Greetings to everyone, my name is Jaime Lopez and I am the new CEA Ag/Natural Resources for Nueces County. I am a native of Nueces County and a graduate of Mary Carroll High School. My wife, Delma, is a Robstown native and together we have two wonderful daughters, Lindsey and Casey, both graduates of Texas Tech University. Upon graduation from Texas A&I University with a BS in Agriculture Education and a minor in Ag Economics from Texas A&I University, I moved to LeSueur, Minnesota and was employed by Pillsbury/Green Giant. During my career with Green Giant as an Agricultural Field Rep, I interacted with our producers as a consultant. I also spent 3 winters in Huatabampo, Sonora, Mexico developing a growing area and producer base as well as assisting in the transition of a processing facility to meet Green Giant specification. I completed my career with Green Giant as the Ag Maintenance Manager, where I was responsible for the maintenance of our Ag Fleet.

My family and I then moved to Tempe, Arizona where I was employed by Pillsbury/Rudi’s Bakery. While at Rudi’s, I was part of a team that was responsible for transitioning all production from the Hayward, California facility to the new Tempe, Arizona facility. My family and I decided that Texas was where we belonged so we moved to Lubbock, TX, where I was a Production Manager for Frito Lay. I was eventually transferred to the San Antonio Frito Lay facility where I had numerous roles in the production process. I ended my career with Frito Lay in 2010 and transitioned into the oil field. I was employed with Aim Directional as an MWD Field Engineer prior to my new career with Texas A&M AgriLife Extension. I am excited about my new adventure and look forward to meeting everyone and supporting the agricultural interests in Nueces County.

PRIVATE APPLICATOR TRAINING
When…….. Tuesdays, 6/7/22, 9/6/22, 12/6/22 Pre-Registration Required…….(361)767-5223
Time ………..8:00 am—11:30 am Where……………….A&M AgriLife Ext. Office, 710 E. Main, Robstown, TX
Fee: $50.00 (Includes study manuals)
A Private Applicator is defined by law as a person who uses or supervises the use of a restricted-use or state-limited use pesticide for the purpose of producing an agricultural commodity.

FARM WORKER PROTECTION SAFETY TRAINING
When………..Fridays, 5/13/22, 9/2/22 Time …………………9:00 –10:00 am
Where ……………………………………………Texas A&M AgriLife Extension Office
Pesticide handlers and workers must be trained every year unless they are certified applicators. All participants in this training will be issued cards verifying they have successfully completed the required training and given a copy of the sign-in roster for their employer’s files.
Conflict in Ukraine Fuels Uncertainty for Agriculture

Texas A&M AgriLife Extension Service economists said both Russia and Ukraine do not represent major destinations for U.S. commodities, ranking 56th and 80th, respectively. However, the conflict’s impact on global trade, trade alliances and infrastructure could ripple throughout U.S. sectors in the near- and long-term future.

Russia imported between $1.2 billion and $1.6 billion of U.S. agricultural products annually until imports fell to around $200 million to $300 million over the last five years, following its invasion of Crimea. David Anderson, Ph.D., AgriLife Extension economist, Bryan-College Station, said this type of conflict creates a “factor of chaos.” The invasion may not directly impact U.S. supply chains, but it will likely disrupt specific sectors, commodities and products as well as create uncertainty, which typically leads to market volatility.

For example, Anderson said the invasion and subsequent sanctions against Russia could further complicate U.S. fertilizer supplies and prices. He noted one major fertilizer product component comes from a Russian-based company.

Anderson said this type of conflict directly impacts lives in that region, but it also creates worry and uncertainty throughout all sectors and markets that ripple through the U.S. economy and many other countries to varying degrees.

“We are blessed to live in a big, diverse nation where we produce an exportable excess of many basic agricultural commodities,” Anderson said. “We do import a lot of fruits and vegetables and coffee, but none of that is coming from Ukraine or Russia.”

Ukraine, Russia conflict and wheat

Mark Welch, Ph.D., AgriLife Extension small grains economist, Bryan-College Station, said the futures grain markets, from wheat to grains for livestock feed, will likely be affected most by the invasion. Ukraine and Russia together are expected to account for about 30% of global wheat exports in the current marketing year.

On Monday, Kansas City July wheat contracts, which represent harvest contracts for Texas producers, fluctuated wildly but were expected to trend higher, Welch said. Corn and soybean prices were also trading higher.

“We are pretty deep into the current marketing year for wheat, which ends May 31, so I do not know how much more wheat is left to be shipped in the next few months,” he said. “In that respect, the timing of this invasion may limit short-term impacts. Certainly,
damage to port infrastructure or shipping restrictions in the Black Sea will slow trade and make it much more expensive.”

China announced it is open to grain shipments from Russia. This would provide an outlet for Russian grain sales and help China meet its grain import needs.

Much like what happened during the tariff war between the U.S. and China, trade alliances and flows may shift, Welch said.

“It’s really tough to say right now because there are more questions than answers,” he said. “Uncertainty fuels volatility, and when commodity supplies tighten, any disruption to the market can make an impact.”

Cattle, poultry and pork

Anderson said Ukraine and Russia will have very little direct impact on U.S. protein markets, but the conflict could impact some trade sectors indirectly, including protein production.

According to a CME Group’s Daily Livestock Report following the invasion, the impact of restrictions on Russian protein purchases in the world market are likely to have no impact on global trade of those items.

Russia once relied on imports for proteins like pork, poultry and beef, but has reduced its dependence by increasing domestic production. In 2010, Russia imported around one-third of its pork, but increased its production by 26% and is now a net exporter of pork.

In the early 2000s, more than half of Russia’s chicken was imported, but by 2010 imports dropped to 27%. Last year, Russia imported 5% of the poultry it consumed, but also exported the same amount.

Beef has been more difficult to secure because of land requirements, know-how and domestic preference, according to the CME report. Russian beef consumption has fallen 32% since 2010, and much of its beef imports come from neighboring ally Belarus.

AgriLife Extension district reporters compiled the following summaries:

A map of the 12 Texas A&M AgriLife Extension districts.

COASTAL BEND

Frequent cold fronts disrupted corn planting in many parts of the district, leaving producers to wait on warmer weather or fields to dry out. Where conditions allowed, some corn was planted and several counties in southern areas reported corn was already up. Some fertilizer was applied to fields. Row-crop field preparation continued. A
small amount of grain sorghum was planted. Rangeland and pasture conditions continued to deteriorate with livestock showing signs of reduced nutrition. Hay feeding and protein supplements continued. Livestock markets were good.

Soil moisture ranged from very short to adequate. Areas received 0.75-1.25 inches of rainfall. Sleet and hail came with the rainfall. The moisture was helping pastures. More moisture was needed to bring the soil out of drought conditions. Oats were in fair to good condition. Winter wheat was in fair to good condition. Pasture and rangeland were fair to poor.

SOUTHWEST

Conditions were cold and windy with no measurable rainfall reported. Rangelands were extremely dry, and pastures were grazed. Warm-season plants were emerging, but the lack of subsoil moisture was slowing growth for seedlings and warm-season perennials coming out of dormancy. Corn planting began. Winter wheat and oats were in poor condition. Recent freezes allowed fruit trees to get needed chill hours for fruit production. Cattle prices remained steady while goat and sheep prices had risen slightly. Spring lambing and kidding were underway. Livestock were in fair condition. Supplemental feeding of livestock and wildlife continued.

SOUTH

Northern and eastern parts of the district were very short on moisture while western and southern areas received short to adequate moisture. One area reported a soaking drizzle rain. Temperatures reached 30 degrees below normal average. Irrigated food plots of oats looked good, but non-irrigated were no longer growing. Blackbrush plants were blooming. Producers continued to prepare fields for planting. Farmers in some areas were hesitant about planting because soils were powder dry. In other areas, farmers were slowly planting according to the amount of soil moisture available in fields. Cooler temperatures were delaying some plantings in areas with adequate moisture. Sunflowers, corn and sorghum were being planted before a cold front arrived with some precipitation. Warmer weather in the forecast should help those fields emerge. Vegetables, sugarcane and citrus harvests continued. Cool nighttime temperatures were helping vegetable crops. Livestock producers were providing heavy amounts of supplemental feed, marketing calves and culling cows in drier areas. Many pastures have little to no grass. Reports of fires increased, and ungrazed pastures pose a fire danger. Stock tank levels were fair. Areas with more moisture reported mixed pasture conditions with grasses and forbs emerging from dormancy. Bermuda grass remained brown and dormant. Citrus tree farmers were hoping surviving trees will bloom and produce a higher-yielding crop this year.
COASTAL BEND GRAIN STORAGE & HANDLERS SAFETY
CONFERENCE
Wednesday, April 13, 2022
8:30 am - 4:00 pm

Location: San Patricio County Fairgrounds—Civic Center
219 W. 5th Street, Sinton, Texas

Fee: $25 (Includes Lunch) payable at the door
$35 CPR Training & Certification (Limit 20 Participants)
*CPR Training - Priority to Conference Participants*

Pre-Registration by April 11, 2022 by calling (361) 587-3400

AGENDA

8:30 - 9:00 am: Registration
9:00 - 9:55 am: OSHA Update
Marianne McGee, OSHA compliance Assistant Specialist
9:55 - 10:00 am: Break
10:00 - 10:55 am: Insects & Control Around Grain Facilities
Dr. Dalton Ludwick, Extension Entomologist, Corpus Christi
10:55 - 11:00 am: Break
11:00 - 11:55 am: Heat Stress and Trauma Responses
James Mobley M.D., M.P.H. San Patricio County Health Director
12:00 - 1:00 pm: Lunch at Butter Churn
1:00 - 4:00 pm: CPR Certification
James Shepard, Texas Cotton Ginners Trust Loss Control Manager

Lunch will be at Butter Churn Restaurant, 207 West Sinton, Sinton, TX 78387

For further information you can also contact Jaime Lopez, Nueces County-CEA 361-767-5220

Sponsored by: Texas A&M AgriLife Extension Service, Nueces, San Patricio and Refugio County, Woodsboro
Farmers Coop, South Texas Country Elevators Assoc., Planters Coop and Driscoll Grain

Texas A&M AgriLife Extension

219 N. Vineyard
Sinton, TX 78387
361-587-3400

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2022 South Texas Agriculture Symposium
Tuesday, April 12, 2022  I  7:30 am - Noon

Hosted by Texas A&M AgriLife Extension - Corpus Christi Based Specialists 1 General CEU

HOT TOPICS FOR AGRICULTURE - AGENDA

7:30 - 8:00  REGISTRATION

8:00  Websites & Apps to Improve Ranch Management
      - Dr. Megan Clayton, Professor & Extension Range Specialist

8:30  Sandbur Management in Pastures and Hay Meadows
      - Dr. Josh McGinty, Associate Professor & Extension Agronomist

9:00  Carbon Storage in Grasslands
      - Dr. Jamie Foster, Professor of Forage Agronomy, Texas A&M AgriLife Research

9:30  Extra Income Opportunities from Birding
      - Dr. Maureen Frank, Assistant Professor & Extension Range Specialist

10:00  BREAK

10:15  New Rules for Antibiotic Use in Livestock
      - Dr. Joe Paschal, Professor & Extension Livestock Specialist

10:45  Linking Retail Beef Prices to Calf Prices
      - Dr. David Anderson, Professor & Extension Economist - Livestock Marketing

11:15  Cotton Pests: Status of New and Old Technologies
      - Dr. Dalton Ludwick, Assistant Professor & Extension Entomologist

12:00-1:30  Catered Lunch & "Nueces Agriculture" Open Discussion
            - Jaime Lopez, CEA-Ag/NR

This event will be held at the AgriLife Extension Service office located at 710 E. Main in Robstown. Participation fee is $25. To register, go to https://agsymposium2022.eventbrite.com by April 8.

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As dry conditions continue to grip much of Texas’ Cotton Belt, there are factors producers can control that will improve the chances of establishing a good cotton stands, according to Texas A&M AgriLife Extension Service experts.

On a recent episode of the AgriLife Online Crop Production Podcast, Jourdan Bell, Ph.D., AgriLife Extension agronomist, Amarillo, and Emi Kimura, Ph.D., AgriLife Extension agronomist, Vernon, joined other AgriLife Extension experts to discuss cotton production. Both noted that drought conditions will make crop establishment a challenge.

According to the U.S. Drought Monitor, Texas’ Cotton Belt, which includes much of the Panhandle, Rolling Plains and South Plains, is experiencing severe to extreme drought, with large swaths of the regions entering exceptional drought status as of March 10. Drought conditions make establishing cotton stands a challenge, even in irrigated fields.

Bell and Kimura said weather is out of producers’ control, but that by improving cotton seeds’ chance of germination and establishment they can improve yield potential at harvest. Cotton is more drought hardy than other crops like corn and sorghum, especially after a good stand is established, Bell said. This makes establishing good stands critical when conditions are not ideal for planting.

“Mistakes at planting can haunt you all season,” she said. “Cotton is a plant that can adapt, but we are looking for a good, uniform stand at the start.”

Seed depth critical for cotton stands

Bell said cotton growers know soil moisture is necessary for germination. They know to plant when soil temperatures are 65 degrees or above consistently. Producers may also know the correct seed depth for their chosen varieties. But, she said, they need to make sure planters are delivering seeds to the correct soil microenvironment for success.

Ideal seeding depth could be 0.5-1.5 inches depending on variety, she said, but oftentimes equipment issues can be a contributing factor to success or failure. Producers should check for mechanical issues such as diameter of disc openers, row cleaners, closing wheels, down pressure, loose bushings or bolts, or any other maintenance issue that could result in the planter placing seeds unevenly or too shallow or too deep. “We talk about planting conditions like soil temperature and moisture, but I don’t think we talk about planters enough,” Bell said. “Unfortunately, we have a negative weather outlook, so planter settings and maintenance are even more critical. Be aware of any issue that might cause bouncing and uneven seeding depths.”

Seed vigor, soil temperature important.

Among the factors producers can control, Kimura emphasized soil temperature and seed quality and vigor.

Soil temperatures need to be at least 65 degrees for five straight days, she said. So, producers should avoid planting if soil temperatures are good, but a cold front is forecast to arrive over the following five days.

Challenging conditions place even more importance on growers planting high quality seed, Kimura said. Cotton seedlings often encounter stressful conditions at the beginning of the growing season, and while high seedling vigor may not mitigate the impact of stress factors, it can help.
Seed vigor, soil temperature important

Among the factors producers can control, Kimura emphasized soil temperature and seed quality and vigor. Soil temperatures need to be at least 65 degrees for five straight days, she said. So, producers should avoid planting if soil temperatures are good, but a cold front is forecast to arrive over the following five days. Challenging conditions place even more importance on growers planting high quality seed, Kimura said. Cotton seedlings often encounter stressful conditions at the beginning of the growing season, and while high seedling vigor may not mitigate the impact of stress factors, it can help.

One method to determine vigor is through the use of the Cool-Warm Vigor Index, which is typically provided by sellers for buyers to refer to before purchasing cotton seed. Vigor can also be tested. Planning could be moot for dryland producers in many parts of the Cotton Belt if rainfall does not create adequate germination conditions over the next 45-60 days, Kimura said. But irrigated producers can increase the chances of establishing a good stand. And dryland producers can be prepared to plant, and plant effectively, if rains do arrive in their planting window.

We can’t control Mother Nature, but we can control when and what we plant,” she said. “We can plant really well. Pencil every aspect of production out due to high input costs and have a plan, and then hope for rain.”

AgriLife Extension district reporters compiled the following summaries:
A map of the 12 Texas A&M AgriLife Extension districts.

COASTAL BEND

No significant rains were reported, and soil moisture levels were unseasonably low. Corn planting was in progress, and most fields had emerged. Sorghum and rice were also being planted. Cotton plantings were expected to start as soil temperatures warm up. Pastures and fields needed rain. Cold temperatures and dry conditions continued to delay the emergence of warm season grasses. Livestock producers were still feeding hay and protein as feed prices continued to rise. Livestock markets were holding strong.

SOUTHWEST

Very dry and windy conditions continued across the area, and fire danger increased. Pasture and rangeland conditions continued to decline with a lack of moisture. Corn and sorghum planting continued. Wheat conditions were poor due to lack of moisture. Spring lambing and kidding continued. Some producers reported deeper culling of cattle herds. Producers continued to provide heavy supplemental rations for livestock and wildlife.

SOUTH

Soil moisture levels were very short to short in the northern, eastern and western areas of the district and mostly adequate in southern parts. Cold fronts dropped nighttime temperatures into the mid-30s. Fieldwork continued, but most growers were delaying planting until rains improve soil moisture levels. Cool-season vegetable crop harvests continued. Some producers were planting corn and sorghum. Some emerged corn stands looked very good, and some fields were in four-leaf stage. Grain sorghum was coming up but slower due to cool temperatures. Some cotton was planted, but very little had emerged. Warmer temperatures in the forecast could help cotton emergence. Pastures and rangelands were bare in many areas. Ranchers continued to provide heavy supplemental feed rations and cull herds. Stock tanks were low. Cattle sale volumes were above average with reports of feeder cattle prices dropping $20 per hundredweight. Pastures and rangelands were greening up some in areas that received moisture.
UPCOMING AG PROGRAMS

Plastics in Cotton
May 11, 2022

Carbon Farming
May 25, 2022

Field Crop Tour
June 6, 2022

Watch for these and other programs coming in 2022.

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A recent research breakthrough in human medicine could help a Texas A&M Department of Animal Science researcher find a way to increase beef production to help meet the demands of global population growth.

Bos indicus cattle, such as these, lag in their reproductive efficiency, something researchers are trying to help fix with a recent medical breakthrough.

Bos indicus cattle breeds are very important to global beef production due to their adaptability to tropical and sub-tropical climates, including those found in Texas and other southern U.S. states.

But a big challenge or disadvantage for Bos indicus, or Brahman, cattle is that their overall reproductive performance is inferior to that of Bos taurus cattle breeds such as Angus and Hereford, which predominate in the Midwest and Northern states.

Rodolfo Cardoso, DVM, Ph.D., assistant professor and reproductive physiologist in the Department of Animal Science of the College of Agriculture and Life Sciences, is leading a four-year project funded by a $500,000 grant from the U.S. Department of Agriculture, USDA, National Institute of Food and Agriculture. Among the collaborators are Gary Williams, Ph.D., Texas A&M AgriLife Research professor emeritus, and graduate students Viviana Garza and Sarah West.

Cardoso said revolutionary advances in neuroendocrine research have defined the mechanisms controlling the secretion of gonadotropin-releasing hormone, GnRH. The new insights, he believes, can help his team determine neuroendocrine differences between Bos taurus and Bos indicus genotypes of cattle and use that to enhance reproductive efficiency in Bos indicus-influenced cattle.

Rodolfo Cardoso, Ph.D., at Texas A&M University Department of Animal Science, is conducting the new research.

“Very recently, there was an important breakthrough on the understanding of how the secretion of GnRH is regulated in rodents and primates,” he said. “Our preliminary research suggests that similar mechanisms are also important in cattle and could explain the differences in reproductive performance between Bos taurus and Bos indicus animals.

“If confirmed, those findings can have practical implications to reproductive management of Bos indicus cattle. In human medicine, several pharmacological strategies to improve fertility in women have already been developed based on these novel findings.”

Calving timing matters

As many as 70% of the world’s cattle are raised in tropical and sub-tropical regions, and approximately 30% of U.S. beef herds have some Bos indicus influence, particularly in the southern and southeastern regions. One major challenge is that Bos indicus and Bos indicus-influenced cattle reach puberty markedly later than Bos taurus breeds. That late puberty essentially means one less calf in a cow’s lifetime and also presents challenges when breeders try to synchronize estrus cycles for the annual breeding season.

Cardoso said typically Bos taurus heifers reach puberty at 10-12 months, whereas Bos indicus heifers often won’t reach puberty until 15-17 months.
“That five-month delay makes them not reach puberty in time for their first breeding season, and so they have to wait another whole year to be bred and have their first calf,” Cardoso said.

With more than 4 million replacement beef heifers entering the U.S. cow herd annually, the difference between having a calf when the heifer is 2 versus 3 years old can make a big difference in beef production. In Texas and Florida, less than 50% of beef heifers reach the goal of calving at 2 years old due to the Bos indicus influence.

Cardoso said heifers that calve for the first time at 2 years of age produce approximately 300 more pounds of weaned calf weight in their lifetime, or a $500 difference, compared to heifers that calve at 3 years of age.

This project will utilize the recent discoveries to determine whether distinct differences observed in reproductive function in Bos indicus and Bos taurus breeds can be attributed to functional differences in the brain area that controls the secretion of the GnRH hormone.

Predetermined breeding seasons are key to efficiency.

A predetermined breeding season typically lasts between 45 to 90 days and allows for more efficient management of a beef cattle operation, Cardoso said.

“You can have a very uniform calf crop, which makes it much easier to manage those calves — vaccinate and do all the health protocols at the same time,” he said. “You can wean and sell the calves at the same time because you have a uniform group, so it makes management much, much more efficient in a cow-calf operation. It also allows for culling of animals that are not efficient.”

In addition to better understanding the cattle’s reproductive function, Cardoso said, a second goal from a pharmacological strategy is to develop synchronization protocols for artificial insemination tailored to Bos indicus heifers. Most protocols currently used in the U.S. were developed specifically for the Bos taurus breeds.

“These Bos indicus heifers already have, at 12-14 months of age, the skeletal size and maturity required to support a safe and healthy pregnancy,” he said. “There’s no question about that. They’re just not cycling yet. We don’t want to induce these heifers to reach what we call precocious puberty (puberty before 10 months of age). That’s not desirable, and that’s not what we’re trying to accomplish here.”

A key benefit, Cardoso said, of synchronizing the breeding season more efficiently is being able to use artificial insemination more in Bos indicus-influenced cattle.

“Artificial insemination is the most powerful tool we have available to improve genetics in beef cattle herds,” he said. “Artificial insemination is a way that a beef cattle producer can, over time, start improving the genetics of the herd.”

But currently, breeders’ ability to synchronize estrus of Bos indicus-influenced animals for artificial insemination is not optimal, Cardoso said.

“We hope by the end of this four-year project we will have a very good understanding about the neuroendocrine differences between Bos taurus and Bos indicus-influenced heifers,” he said. “And, more importantly, we think at that point we’ll have some good strategies to pharmacologically control the estrus cycle in Bos indicus-influenced heifers.”
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