

Animal Industry News Update

from the LCES Animal Science Division



Beef (Dr. Ron Del Vecchio)

New Advancements in the Study of Dystocia

Dystocia costs the US beef and dairy cattle industries more than \$400 million annually.

Replacement heifers are usually bred at approximately 13 to 16 months of age and deliver their first calf at 2 years of age. Breeding heifers at a young age leads to more calving trouble but the cattle industry depends upon producing calves. Producers cannot afford to support nonbreeding females for 4 years before they get any return. By 1971 researchers had confirmed that birth weight was the most important factor causing dystocia, and two critical factors affecting birth weight are sire and sex of the calf. With this in mind some of the latest work on the study of dystocia has been with the relationship between hormonal factors and sex of the calf. It has been known for a long time that heifers and cows carrying male calves have more difficulty calving than those carrying female calves. However, recent data indicate it is more than just the size of the calf influencing calving. Cows carrying male calves have higher testosterone levels in their blood which could interfere with the normal process of parturition thereby increasing dystocia. Researchers also have found that cows having more difficulty calving have different progesterone and estrogen profiles than cows that do not require assistance. These hormones are intricately involved in the process of parturition and as a result may indicate a difference in the degree of relaxation and expansion of the birth canal and the force of labor contractions. Other new and innovative research projects on dystocia deal with the potential genetic aspect of this problem, which may enable producers to more precisely select animals having less dystocia. Beef cattle producers want to maximize growth and weaning weight while keeping birth weight low enough to minimize dystocia. Although there are probably many genes that affect these traits jointly, researchers believe they have found a location on chromosome 2 that influences birth weight without affecting subsequent growth. Determining how this region influences birth weight and finding the specific gene will be the focus of much research in the future. Coupled with our existing management recommendations, a better understanding of hormonal influences and the genetic components of dystocia are viewed as being key to the future of reducing calving difficulty for cattle producers.

(Source: Agricultural Research, July 2001)

Poultry (Dr. Theresia Lavergne)

Campylobacter When we hear about food poisoning outbreaks, the outbreaks are caused by E. coli, listeria, or salmonella. But the most frequently diagnosed food-borne bacterium is campylobacter.

Mare Reproductive Syndrome Work continues in Kentucky to identify the cause of abortion and weak foals that swept a number of thoroughbred farms in

Campylobacter causes up to four million human infections a year. These infections are sporadic and are not associated with a food poisoning outbreak. Campylobacter is found in the intestinal tracts of people and animals, but campylobacter infections are caused by eating contaminated or undercooked poultry or meat, or drinking raw milk or contaminated water. The symptoms of campylobacter infection usually occur within two to 10 days after ingesting the bacteria, and the symptoms include diarrhea, fever, nausea, vomiting, or abdominal pain.

Although found in other farm animals, campylobacter experts are expressing the most concern over poultry as the source of infection. Agricultural Research Service scientists have pinpointed the fertile chicken egg as one major source of campylobacter. Additionally, high levels of campylobacter have been found on poultry at the retail level.

Currently, a prototype vaccine for campylobacter is being developed. However, we as consumers have a responsibility in food safety. Our food safety responsibilities for poultry and meat include: prompt refrigeration, thorough cooking, avoiding cross-contamination, washing hands and surfaces often, not letting raw foods (poultry) touch other food, not reusing marinades from raw meat or poultry, not putting cooked poultry or meat back on the plate that held the raw product, and thawing raw poultry and meat on the bottom shelf of the refrigerator. (U.S. Food and Drug Administration, FDA Consumer; ARS, USDA)

Animal Health (Dr. Steve Nicholson)

Eastern Equine Encephalitis This mosquito borne virus infection reappeared in July in a horse in Bienville parish and an emu at a zoo in Alexandria. These cases were confirmed. Vaccination is recommended for horses and emus.

West Nile Virus In July, dying crows in north Florida and Georgia were found to be infected with the virus. It seems only a matter of time before this mosquito borne virus reaches Louisiana. More than 70 bird species have been affected according to CDC. The virus can cause encephalitis in humans and horses. Other mammals can be infected. Vaccine is not available at this time.

Anthrax in Texas Anthrax was reported in deer, horses and cattle west of San Antonio in south Texas. Ranch workers were advised of safety precautions to take when handling and disposing of sick and dying animals. Carcasses must not be skinned but immediately buried or burned when found. Vaccination of livestock is effective. Hunters and other visitors are advised to leave remnants of dead animals alone.

April and early May. A major focus of the investigation is cyanide. It is thought that pregnant mares ingested grass contaminated with feces from caterpillars that had

fed on cherry tree leaves. Cyanide is a natural toxicant in the leaves.

Rabies in Louisiana To date, in 2001, there have been 5 positive skunks (2 in Lafayette Parish, 2 in Acadia Parish and 1 in Natchitoches Parish). In 2000, there were 726 animal heads submitted for rabies testing of which 4 were positive. These 4 positive cases in 2000 were, by parish: in July, 1 bat in Rapides and 1 bat in Claiborne; in September, 1 skunk in Natchitoches; and in November, 1 skunk in Acadia. (Dr. Shelly Phillips, Public Health Veterinarian, DHH)

Dairy Update (Dr. Charlie Hutchison)

After months of debate and discussion the USDA announced on May 31, 2001, a change in the support prices for butter and nonfat dry milk, thus revising the "tilt" or relationship between these two dairy products. This resulted in the support price for nonfat dry milk to be lowered to \$0.90 and the support price for butter to be raised to \$0.8548 cents per pound. The support price for barrels or blocks of cheddar cheese was not modified by USDA. This change was made due to the large amounts of nonfat dry milk purchased by USDA's Commodity Credit Corporation (CCC) during the past 20+ months. In fact, almost 50% of the U. S. nonfat milk powder production between October 1999 and September 2000 has been purchased by the CCC.

What effect will these adjustments have on the farm-level milk price paid to producers? Increasing the support price for butter will have no impact on producer prices since butter is currently trading above \$1.90 per pound. This is well above the current support price of \$0.85 per pound. On the other hand, nonfat milk prices have been stuck at or close to the previous support price of \$1.01 per pound and after the support level was lowered to \$0.90 per pound, Class IV futures prices fell 40 to 50 cents per cwt. for the June, July, August and September contracts during June 1 trading. The National Milk Producers Federation (NMPF) contends that the decrease in the support price of nonfat dry milk will cause the Class IV milk price to plummet resulting in an \$818 million decrease in U.S. dairy farm income during 2001. Other market experts think that the lowering the support price will not change the Class IV price or dairy farm incomes drastically. This prediction was based on the fact that the current World nonfat dry milk prices were just under \$1.00 per pound and the export market has been described as very tight. This means that U. S. products can now compete on the world market. According to Dr. Bill Herndon, Extension Dairy Economist, at Mississippi State University, "While the verdict is still in the hands of the 'jury', changing the butter-powder price tilt will probably have very little negative impact during 2001 due to strong dairy prices but, could have profound harmful effects on dairy farm incomes in 2002 as milk output increases and dairy prices fall."

Looking at the Class I mover for the past three months (May \$14.99, June \$15.34 and July \$15.40), changing the butter-powder price tilt has had no impact on the Class I price. The July class I price mover is

\$3.45 higher than the July 2000. The market price is probably being driven by reduced milk production (both reduced cow numbers and milk per cow) in the top 20 milk producing states resulting in a tight market or perceived milk shortage. The reduction in cow numbers and milk per cow has been fueled by weather conditions, higher alfalfa hay prices and dairy replacement heifers prices as high as \$2,200 for springer heifers with baby Holstein heifers being priced at \$370.00 per head.

(Materials adapted from Mississippi State University Extension Service "Dairy News" May / June 2001)

Swine (Dr. Tim Page)

Many of you have show pig producers located near populated areas in your parish. Odors from those farms can be a real and/or perceived problem. In some instances, farms have had to cease operations after numerous complaints. Not only do we need to help these producers stay in business, but we should be proactive stewards of the water and air environment. There are some new products available that, when used properly, will reduce gases and odors.

One of those products that has sound research data to back up its claims is Barrier, from Agrilience. Barrier is a soy-based product used to reduce hog odors. The product is poured directly over the hog manure in pits. Barrier spreads to form a thin barrier that holds in hydrogen sulfide and ammonia, thereby reducing odor. Researchers at Iowa State University reported up to 75% reduction of hydrogen sulfide and up to 40% reduction in ammonia levels with the product.

Researchers at North Carolina State University and the University of Minnesota reported similar results. Agrilience recommends adding Barrier to manure pits monthly. The retail cost of the product is about \$10 per gallon. The treatment for a 50 sow show pig operation would require about 1 gallon per month.

This is a significant cost (12 months - \$120) when trying to make a profit raising pigs. When you consider the option of neighbor complaints and possible litigation however, the price does not look that expensive. Another positive about Barrier is that it is a natural product made from soybeans. That can even be good public relations for pork and soybean production. Each operation has to decide if they have a potential problem with odors and the possible impact those odors may have on neighbors. This product may not work as well as the research indicates if the manure system does not use some form of pit. There are other commercial products available for other waste handling systems such as lagoons. If you have show pig producers in your parish, you should remind them that reducing odors in their operation is not an option in today's society. They have to make waste and odor management a priority not only to stay in business but also to be good stewards of the environment.