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Cattle Producers Of Louisiana P.O. Box 886 Prairieville, Louisiana 70769 Website: www.lacattle.org Toll Free: 888-528-6999

> Dave Foster Chief Executive Officer info@lacattle.org

Don't forget March is the month that we change our clocks, (spring forward) which allows us more daylight.

Our CPL February Information meeting, "Dirt Rich or Dirt Poor", was a huge success! Our co-sponsor LA Grazing Lands Conservation Initiative (LGLCI) allowed us to bring in our facilitator Dr. Allen Williams, National and International Grazing and Soil Health expert. Fifty plus people got to hear from a panel of 5 producers (CPL members) who practice Innovative Grazing. We plan to have more of this type of meeting. If you are interested in hosting one, please contact me.

On the second day of March I went to Circle T Ranch in Church Point, LA at the request of owner Troy Thibodeaux. Troy had 5 cattlemen from Thailand there to look at his herd of Red Brahmans and to see in person his World Champion Brahman Cow. A real honor for Troy and his family, small town Church Point and the state of Louisiana. Troy is a lifetime member of CPL.

For Louisiana and the southeast cow/calf producers, March and April are "in between times" for cattle marketing. Our fall and spring born calves are not ready for market so our local sale barns work hard to sell "odds and ends" and not enough for 🐋 buyers to get a load of the same class of cattle. We should be watching the market for slaughter steers and heifers, they usually hit a high in April. Also this is a good time to bring your cull cows to market when this market normally peaks in March. You also will be seeing notices of Special Replacement sales this month. Our grass situation should help demand for theses replacements. Keep track of the market and don't get caught "sleeping" or tempted by green grass to miss marketing opportunities. Enjoy the beginning of Spring and contact me if you need information! Dave Foster, CEO

FACTORS AFFECTING BRED COW VALUE

Source: Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

Bred cows vary in value according to a number of factors including age; quality; weight; stage of gestation; hide color; time of year and location. Research at Oklahoma State University has examined 15 years of auction data in Oklahoma to determine the impact of these factors on commercial bred cow value. Purebred cows are more commonly marketed by private treaty or in production sales but the general relative impact of value factors identified in the auction study is likely to be similar.

In the latest weekly combined Oklahoma auction data, bred cow values are reported in a range from \$735 to \$1585/head. The research model would suggest that the base value of a four year old (fourth gestation), average quality cow, weighing 12-1300 pounds and 5 months bred is \$1000-\$1050/head. This estimate is consistent with the reported market data. Changes in any of these characteristics impact the value of the bred cow. All value differences below are based on current average market levels. Price adjustments are based on percentages which means that the dollar value of price adjustments will be different at lower or higher average market price levels.

FACTORS AFFECTING BRED COW VALUE

Young cows have the highest lifetime production potential and thus first-calf heifers have the highest average value, about \$35 /head more than the four year-old base cow. Cows show only modest price decreases through age six then drop sharply. For example, an eight year old cow will have a value about \$110/cow less than the four year-old cow. Compared to the 12-1300 base weight, a bred cow weighing 14-1500 pounds will have an average value about \$50/head higher. In contrast, a cow weighing 900-1000 pounds will have a value \$85/head less compared to the base cow. Stage of gestation also impacts bred cow value with a first trimester bred cow valued roughly \$50/head lower than a mid-trimester cow. Value increases for late gestation cows up to eight months bred by about \$55/head over mid-trimester cows. However, bred cow value drops after eight months bred when cows are extremely close to calving.

Cow quality has a significant impact on bred cow value with high quality cows bringing about 14 percent higher value compared to average quality while low quality cows bring about 15 percent lower than an average quality cow. In the example above, that means roughly \$150/head more for high quality to \$150/head less for a low quality cow compared to average quality. Apart from quality, hide color affects value. The auction data does not report breeds but does distinguish black colored animals from all others. A black-hided cow brings an average premium of nearly seven percent or \$70/head more in the current market. In Oklahoma, bred cow values peak in March and are seasonally lowest in October, with generally low values from June through October. At current market levels, the seasonal swing in bred cow value would be about \$140/head from the March peak to the October low.

The effects reported above are additive and it is easy to see why a wide range of bred cow values are reported. Using the research model and current market conditions (and holding cow weight and the time of year constant) various combinations of age, quality, gestation, and hide-color result in a range of bred cow value estimates from about \$730 to \$1300 per head. The research model appears to be capturing current average bred cow values reasonably accurately. However, demand for high quality cows appears to be stronger than usual with current values for high quality cows in Oklahoma reported at roughly \$1550/head or \$200-\$250 per head higher than the research model would predict. This is likely another indication that herd expansion is still going strong.

Drones in Acriculture and Hands–On Drone Training

Source: Robert Goodwin, Michigan State University

Training programs tie how to fly Unmanned Aerial Systems, or drones, together with data collection and geographic data analysis.

If you haven't noticed that Unmanned Aerial Systems (UAS), otherwise known as drones, have been impacting the agriculture industry lately, it may be time to crawl out of your winter hibernation. Drones are everywhere in the agricultural landscape and are being used to determine plant health, inventory plants, collect farm asset information, assess crop damage and even determine areas of low soil moisture. This information is proving useful to agricultural professionals in the context of precision agriculture and farm management.

This revolution is being fueled not only by advancements in drone platforms, but by improved sensors as well. Numerous lightweight cameras are now available that capture reflected light energy beyond that which is visible to the human eye. Reflected energy in areas called the Red-Edge and Near-Infrared are particularly useful for agricultural activities.

For images from drones to be the most useful, it is necessary to process the data and then display or analyze it in something called a Geographic Information System (GIS). In a generic sense, this means putting the data into a map. Once images from drones have been processed and layered in a GIS, numerous opportunities for analysis become available.

For example, imagine a series of photographs, or even a video, of a corn field that is experiencing an outbreak of corn rootworm. The static images and video would help the farmer or crop service vendor identify generally where the damage is occurring. However, it would be very difficult to identify the exact location and quantify the damage. If this same imagery were processed and added to a mapping program, it would be possible to precisely determine the location and extent of the outbreak. This location information could then be imported into the navigation system of a GPS-enabled spray rig to treat the specific area.

Another example might involve a Christmas tree farm. Imagery by itself would not be terribly useful for counting trees and estimating height would be even more difficult. By processing the imagery and utilizing tools in a GIS, it is not only possible to count all the trees quickly through automated routines, but also determine the height of each tree.

While many workshops exist that teach professionals how to fly drones, training opportunities that tie (continued on page 3)

Adding Value to Beef on Both Ends

Source: Kyle Grubbs, SDSU Animal Science Department

Bang for your buck.

Getting more bang for your buck is always a goal in life. This holds true for both beef producers and consumers. Almost everyone likes a good steak, but good steaks are generally considered expensive. One way to lower the cost of a steak dinner is to find the "value added" cuts. Not only do these cuts stretch budgets farther, they also help the producer realize more value from the beef they raise. Steaks such as the flat iron, chuck eye, and the Denver cut are a great way to save money and still have an excellent eating experience. Dependent on the cut, there can be up to a \$2-4 per pound savings when these steaks are compared to the common steaks like the rib eyes, T-bones, porterhouse, and New York strip steaks.

Why do these cuts sell for less?

They actually sell for more than they did! How can that be? Prior to these cut becoming steaks they were traditionally included in roasts and ground beef. Beef roast and ground beef will be less expensive than the individual steaks, as shown in the table below. During processing these muscles that have been identified as tender and flavorful can be removed to sell individually versus being sold as a roast or ground beef. Table 1. A cost comparison* of traditional beef marketing, value cuts, and traditional steaks.

Traditional Marketing	Value Cuts	Steaks **
Chuck Roast \$4-6/lb	Chuck Eye Steak	Ribeye
Hamburger \$3-5/lb	Flat Iron Steak \$6-7/lb	T-Bone \$10-14/lb
	Denver Steak	NY Strip

*Prices based on grocery advertisements and data collected by the author. **USDA Choice Beef

How do you know these cuts are tender?

In the late 1990's the National Cattlemen's Beef Association sponsored several research projects to study the tenderness of different muscles. This research is called profiling, researchers would use several measurements of tenderness such as mechanical "shear force" and sensory panels to reveal which muscles were more tender than others. A great example of this research is the flat iron steak that comes from the chuck, or shoulder of a beef carcass. The flat iron steak in scientific terms is the infraspinatus muscle, which is the second most tender cut coming in behind the tenderloin. Yet, until 2002 it was not marketed as a steak. Another example is the Denver cut which was debuted in 2009 and ranks is the top five for tenderness.

What do I look for?

Cuts to look for: Denver Cut Steak, Flat Iron Steak, and Chuck Eye Steak.

These cuts will gives consumers an excellent eating experience while helping stretch the bottom line of the food budget.

Drones in Acriculture and Hands–On Drone Training

together data collection and geographic data analysis are rare to nonexistent. This is unfortunate since drone imagery by itself is not terribly useful. To educate professionals on the entire drone workflow, Michigan State University's Remote Sensing and Geographic Information System (RS&GIS) has teamed up with MSU's Institute of Agricultural Technology and Northwestern Michigan College Aviation to offer a three-day, Hands-On Drone-to-GIS workshop focused on the process of using drones to collect, process and analyze data. This course, which is taught by experts in the fields of GIS and aviation, will teach participants the following:

• Current Federal Aviation Administration (FAA) regulations and requirements for obtaining an FAA Remote Pilot Certificate.

- How to plan and execute autonomous drone missions.
- Manual operation of multi-rotor drones.
- Processing imagery into usable products.
- Basics of visible and near-infrared (VNIR) remote sensing as it relates to vegetation and land use.
- Display and analysis of drone data using commercial and free GIS software.

The Hands-On Drone-to-GIS workshop is appropriate for everyone wishing to deploy drones in their business. No experience is required, but a basic comfort with technology is recommended. Several workshops will be offered April through September 2017 at MSU or Northwest Michigan College. Visit the Hands-On Drone-to-GIS workshop registration page for dates, location or to register. You can also contact me at 517-432-0879 or goodwinr@msu.edu.

Wational Drought Summary for February 21, 2017

Summary

Several weather systems moved across the contiguous U.S. (CONUS) during this U.S. Drought Monitor (USDM) week. Upper-level troughs, surface fronts, and surface low pressure systems slammed into the Pacific Coast, drenching California, Oregon, and Washington with several inches of precipitation, especially in the favored upslope areas. As they crossed the coastal ranges, the weather systems dropped above-normal precipitation across parts of the Southwest and Pacific Northwest. Tapping Gulf of Mexico moisture, a couple systems drenched parts of the Southern Plains to Lower Mississippi Valley, while another brought above-normal precipitation to parts of the Upper Mississippi Valley, but most of the Northern to Central Plains was drier than normal. Upper-level ridging in the central part of the CONUS contributed to above-normal temperatures across most of the country and drier-than-normal weather for most areas east of the Mississippi River. With persistent unusually warm temperatures across much of the CONUS, plants are responding prematurely, especially in the Southeast to Midwest. For example, as noted by the Alabama State Climatologist, plant phenology indicates that Alabama is around 20 days ahead of normal with warm soil temps (and dry soils) so that plants think it is March 12th instead of February 20th. The precipitation that fell this week continued to reduce long-term drought in California and contracted drought in the Southern Plains, but dry conditions in the Mid-Mississippi Valley, Southeast, and Mid-Atlantic expanded drought.

The Southeast

Some stations in the Southeast had over an inch of rainfall this week, but most had less than an inch and many less than half an inch. Much of the region was drier than normal, with eastern Mississippi to northern Florida having the greatest precipitation departures. Ground water and deeper soil moisture did not recover much from last year's severe drought, and so the ground is primed for rapid intensification of drought if the current dry spell continues. Streamflow is at near record to record low levels from northeast Alabama to the western Carolinas. Even though temperatures have been persistently warmer than normal and some plants are blooming early, agriculture has yet to spin up in North Carolina so there were no reported agricultural impacts from the drought yet. No water-supply impacts have yet been reported in the state, and reservoir levels were okay at the moment. Nevertheless, D1-D2 were expanded in western North and South Carolina to reflect the low streamflows and groundwater conditions. D0-D2 were expanded in Alabama and Mississippi, and an oval of D3 added in west-central Alabama, to reflect short-term (last 30-60 days) and long-term (6-12 months and longer) dryness, as well as low streamflows. D2-D3 were expanded in northern Georgia to better reflect long-term dryness, while D1 was pulled back southwest of Atlanta where 7-day to 6-month precipitation was wetter than normal. *The South*

Precipitation amounts ranged from less than a tenth of an inch across western Texas and Oklahoma to half an inch or more to the east. A couple low pressure systems dropped 2+ inches of rain across a large part of eastern Texas and parts of Oklahoma, Arkansas, and Louisiana. Do-D3 were trimmed in Texas and Oklahoma where precipitation amounts were above normal. In spite of this week's rains, several large wildfires continued to burn in eastern Oklahoma to western Arkansas. Do expanded in northeast Arkansas and the northwest corner of the Texas panhandle and a little across the border in New Mexico where precipitation deficits were evident, and D1 expanded in northwest Arkansas which missed out on the heavier rainfall.

CATTLE PRODUCERS OF LOUISIANA PRAIRIEVILLE, LOUISIANA 70769 WEBSITE: WWW.LACATTLE.ORG PRAIRIEVILLE, LOUISIANA 70769 TOLL FREE: 888-528-6999