

Animal Industry News Update

from the LCES Animal Science Division



Beef (Dr. Ron Del Vecchio)

Selection of Cattle for Fly Resistance

Have you ever wondered why there will be more flies on some cattle and not as many on others? Recent studies indicate that there is a difference in the desirability of cattle to flies. According to researchers at the University of Arkansas there are a number of factors that could influence the attractiveness of some cattle to flies; however, the specific reasons for this difference are still being researched. One such feature is the hair density of the cattle. Cattle with more hairs per square inch will, of course, have more hair follicles. These hair follicles have glands that secrete chemicals with specific properties that can repel flies. It is unclear at this point in time if these chemicals prevent the fly from feeding on the cattle (i.e., works as a repellent) or if they are actually distasteful to the flies. The Arkansas researchers are currently aware of two proteins that are present in more fly-resistant cattle.

Through their work, the Arkansas researchers have reported that the genetic resistance heritability is .58. That is considered a highly heritable trait and should respond nicely to selection. Also, in the future a simple blood test could identify more tolerant cattle.

Although interesting, we need to keep this type of research in perspective. As a producer you may want/need to put selection pressure on other genetic traits before looking at fly control. Further, we must remember that any type of single trait selection pressure is not recommended.

However, this research does have potential for application to the industry. For example, as pesticide resistance develops and, should, organic/natural beef production expand, this work will be helpful to those segments of the industry. (Source: Drovers July 2001)

Animal Health (Dr. Steve Nicholson)

Foot and Mouth Disease (FMD)

As of 10/25/01, the FMD outbreak in the UK had ended with the last reported case on 9/30/01. In seven months there were 2,030 cases and 3.9 million head of livestock slaughtered and buried or burned on 9,591 premises.

Bovine Spongiform Encephalopathy (BSE, Mad Cow)

BSE is not known to occur in the United States. Japan recently joined 15 other countries and the United Kingdom which have confirmed the presence of this disease in their cattle. Japan has 5,129 exposed cattle under surveillance.

BSE or "mad cow disease" was first recognized in the U.K. in the mid-1980's. In 1992, there were

To this date, Bovine Spongiform Encephalopathy (BSE) has not been detected in pigs in the U.S. But it still may have an impact on the pork

37,280 cases of BSE reported in the U.K. In 2001, there were only 318 cases through mid-June. Banning the feeding of ruminant meat and bone meal products has reduced or completely prevented new cases. The U.K. continued to export ruminant meat and bone meal to many countries until recently.

Cases of variant CJD (vCJD), thought to be the human form of "mad cow disease," have claimed the lives of more than 100 people in the U.K. As of July, there were 15 cases reported for 2001. Officials expect a continued rise in the number of cases but do not think there will be millions affected as once feared.

In the USA, approximately 14,000 bovine brains (144 from Louisiana) have tested negative for BSE in the past 10 years.

Scrapie in Sheep

The USDA, in cooperation with the sheep industry, has launched a campaign to eradicate scrapie from the United States by 2017. Meat and bone meal from scrapie infected sheep is thought to have been the source of BSE or Mad Cow in the U. K. Feeding ruminant bone and meat meal to ruminants was banned in December 1997 in the United States.

Encephalitis in Horses

West Nile virus infection has been confirmed in 8 horses (3 died; 7 in Vermilion and 1 in Cameron). One human case in Jefferson Parish has been confirmed.

Eastern equine encephalitis has been confirmed in 15 horses through Oct 11, and in one human case in Livingston Parish. Plan to vaccinate horses routinely for these diseases.

Swine (Dr. Tim Page)

Pork Producer Biosecurity and Livestock Disease

In light of recent events in the United States, veterinarians and other officials are asking pork producers to have a heightened awareness around their operations to prevent accidental or intentional spread of livestock diseases. Dr. Beth Lautner, National Pork Board vice president of science and technology, urges pork producers to review their security and biosecurity plans. If suspicious activities are seen, report them to law enforcement officials. Producers should not allow anyone on their operations that they do not know. If unusual lesions or health situations are found in livestock, pork producers should quickly notify their veterinarian to prevent the situation from spreading. Pork producers, through their checkoff investments, have been actively engaged in protecting the U.S. swine herd for years. They have worked with USDA and state veterinarians to prevent disease and to plan ways to respond to an introduction of a disease.

industry. According to Will Hueston, DVM, "absence of evidence is not evidence of absence. It is difficult to prove that a species is not susceptible and the

remaining uncertainty, international trade restrictions on meat products, and consumers' food safety concerns will have an impact on swine producers." Hueston is the director of the Center for Animal Health and Food Safety at the University of Minnesota. He also served six years on the United Kingdom BSE Advisory Committee.

Even without evidence of BSE in live pigs, some scientists are concerned that the BSE agent could be sequestered in pig tissue and pigs could be silent carriers of the disease. Hogs fed BSE-contaminated feedstuffs could expose other species by shedding the agent into the environment. Consumer concerns will rise as BSE is identified in other countries and more cases of variant Creutzfeldt-Jakob disease are diagnosed. Pork and other livestock industries must be ready for the communications challenge that comes with the uncertainty about the disease and the continued media attention.

Horses (Dr. Clint Depew)

Cool Season Management Practices

Cold weather presents several management problems for horsemen. As temperatures decline grass growth slows and grass quality decreases. As horses eat less grass because of the lower quality, the need for roughage in their diet increases. Generally horses will eat grass or pasture before they will eat hay. When horses start to eat hay, that indicates that pasture quality has decreased and more hay is needed. Restricting hay consumption tends to result in the development of vices including wood chewing and cribbing.

Horses also need more energy to maintain their body condition and resist cold weather. Therefore, additional feed will be needed and/or the concentration of the feed can be increased by adding fat or higher concentrate grains to meet their energy needs.

One problem that typically occurs in cool weather is reduced water consumption. Therefore, there is reduced water available in the gut, and colic can result due to impaction. If your horses are drinking a lot less water than normal, reduce their feed intake until their bodies have made the adjustments.

Mosquitoes seem to seek heat in cooler weather and may be more of a problem for horses, so continue to use your insecticides and repellants to protect your horses. When using insecticides always check the label and follow directions. Some insecticides can be used daily without causing adverse effects. However, many of the livestock sprays that are labeled for horses have a week to 10 day period between applications. More frequent applications can cause illness in the horse.

Close observation is always one of the most effective methods of identifying potential problems. Changes in the horse's attitude is generally the first sign of problems. Most problems can be solved if detected

The first few weeks in October have certainly changed the dairy price landscape. Grade AA butter prices have gone from \$2.20 per lb in September to \$1.26 closing price on October 26 on the Chicago Mercantile Exchange. The price of 40 lb blocks of

early, so watch your horses closely for any changes in eating habits, defecation or attitudes.

Poultry (Dr. Theresia Lavergne)

Cold Weather Brooding

Birds brooded at 80 degrees F vs. 90 degrees F weigh 20 percent less at 10 days of age, have 10 percent poorer feed conversion, and are more likely to exhibit symptoms of disease. Thus, proper brooding is important for the commercial broiler industry, as well as for 4-H and FFA broiler projects.

When brooding chicks, we must be aware of the environmental conditions at chick level. What we sense at five feet above the floor may be very different than what the chick is experiencing at two inches above the floor. We must keep in mind that hot air is lighter than cold air, so the hot air produced by brooders raises to the ceiling while cold air leaking into the house collects at the floor.

Therefore, the best way to ensure that you are brooding at the proper temperature is to place the thermometers/sensors at "bird level". As the bird grows, you may need to raise the level of the thermometers/sensors so the birds cannot peck at them or sit on them. Also, as the birds get older they are less sensitive to lower air temperatures.

If you have gas brooders and have trouble maintaining proper temperature even though your brooders are running constantly, then there are several possible explanations. First, your house insulation may be inadequate and needs to be increased. Second, your house may let in too much unwanted air and needs to be tightened. Third, there may be insufficient gas pressure. Brooders are designed to operate at a specific gas pressure, and when gas pressure is too low the heat production is insufficient.

With the arrival of fall and winter, you need to find time to evaluate such things as thermostat/sensor locations, gas pressure, house insulation, and house tightness. This evaluation could pay off in fuel savings and bird performance. (Poultry Times, October 15, 2001)

Dairy Update (Dr. Charlie Hutchison)

For the past several months, dairy marketing experts have been forecasting that the price paid for producer milk would drop sharply toward the end of the year and, prices would be relatively low through the spring of 2002. Producers and other industry people have been wondering what kind of crystal ball these experts have been using. The price of producer milk has been rising steadily due to near record market prices for butter and due to significant advances in the cheese market. Consumer demand for dairy products also was increasing slightly. Milk production nation-wide has been dropping and cow numbers have been declining. Prices for dairy cows and springing heifers were extremely high (if you could find them).

cheese has gone from \$1.78 per pound in September to closing at \$1.20 on October 26. The price of 500 lb barrels of cheese has seen a similar decline going from \$1.67 per pound in September to closing at \$1.14 per pound on October 26. Prices in the futures markets

have shown a response to the sharp declines in dairy commodity prices. The full impact of these drops has not been realized yet since the class I mover for November milk was only down \$0.17 from the October class I mover price. The market appears to be reacting to reduction in demand for dairy products partially due to the events following September 11, 2001, and the uncertainty of the U.S. economy.