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Texas Dairy Matters

Newsletter

Editor: Texas AgriLife Extension Service - Dairy Team

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2010 Southwest Dairy Day

On May 27, the Schilderink family and Texas AgriLife Extension Service will host the Southwest Dairy Day at Spandet Dairy in Hart, Texas. The event will start promptly at 10 a.m. with guided tours of Spandet Dairy, which is a 5,500 cow cross-ventilation facility. Some of the attractions to see while on the tour are a 100-cow rotary parlor, 6,000-head open dry lot heifer operation, latest in cow comfort and cooling, nutrient management handling, and special needs facilities. Some of the demonstrations conducted during the tour will be a smoke test of the cross-ventilation barn, how to improve irrigation pump efficiency, and information on manure and sand separation. Booth exhibits will display the latest products and technology allied industry has to offer! Lunch will be provided courtesy of Sweet Bran, Intervet/Schering-Plough and Vi-COR. Last year we had more than 70 booth exhibitors and equipment dealers, and served lunch to more than 650 people. Come out and spend the day with activities the whole family can enjoy! Booth spaces are available for purchase until April 30. For more information contact Choyia Holley at (254) 968-4144, e-mail at c-holley@tamu.edu or visit our Web site at http://texasdairymatters.org.

High Plains Herdsman Short Course

Texas AgriLife Extension Service is organizing the first High Plains Herdsman Short Course. This event targets parlor managers and mid-managers with the objective to better understand milking routine, leadership and milk quality issues. The morning section will consist of presentations and the afternoon section will allow attendants to participate in a wet lab addressing the dairy cow mammary gland. Presentations will be primarily in Spanish with English translation as needed. Lunch will be provided to all participants. This program will be delivered in four locations throughout the Texas Panhandle starting at 9:00 a.m.:

May 19 – Rita Blanca Coliseum - Dalhart
May 21 – AgriLife Extension-Deaf Smith County office - Hereford
May 26 – Olton Ag Pavilion - Olton
May 28 – Bailey County Coliseum - Muleshoe

For registration and more information, contact Jerri Hamar at (806) 677-5600, e-mail: jhamar@ag.tamu.edu or visit our Web site at http://texasdairymatters.org.

Kudos for our AgriLife Extension Dairy Specialist

In February, Dr. Ellen Jordan, Texas AgriLife Extension Service dairy specialist and professor at the Texas AgriLife Research and Extension Center in Dallas received the 2010 **Outstanding Dairy Industry Educator/Researcher Award** for her years of dedication and service to dairy producers not only in Texas but nationally as well.

Dr. Ellen Jordan receiving 2010 Outstanding Dairy Industry Educator/Researcher Award

Jordan has worked with industry and producer groups to resolve issues in Texas in the areas of reproductive physiology and nutrition over the years, and more recently in the area of environmental regulation concerns as they pertain to regulation interpretation and compliance. She has been active in researching water quality issues across Texas. She also develops training and teaching materials to enhance and strengthen educational programs in dairy cattle production and management. Jordan has participated in more than 1,600 radio programs through the years to get crucial herd health, production and management information to dairy producers in the region.

In 1991, she was selected as a dairy show honoree by the West Virginia Dairy Cattle Show and Festival. In recognition of outstanding scholarship, leadership, fellowship and character in service to agriculture, Jordan was awarded membership in the Centennial Honor Roll of Alpha Zeta.

The Dairy Team is honored to have Dr. Jordan as part of the team and would like to congratulate her for a very deserving award.

Log on to http://texasdairymatters.org to subscribe to the quarterly TDM newsletter

Dairy Producer Meeting - Occupational Safety Issues in Dairies

Texas AgriLife Extension Service is organizing a Dairy Producer Meeting for the last week of June focusing on occupational safety issues. Researchers from the medical school at the University of Texas – Tyler will share with dairy producers their research and current issues on labor safety in dairies.

For more information contact Dr. Ralph Bruno at (806) 651-2620 or by e-mail: rgbruno@ag.tamu.edu.

The National Milk Processor Education Program launched the Great Gallon Give program which will give away hundreds of thousands of gallons of milk to raise awareness of the importance of milk "in building strong families". More information at: www.whymilk.com

USDA reported in March that dairy farmers reduced culling in February. This reduction in culling represents an 8% decline compared to February 2009.

February 2010 milk production in TX decreased by 5.4% compared to the previous year.

Lameness Prevention Provides Returns

Kevin Lager, MS
Texas AgriLife Extension Service – Canyon, TX

Over 28% of dairy cows on dairies larger than 500 cows experience lameness based on a survey conducted by the USDA National Animal Health Monitoring System. Lameness can have a significant impact on health, milk production and reproduction of the dairy cow.

Hoof ailments leading to lameness result from infectious agents (foot rot), laminitis, conformational or other lesions (corkscrew claw, injury), and issues concerning the claw. These include white line disease, thin sole-induced toe ulcers, sole ulcers, heel ulcers, toe ulcers, sole punctures and thin soles. Additional risk factors associated with lameness include: diet, high milk production, under-conditioning and environmental effects such as housing type, stall surface and season.

Estimates of the costs associated with lameness on a dairy depend upon what is included, but range from $90 to $300 per incident. A basic estimate for a 2,000 cow dairy with 28% lameness means 560 of the animals experience lameness each year. This is a total cost between $50,000 (low end) and $168,000 (high end). Regularly trimming hooves, at an estimated cost of $12/cow or a total cost of $24,000 for the herd, helps prevent the losses caused by lameness.

The productivity losses result from decreased milk production, increased days open and greater potential culling; as lame cows prefer to rest instead of eat. The resultant decreased feed intake increases the chance of illness and injury as the cow is not maintaining body weight and her immune system is weakened. Travel to and from the parlor, as well as travel within the pen, poses an increased chance of injury due to slipping; since she is already on an unstable base.

Measures to reduce lameness include:

- Trim hooves at least once during each lactation (early dry period or at dry off). A second trimming may be scheduled at 150 days-in-milk.
- Keep lock-up and standing time as short as possible (limit to 1 hr for early fresh cows).
- Manage rations to avoid incidences of acidosis.
- Maintain return alleys and pens free of rocks to prevent sole punctures and bruising.
- Provide clean, dry areas to reduce the risk of foot rot.
- Use footbaths properly to control some hoof diseases.

Train all employees working with cows to monitor herd lameness to increase the chance of catching lame animals; since cows will be seen in multiple areas of the dairy by multiple employees. Having an employee trained in hoof care provides the advantage of treating lame cows and trimming hooves between visits from the professional trimmer who regularly trims the herd.

Be sure thorough employee hoof trimming training is conducted by a veterinarian or experienced hoof trimmer, or a lameness issue may be magnified instead of corrected. Hoof trimming is an investment in the future hoof health of the herd. Not only does it improve foot health, but costs associated with lameness are reduced.

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This article is part of our TDM fact sheet series (Feb. 2010) and can also be viewed at http://texasdairymatters.org

New Resyncronization Protocol Improves Fertility

Todd Bilby, PhD
Texas AgriLife Research and Extension Service – Stephenville, TX

Timed AI (TAI) protocols developed in the last 15 years have improved synchronization of the estrous cycle for first postpartum AI. Unfortunately pregnancies per AI (P/AI) have remained low (< 50%), resulting in a large proportion of open cows that need to be re-inseminated. Resynchronization of open cows is recognized as one of the biggest challenges in managing today's dairy cows.

Cows that fail to conceive to first postpartum AI have a harder time getting pregnant. Not only are they less fertile, but also we are limited to what we can do to resynchronize cows, particularly while pregnancy status is unknown (i.e. before pregnancy exam).

Among herds that use TAI for re-insemination of open cows, most resynchronize the estrous cycle with the Ovsynch protocol (d 0 – GnRH, d 7 – PGF2α, d 9 – GnRH, and d 10 – TAI) or a variation thereof (i.e. Cosynch- 72). However, the timing at which the resynchronization protocol is initiated is quite variable and dependent on when pregnancy exams are administered (i.e. ultrasound less than 32 days or palpation greater than 32 days post-AI).

As with first postpartum AI, one of the limiting factors to the success of resynchronization protocols is the synchrony of the estrous cycle at the start of the TAI protocol. Cows starting the TAI protocol between day 5 and 9 of the estrous cycle have improved P/AI. The length of the estrous cycle of lactating dairy cows is approximately 22 days. Thus, intuitively starting the resynchronization protocols at 27 to 31 days after AI would result in improved P/AI. However, only 10.1% of open cows return to heat at 22 days after AI and only 43.5% of them return to heat 20 to 24 days after AI. Therefore, starting the resynchronization protocol based on days since previous AI is not likely to be a successful strategy. Alternatives to 'presynchronize' the resynchronization protocol have to be developed and implemented.

In a study conducted in CA and AZ, three resynchronization protocols were evaluated. Cows were examined for pregnancy 38 days after AI. All open cows started the resynchronization protocol (Cosynch-72) on the day of diagnosis (re-insemination 48 days after previous AI). One third of the cows received a GnRH injection one week before pregnancy exam (presynchronization with GnRH – GGPG) and another third received a CIDR insert for 7 days starting on the day of open diagnosis (from the day of start of the resynchronization protocol until the PGF2α).

Figure 1 depicts treatment schemes with open pregnancy diagnosis (OP) occurring at 39 days post AI. Cows presynchronized with GnRH before the start of the resynchronization protocol and those treated with a CIDR insert during the resynchronization protocol had greater P/AI at 90 days after re-insemination compared with cows receiving only the Cosynch-72 (31.2, 29.5, and 22.1%, respectively). Further, there was no difference on interval to re-insemination (49 days after previous AI). An economic analysis demonstratedthat presynchronization with GnRH and treatment with CIDR inserts resulted in greater returns per pregnant cow than the Cosynch-72 protocol alone ($ 36.40, 33.30, and 27.50, respectively).

In summary, utilizing the GGPG protocol improved P/AI and increased return per pregnant cow. In addition, the GGPG injections occur on the same day of the week with the exception of the TAI day. The GGPG protocol may be an improved alternative to current resynchronization programs.

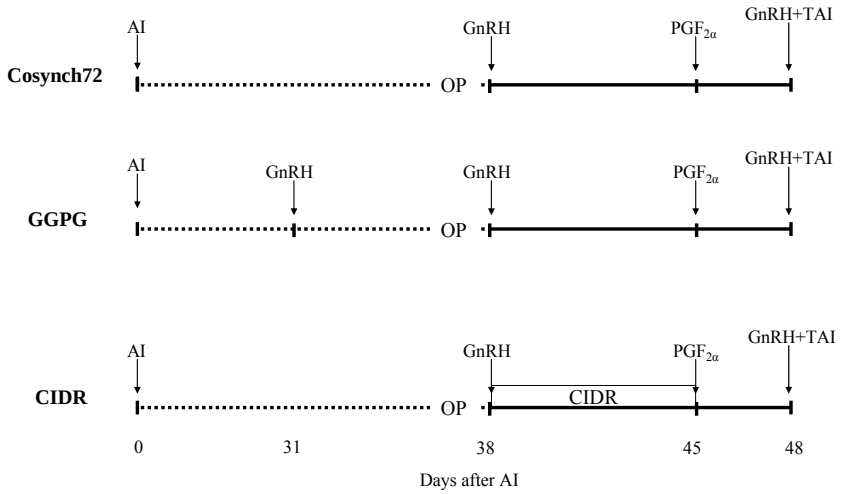
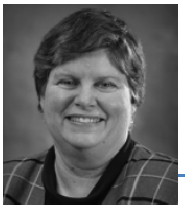


Figure 1. Treatment schemes for resynchronization.

This article is part of our TDM fact sheet series (Mar. 2010) and can also be viewed at http://texasdairymatters.org



Using Distillers Grains for Starch

Ellen Jordan, PhD, ACAN
Texas AgriLife Extension Service – Dallas, TX

Traditionally, corn has been the major energy source for dairy rations because of the high starch content. The starch provides energy needed for high milk production; however when too much starch is added at the expense of forage, rumen pH decreases. When rumen pH falls, intake decreases as does fiber digestion and milk fat concentration.

The recent surge in ethanol production for fuel has resulted in increased competition for corn. A side benefit of the ethanol industry has been an escalating quantity of byproducts, which can be used by nutritionists in formulating rations. These byproducts present an opportunity to develop rations with energy provided from alternatives to corn. Consequently, rations may be developed that minimize the negative impacts of feeding too much starch.

One of the major ingredients available from ethanol production is distillers grains. For each 56-pound bushel of corn processed for fuel, 18 pounds of distillers grains is generated in addition to the 2.7 gallons of ethanol and carbon dioxide. Both wet and dry distillers grains (WDG and DDG) are available.

Drying distillers grains improves shelf life and ease of handling, while reducing freight charges. If too much heat is applied in the drying process, digestibility declines, as well as palatability. Although some think color is an indicator of overheating, a burnt odor is more accurate.

Distillers grains with soluble (DGS) is produced when part of the "stillage" is added back to the grain. In recent research from South Dakota, substituting dry DGS (DDGS) and soyhulls for the starch from corn was evaluated. Four different rations were fed with 0, 7, 14 or 21% DDGS. Starch declined from 29 to 26 to 23 to 20% in the four rations as DDGS increased. The rations consisted of 27% corn silage, 22% alfalfa hay and 51% concentrate. Soyhulls were added along with the DDGS to maintain crude protein at 17% across the four rations.

As the percent DDGS increased, dry matter intake declined in a linear fashion; however neither milk production or composition of fat or protein changed. Consequently, feed efficiency tended to improve as the starch was replaced by the nonforage fiber from soyhulls and DDGS.

Results from this research indicate that DDGS, in combination with soyhulls, can partially substitute for the starch from corn without negatively impacting production. At the time of the trial, the calculated feed cost declined from $4.91 to $3.49 per cow per day and income over feed cost increased from $7.02 to $8.44 per cow per day as starch from corn decreased from 29 to 20% of the ration and DDGS increased from 0 to 21%.

The price of various feed ingredients continue to change with time, but by-product feeds provide alternatives to control cost and maintain productivity. Work with your consultant to identify which ingredient combinations might improve your bottom line.

This article is part of our TDM fact sheet series (Apr. 2010) and can also be viewed at http://texasdairymatters.org

Hoof Trimming Clinic in East TX

On March 2 and 3, Texas AgriLife Extension Service conducted a hoof trimming clinic in Spanish in East Texas. Ten dairy employees learned practical hoof trimming techniques from Dr. Jan Shearer, Iowa State University, at the AgriLife Extension office in Hopkins Co.

The hoof trimmer's role in maintaining biosecurity and preventing disease was discussed at the training by Dr. Mario Villarino, AgriLife Extension agent. Proper cleaning and disinfecting of equipment was stressed to minimize the spread of disease through the hoof trimming process.

The program covered basic anatomy and how it relates to proper hoof trimming. The pros and cons of different hoof trimming tools were discussed, as well as how to maintain the equipment. Attendees brought their own tools to the course for evaluation and recommendations.

After having their tools evaluated, participants practiced techniques prior to receiving training on live cows. The class moved to a local dairy to practice what they had learned in the classroom and laboratory sessions.

Support for the program came from Zinpro, with Pfizer Animal Health providing lunch.

Dairy Manure Tech. Tour

Texas AgriLife Extension Service in Comanche, Hamilton and Erath counties hosted the annual Dairy Manure Technology Tour on April 13 in Stephenville. The meeting was held at the Texas AgriLife Extension and Research Center on State Hwy. 281 in Stephenville.

Topics for the day included:

* Occurrence and Fate of E.coli from Cattle and Wildlife Under Different Environmental Conditions — Dr. Saqib Mukhtar, ag engineer, AgriLife Extension, College Station.

* TCEQ Updates — Mr. James Moore, TCEQ.

* Update of Soil Sampling Techniques for CAFO's in TX — Dr. Sam Feagley, AgriLife Extension agronomist, College Station.

In addition to the topics, the group toured a small grains variety trial located at the Research and Extension Center. Dr. Jim Muir with Texas AgriLife Research and Dr. Robert Duncan with AgriLife Extension provided updates on the production of small grains for green chop and silage.

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High Plains Dairy Conference

The annual High Plains Dairy Conference was held March 11-12 at the Ambassador Hotel in Amarillo. This was the first time the conference was held in Texas, and the change of venue did not dampen the turnout as more than 320 attendees representing dairy producers and allied industry gathered to network and gain applicable knowledge. The conference was highlighted with the addition of farm tours, including a heifer grow yard, a dairy and also a feedlot on the first day. The conference sessions were held on the following day. For more information or to view conference proceedings from previous years visit www.highplainsdairy.org.

2010 TACC Award

The Dairy Team would like to congratulate Mr. John Cowan, former Executive Director of the Texas Association of Dairymen, who received the Cooperator of the Year award from the Texas Agriculture Cooperative Council.

People from the Texas Dairy Industry

John Cowan

John Cowan is the former Executive Director of TAD. Cowan has worked with many organizations and state agencies including the Texas Critical Infrastructure Advisory Group, National Animal Health Association and Natural Resources Conservation Service's State Technical Committee and is actively engaged in working for state agriculture on environmental stewardship programs.

Dr. Saqib Mukhtar

Dr. Saqib Mukhtar is an associate professor and AgriLife Extension specialist based in College Station. His research focuses on manure management as well as air and water quality. Mukhtar has continuously provided educational training in agricultural management education and has an extensive list of on-line publications for livestock and poultry operations at http://tammi.tamu.edu

Texas AgriLife Extension Service Dairy Team

You can ask a question of the Dairy Team at: texasdairymatters@ag.tamu.edu

Todd Bilby, PhD

Ralph Bruno, DVM

Ellen Jordan, PhD

Kevin Lager, MS

Save the dates:

May. 5-6, 2010 - Dairy Marketing Research Symposium – Overton Hotel, Lubbock, TX

May 19,2010 – High Plains Herdsman Short Course – Dalhart, TX- http://texasdairymatters.org

May 21, 2010 – High Plains Herdsman Short Course – Hereford, TX - http://texasdairymatters.org

May 26, 2010 – High Plains Herdsman Short Course – Olton, TX - http://texasdairymatters.org

May 27, 2010 – Southwest Dairy Field Day – Hart, TX - http://texasdairymatters.org

May 28, 2010 – High Plains Herdsman Short Course – Muleshoe, TX - http://texasdairymatters.org

July 9, 2010 – Value-Added Market Cows – Hopkins County Civic Center – http://texasdairymatters.org

July 11-15, 2010 – American Dairy Science Association- Annual Meeting, Denver, CO – www.adsa.org

For other event dates log on to http://texasdairymatters.org

Texas Dairy Matters Newsletter is produced by the Dairy Team of Texas AgriLife Extension Service / Texas A&M System. Ralph Bruno, WTAMU Box 60998, Canyon, TX – 79016; Phone (806) 651-2620; Fax: (806) 651-2504; rgbruno@ag.tamu.edu; Todd Bilby, trbilby@ag.tamu.edu; Ellen Jordan, e-jordan2@tamu.edu; Kevin Lager, kjlager@ag.tamu.edu. Fact sheets are based on peer reviewed research and edited by the Dairy Team.