tolerance, Dr. Mark Kelley, AgriLife Extension cotton program specialist, Lubbock.

- Sugarcane Aphid Management-best management practices for sugarcane aphid control. What to spray, when to spray and how to determine the need to spray, Dr. Pat Porter, AgriLife Extension entomologist, Lubbock.

- Pesticide Laws and Regulations, Steve Boston, Texas Department of Agriculture pesticide inspector, Lubbock.

- 2016 AgriLife Extension Program Updates for Lubbock County, Scott, Dr. Mark Brown, county agent, and Vikram Baliga, county horticulturist.

- Industry Update, Angie Martin, Texas Corn Producers Industry relations, Lubbock.

- Corn/Sorghum Management, Dr. Jourdan Bell, AgriLife Extension agronomist, Amarillo.

-30-

SWISHER COUNTY
310 W. Broadway
Tulia, TX 79088

Merry Christmas

And

Happy New Year!

Using the Remind Program to stay up to date on Swisher County events:

1. **Text @623540 to (906) 762-4139**
2. **The system will then reply to your phone.**
3. **Simply reply back with your first and last name, and you're finished!**
4. **No one has access to your number.**
5. **Be "in the know" on all important Swisher County Ag events.**

The Quarterly Agricultural Newsletter

Is published by

Texas A&M AgriLife Extension, Swisher County

Swisher County Extension Office

310 W. Broadway

Tulia, Texas 79088

806-995-3721 Fax: 806-995-2364

swisher.agrilife.org

Follow us on:

Twitter: @SwisherExtANR

Facebook: Swisher County-Texas A&M AgriLife Extension