Nacogdoches County
Quarterly Ag Newsletter
Summer 2012
http://nacogdoches.agrilife.org

Upcoming Programs:
June 14-Lunch N Learn
June 21-CEU Breakfast Meeting
June 28-Attoyac Watershed Program
July 12-Lunch N Learn
July 19-CEU Breakfast Meeting
August 9-Lunch N Learn
August 10-Small Flocks & Vegetables
August 16-CEU Breakfast Meeting
September 10-TSCRA Lunch
September 13-Wildlife Program

Breakfast CEU Program
We are continuing to meet the third Thursday of each month at 6:30 a.m. at Kinfolk’s Restaurant for our CEU Breakfast Meeting. Each month, we gather and order a “Dutch Treat” breakfast followed by a one hour CEU Program. This is the following schedule:
June 21 @ 6:30 a.m.
July 19 @ 6:30 a.m.
August 16 @ 6:30 a.m.

Farmer’s Market
The Farmer’s Market is up and running. Any farmer wanting to market their fruits, vegetables, etc. at the farmer’s market should make plans to do so by calling Larissa Philpott at (936) 559-2571 at the City of Nacogdoches. A booth space is just $5.00.

Lunch N Learn
The Nacogdoches County Master Gardeners coordinate a noon luncheon lecture series the second Thursday of each month. This luncheon series takes place from 12:00 noon to 1:00 p.m. at the Texas AgriLife Extension Office of Nacogdoches County in the Courthouse Annex Meeting Room. June 14, July 12 and August 9 are the dates for the next three Lunch N Learn meetings.

Register here:
https://events.tamu.edu/EmsRegics/BeefCattleShortCourse2012
Hay Harvesting

Moisture/Temperature

Producers all over East Texas have baled ryegrass (and/or small grain) hay recently. Here is some information on hay moisture and temperature, key causes for spontaneous hay combustion.

At baling, the moisture content of hay for large round bales should not exceed 18%; for small square bales, moisture content should not exceed 20%. One way to get consistent readings with a moisture meter is to use an 18" length of 2" diameter PVC pipe with a threaded cap on one end. Pack the harvested forage into the PVC pipe, then insert the moisture meter into the hay to obtain a reading.

The temperature of hay baled will increase during the first few weeks after baling "sweating" or "going through a sweat." It is mainly caused by microbial activity, though it can include some final plant respiration.

At a moisture content of greater than 20% up to 35%, mold production becomes a great concern because it consumes nutrients in the hay and reduces its nutritive value. Mold also creates heat from respiration and produces toxins that make the hay less palatable. While mold-related heat up to about 120 degrees F does not damage hay nutritive value, higher temperatures can. Protein breakdown begins at temperatures above 120 degrees F and browning begins at about 140 degrees F. This browning reaction can further increase temperature and take forage nearly to the point of combustion.

Hay temperatures less than 120 degrees F are considered safe

Between 120 and 140 degrees F: monitor closely (check temperature daily)

Between 140 and 180 degrees F: hay is likely to spontaneously combust, consider calling local fire department

WHAT IS LEAN, FINELY TEXTURED BEEF?

For one, it’s not new. Lean, finely textured beef (LFTB) is simply beef and not slime, pink or otherwise. And it’s not “additive” or “filler”.

According to the American Meat Institute, LFTB is produced through a mechanical process similar to a centrifuge in which fat is spun away from beef trimmings, producing a product that is 95% lean or higher. LFTB is added to fed-beef carcass trim to produce ground beef of varying fat content. During the process, ammonium hydroxide is used as an antibacterial. Some reports have claimed this is harmful to your health. Ammonium hydroxide is found naturally in all plant and animal proteins. In a typical bacon cheeseburger, every component contains ammonium hydroxide, in the following amounts: bun = 440 ppm, bacon = 160 ppm, cheese = 813 ppm, condiments = 400 ppm, beef = 200 ppm. This nonsense about LFTB is hurting the beef industry, may drive good companies out of business that employ hundreds of people, could increase the need for more imports of lean trim, and will increase the cost of ground beef to consumers. (Partly summarized from information on www.beefisbeef.com)
DEVELOPING HEIFERS – COST VS. PERFORMANCE

Research conducted from the late 60s to the 80s showed that heifers reached puberty and conceived only upon attaining a genetically predetermined size. It was generally recommended that heifers reach 60% to 65% of expected mature weight before breeding commenced. In order to begin breeding at 14 to 15 months of age, heifers must gain well to reach that goal, which can involve significant cost. In a review of research conducted since 2004, the authors concluded that feeding replacement heifers to traditional target weights increased cost without improving reproduction or calf production compared to developing to 50% to 57% of mature weight. It was indicated that the most effective system might involve relatively slow development after weaning followed by faster gain from 45 to 60 days before breeding. Also, there is some indication that genetic selection for calving at 2-years of age (rather than 3 years as was once common practice) may have reduced the percentage of mature weight needed to reach puberty. (Univ. of Nebraska, USDA-ARS Miles City, MT; J. Anim. Sci. 90:1166)

HEIFER DEVELOPMENT: DRYLOT OR NOT?

In some parts of the country, drylot development of replacement heifers has become more common, but has also become more expensive. Over three years, 299 Angus-based heifers were developed either exclusively in drylot (DL) or grazed on corn stalks or dormant winter range followed by a short period in drylot (GR). In year 1, GR heifers grazed cornstalks for 135 days and then were in drylot for 79 days; in year 2, GR grazed cornstalks for 106 days, grazed dormant pasture for 54 days and were in drylot for 54 days; in year 3, GR grazed cornstalks for 91 days, grazed dormant pasture for 63 days and were in drylot for 47 days. The DL ration, depending on year, was 60-65% brome hay, 12-20% dried distillers grains with solubles or wet corn gluten feed, 10-30% corn silage, and supplement. Heifers were heat synchronized and bred AI followed by cleanup bulls. Weights were as follows:

<table>
<thead>
<tr>
<th></th>
<th>DRYLOT</th>
<th>GRAZED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial weight*</td>
<td>557</td>
<td>557</td>
</tr>
<tr>
<td>Wt. after grazing*</td>
<td>728</td>
<td>614</td>
</tr>
<tr>
<td>Prebreeding wt.*</td>
<td>851</td>
<td>739</td>
</tr>
<tr>
<td>Prebreeding % of mature wt.*</td>
<td>65</td>
<td>56</td>
</tr>
<tr>
<td>Precalving wt.</td>
<td>1027</td>
<td>992</td>
</tr>
</tbody>
</table>

* = P<0.05

Significantly higher percentages of DL reached puberty by time of AI, but there were no significant differences in first or second season conception or pregnancy rates, calf birth date, or calf birth weight. For GR, winter feeding cost was lower ($33, P<0.01), total feeding cost was lower ($42, P<0.01), and net cost of developing a pregnant heifer was lower ($45, P<0.01). Since the GR system included a short period of drylot management, an evaluation of total grazing development was not made in this study. With total grazing, development costs should be lower but reproduction might also be lower, unless adequate supplement is provided. (J. Animal Sci. 89:1595; Univ. of Nebraska)
TSCRA OFFERS REWARD FOR CATTLE THIEF

FORT WORTH, TEXAS – Authorities are looking for an alleged cattle thief who has been missing since March. A reward has been offered through the Texas and Southwestern Cattle Raisers Association (TSCRA) Operation Cow Thief for any information leading to the arrest of Ronald Ryan Shepard, also known as Ron Shepard of Brookfield Cattle Co. and Brookport Cattle Co.

Shepard, 36, Illinois, was indicted Monday by a Rains County grand jury on 3 counts of cattle theft after he failed to make prompt payment on cattle purchased on 3 different dates to an East Texas auction market.

TSCRA Special Ranger Larry Hand began investigating Shepard in August 2011 after Brookfield Cattle Co. failed to make prompt payment on more than $600,000 worth of cattle from 7 different East Texas auction markets. Through diligence of the sale barns and TSCRA, Shepard eventually made payments to 6 of the 7 victims. Charges were filed on the lack of prompt payments to the final auction market.

Shepard is also wanted for theft in Arkansas, Kentucky and Florida. The U.S. Marshals Service issued a warrant on Shepard for skipping bail in federal court in Illinois and the state of Illinois has also issued a revocation of probation warrant.

Shepard was listed as a missing person in March after his vehicle was discovered unattended at an Illinois livestock auction market, but Hand warns that Shepard could be anywhere still buying cattle without prompt payment.

Hand says that the Rains County district attorney’s office, especially DA Robert Vititow, played a large part in Shepard’s Texas indictments. Chris Origliosso, U.S. probation officer, and the U.S. Attorney’s Office in Benton, Illinois, were also instrumental in the investigation.

Anyone with information on Ron Shepard should contact TSCRA’s Operation Cow Thief at 888-830-2333 or the US Marshals Service at 618-439-6442.

My Fish Are Dying!

When the fish standing crop exceeds the 1,000 lbs/acre carrying capacity during the hot months, the stage is set for a die-off. Why the summer months? Because warm water cannot hold as much oxygen as cool water, yet the fish need more because their metabolism (and therefore their oxygen requirements) increases as water temperature increases. A farm pond that could easily carry 2,000 to 3,000 pounds of fish per surface acre through the winter months won’t stand a chance once the dog days of summer arrive. Remember, oxygen is usually lowest right at daylight, so that’s a good time to check and see if fish are swimming at or near the surface. In many cases, the larger fish will be the first to exhibit signs of oxygen stress.

So, how do you correct for low oxygen?
1) Reduce the fish load present to well below 1,000 lbs of fish/acre,
2) Aerate by backing a boat on a trailer into the pond and running the motor in a fixed position to circulate the water and increase oxygen,
3) Add fresh well water, but aerate it well before it enters the pond, and
4) Circulate water with a pump, but set the intake near the pond surface (pumping water off the pond bottom and spraying it back over the surface only compounds the problem!).
Nitrate Poisoning
Nitrate poisoning can occur when cattle eat forages stressed from severe environmental conditions such as drought. Nitrate is present to some degree in all forages and technically, nitrate poisoning is better described as nitrite poisoning. When livestock consume forages, nitrate is normally converted in the rumen from:

Nitrate to Nitrite to Ammonia to Amino Acid to Protein
Nitrate poisoning can occur when:
*Forages consumed contain high levels of nitrate;
*The diet changes rapidly or suddenly;
*Parasitism or other conditions causing anemia;
*Livestock consume supplements of urea or high-protein feeds along with forage containing moderate levels of nitrate; and/or:
*Livestock directly consume nitrite.
Forages can be tested for Nitrate levels. Forages can be tested either as standing forage or as hay. Nitrate poisoning can occur in the following plants:
(examples of plants that can reach high levels of Nitrates)
*alfalfa *corn
*sorghum *pigweed
*millet *oats
*rye *sudangrass
*nightshade species
*some thistles
*johnsongrass
*more…….

Husbandry Practices
Animal husbandry is that aspect of agriculture concerned with the breeding and care of domestic animals such as cattle, goats, sheep, hogs, and horses. Genetics play a major factor in determining the value of a calf, but even genetics cannot be changed by nutrition, health and general management. There are a number of husbandry practices such as castration implanting, tipping the horns and immunizations that just make good sense. One of the most popular practices is castration. The American beef industry is characterized by the use of steers and not intact males. Generally, to receive the highest price all bull calves should be castrated. Delayed castration, especially beyond 400 pounds, increases the chances of sickness and death and reduces the weight gain and feed efficiency.

SOFTWARE FOR HERD RECORDS
Dr. David Lalman, Oklahoma State University
Lalman noted there is a variety of software available for different producers, both seedstock and commercial, currently ranging in price from less than $10 to almost $700. He stressed that producers need to choose software that works for them and indicated that most vendors offer free demonstration copies. Numerous programs have been compared in Oklahoma State University publication CR-3279, “Cow-Calf Production Record Software” available at:
Is There Enough Quality Forage

Many ranchers have lived through wet and dry cycles, and they understand forage accumulation and disappearance and livestock gains and losses. Yes this spring has been a very good one and we have had an on flush of green growth from our winter pastures and we have started harvesting a lot of it in the form of hay. However, we are still not out of the woods yet. Some managers can just tell by looking at it, if the forage they have is enough for the planned stocking rate and for improving the land resource. However, a systematic approach can improve decisions, evaluations and reduce the risk to resources associated with forages becoming short. To evaluate your current situation and to determine if your stocking rate should be adjusted to balance the forage needed with the current supply, here are five steps that can help.

1. Determine how much forage you will need for grazing animals on the planned grazing schedule.

2. Determine the amount of forage you want to leave ungrazed to protect the resource.

3. Calculate the amount of forage supply you will need to last until the forage recovers.

4. Check your pastures to determine if the current forage supply is greater than the amount you need.

5. Make your decisions and implement them based on current and forecast conditions.

Hay & Fertilizer Tid Bits

Retail Fertilizer Material Prices
(2003 vs. 2012)

<table>
<thead>
<tr>
<th>Source</th>
<th>’03</th>
<th>‘08</th>
<th>‘12</th>
</tr>
</thead>
<tbody>
<tr>
<td>82-0-0 (Ammonia)</td>
<td>240</td>
<td>630</td>
<td>767</td>
</tr>
<tr>
<td>46-0-0 (Urea)</td>
<td>250</td>
<td>531</td>
<td>621</td>
</tr>
<tr>
<td>32-0-0 (UAN)</td>
<td>180</td>
<td>410</td>
<td>421</td>
</tr>
<tr>
<td>18-46-0 (DAP)</td>
<td>275</td>
<td>862</td>
<td>644</td>
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<tr>
<td>10-34-0</td>
<td>195</td>
<td>681</td>
<td>799</td>
</tr>
<tr>
<td>24-8-16</td>
<td>395</td>
<td>686</td>
<td>995</td>
</tr>
<tr>
<td>0-0-60</td>
<td>170</td>
<td>550</td>
<td>655</td>
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Nutrient Uptake by Coastal Bermudagrass

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>lbs/Ton</th>
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<tbody>
<tr>
<td>Nitrogen</td>
<td>50</td>
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<tr>
<td>Phosphorus</td>
<td>14</td>
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<td>Potassium</td>
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<tr>
<td>Calcium</td>
<td>8</td>
</tr>
<tr>
<td>Magnesium</td>
<td>3</td>
</tr>
<tr>
<td>Sulfur</td>
<td>4</td>
</tr>
<tr>
<td>Copper</td>
<td>.03</td>
</tr>
<tr>
<td>Manganese</td>
<td>.03</td>
</tr>
<tr>
<td>Zinc</td>
<td>.05</td>
</tr>
</tbody>
</table>

Brain Teasers:

A: If a “good” 4x5 round bale costs $50, would you spend $65 on a 5x5?

B: If a good 4x4 bale costs $40, would you spend $115 on a 5x6?

Answers:

A: All things being equal, a 4x5 round bale at $50, is equal to a 5x5 at $65

B: By volume, 4x4 at $40, is the same as a 5x6 at $115