

# TEXAS A&M AGRI LIFE EXTENSION



## Jackson County Agri-News

Volume X, Issue II

April 2015

### Important Dates

- April 6—Sugarcane Aphid Seminar (on the Web @ 1:00pm)
- April 9-10—Generation NEXT in Corpus
- April 14—Ag Symposium—JCSB Kitchen
- April 18—Master Gardener Plant Sale—JCSB Auditorium
- April 22-24—Processed Meat School @ Texas A&M
- May 6—Ag Day @ BRC
- May 14—Pesticide License Training—JCSB Kitchen.
- May 28-29—Grassfed Beef Conference @ Texas A&M
- June 15—Ag Tour—Hafernack Center

### 2015 Ag Tour

The Jackson County Extension Field Crops Committee is conducting an Ag Tour of several grain and cotton crop demonstrations south of Ganado. Three hours of CEU's for your Pesticide applicators license will be available. One in IPM, two in General. The Jackson County Ag Tour will be on Monday, June 15, 2015. It will start at the Hafernack Center at 4:00 p.m. Certified Crop Advisor hours will also be available.

Tour stops may include a corn hybrid variety demonstration with cooperator Bures Farms, a Regional Agronomic Cotton Evaluation with cooperator Chris Hajovsky, a sorghum hybrid trial with cooperator Bobby Bram and a soybean trial with cooperator Jake Foltyn. A sugarcane aphid study with multiple treatments may also be on the tour.

Tour speakers include: Dr. Robert Bowling, Extension Entomologist from Corpus Christi; Dr. Josh McGinty, Extension Agronomist from Corpus Christi; Dr. Gaylon Morgan, Associate Professor and Cotton Specialist from College Station.

A meal will be catered by Mustang Creek BBQ in the Hafernack Center after the tour. Speakers at the Hafernack Center will include: Dwayne Vincent, FSA program director; Millie Stevens, NRCS; Jeff Nunley, South Texas Cotton & Grain Association; Dr. Robert Bowling; and Colin Hlavinka on "Precision Farming & Mapping".

For more information, call Jackson County AgriLife Extension Office @ 361-782-3312.

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### Inside this issue:

Ag Symposium	2
TAMUCC—Drone Study	3
Ag Day	3
BoarBuster—Hog Trap	4
Milk Proteins—Cancer Prev.	4
Sugarcane Aphid Seminar	5
Processed Meat School	5
Mineral Supplementation	6
Grassfed Beef Conference	7
Aflatoxin Resistance Study	8
Aflatoxin Resistance Study	9
Ag Trivia	10
Pesticide Applicators Training	10

### Master Gardener Spring Plant Sale—April 18, 2015

Did Old Man Winter wreck your yard and garden? Have no fear, the Jackson County Master Gardeners' Spring Plant Sale is April 18th from 8 a.m. to noon in the County Service Building Auditorium.

The Master Gardeners have been searching for the best plants to put in their sale. Some of the plants they have purchased in the past include Little John Bottlebrush, Texas Mountain Laurel, Hibiscus, Esperanza, Plumbago, Verbenas, and many other new plants along with your favorites. A drawing for a number of raffle items will be at 11:30 Saturday morning.

Proceeds from the sale will be used to expand and improve the Texana Educational Garden (TEG) which is next to the parking lot. Last year we added citrus trees and a bulb garden to the TEG. We are working on adding a Ginger and grasses gardens. As with your home garden, Old Man Winter wrecked some of our gardens and we will have to replace a number of plants also. Last year we had three tours of the garden that included youth and adult and we hope to continue the educational tours in the future.

Come and shop the plant sale April 18th. Our prices are normally lower than the nurseries and you pay no sales tax. We look forward to seeing you there.

Anyone that is interested in becoming a Master Gardener and joining in on all the fun projects they do can contact Mike Hiller, County Agent, at the Extension office at 361-782-3312. A Master Gardener training class is being scheduled starting in August. Sign up will be at the booth during the plant sale. If you love to garden, different types of plants and get dirt under your nails along with people of like interest, you should consider becoming a Master Gardener.

## *Ag Symposium*

**An Ag Symposium will be held on Tuesday, April 14<sup>th</sup> from 9-2, in the Jackson County Services Building Kitchen. CEU's offered are 1.5 in IPM. Presentations will be 30 minutes each.**

9:00-9:30: Dr. Joe Paschal

*When is Black Red?*

An overview of current discoveries in beef cattle genetics and genomics, when a gene is not THE gene (is black really black?), can nutrition “whip” genes, and how many EPDs do you really need? Some basic knowledge inheritance (like knowing why you look like your parents) is recommended.

9:30-10:00: Dr. Levi Russell

*What Drives Calf Prices in South Texas*

Rising consumer demand and serious drought have pushed calf prices to record highs. This presentation discusses the impact of various genetic, managerial, and marketing factors on calf prices in South Texas.

10:00-10:30: Dr. Joe Paschal

*Why Did She Eat That?*

A ground to ground level view of the passage of feed through a cow's digestive tract including diet selection, digestion, requirements and supplementation. Some knowledge of feeds and feeding and cow digestion is recommended.

10:30-10:45 – Coffee Break

**1.5 CEUs will be provided in IPM.**

10:45-11:15: Dr. Megan Clayton

*King Ranch & Kleberg Bluestem Management*

The widespread invasive of old world bluestems has created land management issues for most of the state. Learn what is known about their response to different management practices and how to deal with them once you have them!

11:15-11:45: Dr. Andrew Ropicki

*Economic Feasibility of Commercial Aquaponics in South Texas*

This presentation presents the results of an analysis of the economic feasibility of a commercial scale aquaponics facility in south Texas. The analysis is based on an aquaponics system being tested at the Weslaco AgriLife Center.

11:45 – 12:30 – Lunch

12:30-1:00: Mac Young

*The Crop Analyzer Tool*

This presentation will describe the best scenarios for using the Excel-based tool. Additionally, a step-by-step demonstration of how the tool works will be given.

1:00-1:30: Dr. Robert Bowling

*The Sugarcane Aphid: A Review and Update*

This presentation will provide a review of sugarcane aphid biology and direct and indirect damage to sorghum. The presentation will also provide an update on sugarcane aphid activity, insecticides available (registered and those with a section 18), as well as projects and demos for the upcoming season.

1:30-2:00: Dr. Josh McGinty

*Know Your Enemy: Herbicide Resistant Weeds*

An update on the current status of herbicide resistant weeds will be given, as well as a discussion on the mechanisms of resistance, why these problems occur, and management strategies.

2:00 pm - Adjourn

## ***TAMUCC, AgriLife Research approved for drone-based plant health study***

Research will begin soon in the use of unmanned aerial vehicles — UAVs, sometimes called drones — that are expected to help growers improve crop quality and yields while reducing production costs, savings that could be passed on to consumers.

“This represents another excellent opportunity for us to continue conducting cutting-edge agricultural research,” said Dr. Juan Landivar, director at AgriLife Research’s Corpus Christi center. “After submitting an application and undergoing an extensive review process by the Federal Aviation Administration, we were issued a permit to conduct research on in-flight operations for precision agriculture. This technology will eventually improve agriculture and, in addition, could bring an entirely new remote-sensing, multi-million dollar industry to Texas.”

The first test flight of the UAV, a fixed-wing lightweight platform called a Sensefly eBee, will take flight within days, according to Dr. Michael Starek, assistant professor of geospatial surveying engineering at Texas A&M-Corpus Christi. “This technology has huge potential,” Starek said. “Such systems can be equipped with specialized cameras to precisely map where crops are stressed, assess moisture conditions, image 3-D plant structure, detect pest infiltration, and potentially determine early on where crops are diseased. Compared to traditional aircraft or satellites, UAVs provide the capability to scout crops at a fraction of the cost and at spatial and temporal scales previously unattainable.”

Current FAA regulations prohibit flying unmanned aircraft systems for commercial purposes, Starek said. While a few companies have received waivers or permits, the permit that A&M-Corpus Christi and AgriLife Research received is specific to their role as state agencies and does not pertain to commercial uses.

The technology for growers is already here, he said. But challenges still remain on how to effectively operate and process data that is easily useable for the end users. Starek said the current flight permit has very strict guidelines about how, when, and where the fixed-wing UAV can be used. Initial operations will include conducting baseline surveys of crops fields at the Corpus Christi center.

Texas A&M-Corpus Christi and AgriLife Research are in the process of applying for another agricultural UAV permit. “A second permit would use a roto-copter that operates more like a helicopter to hover and focus in on a particular problem in a field,” Starek said.

The data could then be plugged into a “smart” tractor via a computer jump drive. The tractor would proceed through the field, responding to plants’ needs based on a data map showing the tractor where to apply herbicides, insecticides, water, growth hormone regulators or whatever the crop requires.

“That’s precision agriculture,” he said. “It would apply only what’s needed where it’s needed. It will make for a higher-quality, higher-yielding crop, saving the grower time and money.”

“In addition to aiding in the production of crops, other uses for this technology include the management of water, minerals, livestock and wildlife,” Landivar said.

Dr. Craig Nessler, AgriLife Research director in College Station, said this new field of research fits well with the organization’s goals of agricultural research.

“AgriLife Research has long been known for setting the scientific bar, which ultimately benefits the grower, consumer and national food security,” he said. “With this sophisticated technology, our researchers will be able to advance their studies and solve agricultural issues in new ways.”

## ***Jackson County Ag Day—May 6, 2015***

On May 6, Jackson County Farm Bureau and Texas AgriLife Extension will coordinate the Youth Ag Day for Jackson County 4<sup>th</sup> Graders. Approximately 250 kids will come out to enjoy and take part in an Agricultural Educational Experience like none other.

The 2015 Ag Day education focuses on the county’s agriculture aspects. Several AgriLife Extension committees, including Beef Cattle, Field Crops, Master Gardeners & EEA along with speakers representing the Texas Parks and Wildlife, Southwest Dairy Farmers, Rice Belt Warehouse, B-H Genetics, Lavaca Navidad River Authority, Texas AgriLife Poultry Science, The First State Bank, Crop Production Services, Safeguard Pest Control Services, Vanderbilt Farmers Coop., Natural Resource Conservation Service, Jackson County 4-H and the Jackson County Farm Bureau will share interesting and informative information with the youth on the importance of agriculture in our everyday lives.

Presentations will include topics such as: types of food made from corn and rice; good, bad and ugly bugs in the garden; 4-H program and projects; beef and beef by-products; cotton; poultry; wildlife; horses; banking; “Rainfall Simulator—The Science of Runoff” and home safety with chemicals.

A Southwest Dairy Farmers representative will tell the students about the modern milking process, characteristics and anatomy of dairy cows, importance of dairy foods in a healthy diet and more dairy-related facts.

May 6 is Ag Day for Jackson County. If you would like to help out in this exciting event, phone 782-3312.

## ***Introducing BoarBuster: A Better Hog Trapping System***

The BoarBuster™ is a revolutionary trap system that is fully suspended and can be observed and dropped remotely from anywhere with Internet service. This video explains the research that led to the development of the BoarBuster™ system. BoarBuster™ will be available commercially in summer 2015 from WW Livestock Systems. (see links below)

The automated trap sends text or email messages upon motion activation and streams live video through a designated Web server. This trap technology allows the user to observe and activate the traps via smartphone or computer.

The suspended feature of the trap allows animals to enter or leave from all directions, eliminating trap-wary behavior associated with conventional trap gates. The user-activated trigger eliminates non-target animals from being captured. The corral design allows for captured hogs to be loaded out through an integrated door when convenient. Preliminary data suggests that the BoarBuster trap has the potential to capture 88 percent of the hogs from established populations while reducing the labor time per hog to one-third of that needed by drop-nets and corral traps.

The BoarBuster™ trap technology was designed at the Noble Foundation to help mitigate the economic and ecologic damage caused by growing populations of feral hogs in the U.S. and other countries. The Noble Foundation worked with Tactical Electronics and WW Livestock Systems to bring this technology to the marketplace.

[boarbuster.com](http://boarbuster.com)

[wwmanufacturing.com](http://wwmanufacturing.com)

[tacticalectronics.com](http://tacticalectronics.com)

[noble.org/feral-hogs/](http://noble.org/feral-hogs/)



## ***Milk proteins show promise in cancer prevention, treatment***

In a review of the existing research, a team of Australian researchers found that milk proteins, consisting of short sequences called peptides, are potential candidates for the development of anticancer agents and can be generated by enzymatic action, such as those experienced during digestion or food processing, including fermentation. Their findings are in the recent issue of *Comprehensive Reviews in Food Science & Food Safety* published by the Institute of Food Technologists (IFT).

IFT said these peptides may specifically destroy cancer cells, without damaging healthy cells, thus eliminating some of the common side effects of chemotherapy. Conventional anticancer therapies, including chemotherapy and radiotherapy, are expensive and often induce side effects, reducing the quality of life for cancer sufferers. The discovery of natural anticancer compounds may be a better alternative for the treatment of cancer, IFT said.

Cancer is the most widely recognized cause for human mortality. While more research needs to be done, this innovation will contribute toward the advancement of various functional foods as well as a "new wave" of more efficient and effective antitumor medications, IFT added. Article found at: <http://feedstuffsfoodlink.com>

## *Texas A&M AgriLife Research Seminar*

### **Developing Sugarcane Aphid (Homoptera:Aphididae) Management and Outreach Programs for Sorghum Producers**

By Robert Bowling—Texas A&M AgriLife Extension

Meetings will be broadcast via the web. Use this link for online meeting Location: <https://texasrangeclassroom.adobeconnect.com/coastalbend/> and this link for system check: <http://ccag.tamu.edu/files/2014/01/online.pdf>.

When: Apr. 6, 2015  
 Time: 1 p.m.  
 Texas A&M AgriLife Research & Extension Center  
 10345 Hwy 44  
 Corpus Christi, TX 78406  
 Center Auditorium  
 Contact phone: 361.265.9201  
 E-mail: [s-klock@tamu.edu](mailto:s-klock@tamu.edu)



## *2015 Aggie Processed Meat Technology School*

Hosted By:



April 22-24, 2015 on the Texas A&M University, Campus College Station, Texas.

#### **Registration Deadline**

The early deadline to register is April 7, 2015 and registration will close April 17, 2015. Enrollment is limited to 45 people.

#### **Registration**

Register online at <https://agriliferegister.tamu.edu/Meat> or you can also register by calling 979-845-2604. Credit Cards accepted.

#### **Registration Fee**

Covers a light breakfast, breaks, lunch and dinner (day 2), conference materials and supplies, a thumb-drive with conference-related information, facility use fees and speaker costs. Early registration for the Aggie Processed Meat

School will be \$550 per participant through April 7, 2015. After this date, the registration fee will be \$650. Registration closes on April 17, 2015 or when the maximum number of participants is reached.



Conducted in Partnership with:



## ***Mineral Supplementation Can Affect Beef Cattle Performance***

The value of mineral supplementation is either discounted or overlooked by many beef cattle producers. Mineral supplements make up a small part of the total diet, but can play a big role in the overall performance of beef cattle. This article will address the significance of minerals in many metabolic processes that affect growth performance, reproductive efficiency and immune function. The importance of providing a mineral supplement becomes evident once you understand how it can affect animal performance.

Calcium (Ca), phosphorous (P) and magnesium (Mg) are often associated with bone development and growth, but these minerals also serve other vital functions. These include growth, energy utilization, membrane structure, muscle contraction and hormone secretion.

The ratio of calcium to phosphorous in the total diet is also important. While cattle can tolerate ratios of between 1:1 and 7:1, excessive calcium may decrease the absorption of other minerals. Therefore, it is recommended to maintain a ratio of calcium to phosphorous between 1.5:1 and 3:1. Deficiencies in calcium and phosphorous or an imbalance in the calcium to phosphorous ratio can result in decreased fertility, milk production, growth and feed efficiency; as well as an increased incidence of metabolic diseases such as urinary calculi.

Potassium (K), sodium (Na) and chlorine (Cl) are important in water and acid-base balance, muscle contraction, nerve signal transmission and enzymatic reactions. A deficiency of these minerals can result in decreased intake, gain and milk production.

Sulfur (S) is required by ruminants for the synthesis of the sulfur-containing amino acids and the B-vitamins thiamin and biotin. Sulfur is also used in the detoxification of poisonous compounds like those potentially found in most sorghum forages. A deficiency of sulfur can result in reduced intake, gain and digestibility, and animals may be more susceptible to acidosis.

Trace minerals are also needed for optimal growth and performance, and many play a role in immune function. The trace minerals that are commonly supplemented to cattle include cobalt, copper, iodine, iron, manganese, selenium and zinc. Trace minerals are required at very small concentrations, making deficiencies difficult to recognize. Deficiencies of the trace minerals can result in decreased intake and gain, reduced fertility and libido, retained placentas, abortions and stillbirths, low birth weights and poor calf performance.

It is also important to monitor mineral consumption on a herd basis. Simply providing a mineral supplement will not ensure that deficiencies are met. Intake of a free-choice mineral supplement will vary from animal to animal and change with the animal's requirements and the mineral content in the forage and any supplements. A reasonable range for mineral intake is two to five ounces per head per day, depending on the composition of the mineral supplement and the factors previously mentioned. Generally, consumption is lower during the summer months and higher in the winter months due to the mineral levels in growing versus dormant forages.

Providing a complete mineral supplement can greatly impact the performance of beef cattle. Marginal mineral deficiencies can easily go undetected, resulting in decreased reproductive efficiency, poor growth performance and depressed immune function. All of these factors ultimately impact your profitability. Providing a free-choice, complete mineral supplement all year is cheap insurance against the many problems associated with mineral deficiencies.

### **Quote Worth Re-Quoting –**

*The pessimist sees difficulty in every opportunity. The optimist sees the opportunity in every difficulty.* ~ Winston Churchill

TEXAS A&M  
**AGRI**LIFE  
 EXTENSION



**May 28-29  
 2015**  
**Texas A&M  
 College Station  
 campus**

*for more information*

Dr. Rick Machen  
 rmachen@ag.tamu.edu  
 Office 830.278.9151

*To register go to:*  
<https://agriliferegister.tamu.edu/Beef>  
 Register by phone 979.845.2604

Hosted by  
 Texas A&M AgriLife  
 Extension Service  
 Animal Science

Texas A&M AgriLife Extension Service is pleased to announce the fifth conference focused on grassfed beef production.

Consumer interest in natural, grassfed and organic beef continues to rise. If you'd like to learn more about grassfed beef production and how it's different, mark your calendar for May 28-29, 2015 to be in College Station for this year's **Grassfed Beef Conference**.

We're excited about the interest among participants and the outstanding lineup of speakers that will come together for this information-sharing opportunity. Here's a chance to learn more about beef production... from pasture to plate.

Here's a quick preview of the agenda:

- Overview of the US Beef Industry
- Handling Cattle for Wholesome Beef
- Defining natural, grassfed and organic
- Carcass fabrication... a demonstration
- Growing forage – the fundamentals
- Consumers... and their expectations
- Cattle types suited for grassfed beef
- A Taste of Texas Beef
- Forage-based nutrition for cattle
- Marketing a unique product
- Preventative herd health
- Sustainability



## *AgriLife Research study on Texas corn yields, aflatoxin resistance*

COLLEGE STATION – A ground-breaking Texas A&M AgriLife Research-led study on corn has identified useful gene variations for yield increases, drought tolerance and aflatoxin resistance that could make a real difference to Texas producers in the years to come, according to researchers.

The study, titled “Genome Wide Association Study for Drought, Aflatoxin Resistance, and Important Agronomic Traits of Maize Hybrids in the Sub-Tropics” was recently published in PLOS ONE, an international, peer-reviewed, open-access, online publication.

The study included the growing years of 2011, a drought year, and 2012, and was conducted on dryland and irrigated corn in College Station and in Mississippi, all with similar results, said Dr. Seth Murray, an AgriLife Research corn breeder in the soil and crop science department of Texas A&M University at College Station.

Murray said at this time all corn seed available to growers in Texas comes from commercial breeding conducted in the Midwest. As a result, there’s been no significant increase in corn yields in Texas for many years, as reflected in their previous publications.

Murray designed this recently published study to see if there was a genetic reason, possibly the use of Midwest-temperate rather than sub-tropical genetics, limiting production.

He was joined in his research by Dr. Mike Kolomiets, an AgriLife Research plant pathologist, and Dr. Tom Isakeit, a Texas A&M AgriLife Extension Service plant pathologist, both in College Station, along with students Dr. Ivan Barrero Farfan, Gerald De La Fuente and Pei-Cheng Huang.



Dr. Seth Murray, Texas A&M AgriLife Research corn breeder in College Station, looks at corn plants during a field day. (Texas A&M AgriLife Research photo by Li Zhang)



Dr. Ivan Barrero Farfan, a Texas A&M University student working with Dr. Seth Murray during the study, pollinates corn to make hybrids for testing. (Texas A&M AgriLife Research photo by Dr. Seth Murray)

Other researchers who also grew the test plots and contributed to the analysis were Dr. Marilyn Warburton, Dr. Paul Williams and Dr. Gary Windham, all U.S. Department of Agriculture-Agricultural Research Service researchers at Mississippi State University. The study was funded by a USDA National Institute of Food and Agriculture, Agriculture and Food Research Initiative for Plant Breeding and Education grant. Additional support was given by the Texas Corn Producers and Texas A&M AgriLife.

Basically, Murray said, there are 2.4 million acres of corn planted in Texas, with each bag of seed costing at least \$150 and covering over 2 acres, which equates to well over \$180 million of sales in Texas for corn seed.

“The idea is if it is bred in the best conditions in the Midwest, it should survive in the not-so-good conditions we see here in Texas,” he said. “So we believe the private breeders for the commercial industry are trying to do the best for most producers, just not our producers. There has not been an effort to develop corn that addresses the unique needs of southern locations, especially not in the way they have for the Midwest.”

Murray said addressing the needs of the southern locations is not as simple as adding more traits. “A lot of it will come from identifying and using the right native genetics,” he said. “Growers are smart and will find those companies that are selling adapted hybrids, which will improve both yield and aflatoxin resistance, ultimately improving everyone’s bottom line”

He said in their search for genes or gene variants that improve corn for the southern U.S., most of the best diversity came from Mexico, where wild corn was domesticated, and South America, not the Midwest. “There’s a lot of benefit to having the tropical material brought up and crossed with temperate material generally sold by commercial companies,” Murray said.

The AgriLife Research study used a diverse corn association mapping panel to identify genomic regions associated with grain yield, aflatoxin resistance and important agronomic traits in southern U.S. environments. This study also was one of the first in corn to test hybrids, he said.

“We are finding genes that can benefit temperate corn,” Murray said. “We looked at a number of traits, but the best advantage was found with three genes that improved production by about 15 bushels per acre under both irrigated and dryland conditions. They seem to work synergistically.” He said this is only one study, but the results are exciting enough to follow up on because they were the same over multiple years and in multiple environments. The follow up will concentrate on the three genes.

“We don’t know if they will work in a producer’s corn field yet,” he said. “So we are validating in some new populations this summer and will see if they actually have an effect on yield. We’ve already advanced the crosses, made hybrids and the DNA markers have been collected on all of them. This summer we will get our yield data, and we should know if they are real or not.”

Murray said each of the three gene markers have two variants, one is good and one is bad. In the follow up to this study, he said they will look at other breeding material and select for the markers and screen for anything with bad markers and get rid of that, adding “just eliminating that bad variant should help overall production.”

Two of the three genes have not been associated with functions previously, so the next scientific step is to figure out what these genes actually do; how they change the biology of the plant, he said.

“We have absolutely no idea how it is affecting yield and why, but that is where the science will take us,” Murray said. “We are a lot closer to having a quality outcome. They appear to have effects in both dryland and irrigated conditions, so that is what is so exciting.”

He said this initial research and its continuation in the future is ground-breaking in a couple ways.

“There have been no studies for genes with adaptation in the south, and no one has ever looked at this much diversity, especially beyond the Midwestern temperate types,” he said. “We haven’t had access to this many tools in the past. We looked at 60,000 DNA marker variants and eventually there might be millions for breeders to consider.”

Murray said this research has provided additional guidance for improvement of corn in Texas and other southern states and will enhance Texas A&M AgriLife’s breeding programs, which have already resulted in several releases of new inbred lines available for use in hybrids by seed companies.



Aspergillus flavus fungus on corn, which can make aflatoxin. (Texas A&M AgriLife Research photo by Dr. Seth Murray)

**Agri-News Trivia**

**Did you know?**

- Cotton production covers more than 14 million acres or about 22,000 square miles of the United States. Texas produces about 25% of the entire U.S. crop.
- *Conservation tillage, a way of farming that reduces erosion (soil loss) on cropland while using less energy, has grown from 17 percent of acreage in 1982 to 63 percent today. At the same time, total land used for crops declined by 15 percent (70 million acres).*
- Each year over 5 million calves are born on over 130,000 beef cattle operations in Texas.

**Private Applicators License Training**

If you plan on using a state limited use or state restricted use pesticide, such as Grazon P+D, 2 4-D, Weedmaster, etc., and need a license, the Texas A&M AgriLife Extension Service will be sponsoring a Private Applicator Training on **Thursday, May 14, 2015** at the Jackson County Extension Office. Books and study materials for the course need to be purchased ahead of time for \$50.00 at the Extension Office. The exam can be taken a location of your choice. If you complete the training portion and score a 70 or above on the examination, you will be eligible to apply for your Private Applicator License, which will allow you to purchase all state limited use and restricted use pesticides used in agriculture. To reserve your spot at the training, contact the Jackson County Extension Office at (361) 782-3312.



**Real Learning for Real Life**



**Newsletter by E-Mail**

*Due to increased postage costs, we would like to make future newsletters and announcements available to you electronically. If you would like to receive future information by email send an email to [mrhiller@ag.tamu.edu](mailto:mrhiller@ag.tamu.edu). Benefits of having your newsletter sent through e-mail are: pictures and graphs will be in color, easy to store on your computer, no papers to mess with, click-able links to other internet sites, and sooner access.*

Mike Hiller, CEA-Ag/NR



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