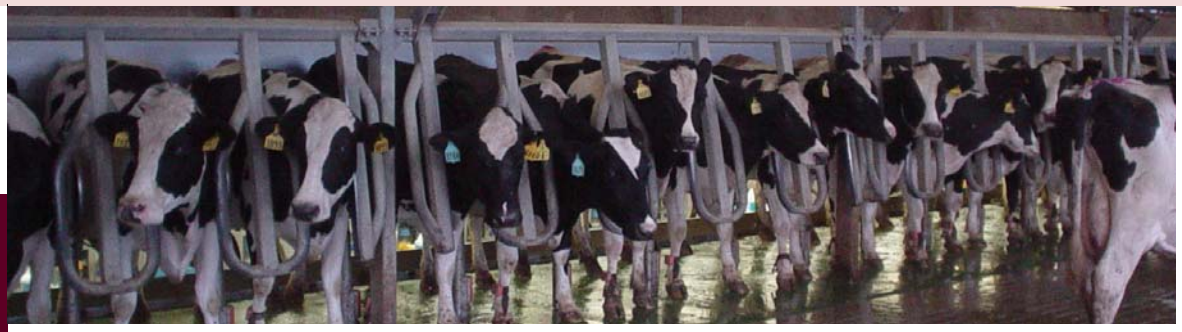
Texas A&M System

Vol. 6
Winter 2011

Texas Dairy Matters

Newsletter



AgriLIFE EXTENSION
Texas A&M System

Editor: Texas AgriLife Extension Service - Dairy Team

In This Issue:

Texas Dairy Team

Todd Bilby, PhD

Ralph Bruno, DVM, MPVM

Ellen Jordan, PhD, ACAN

Kevin Lager, MS

Potential Changes in Water Use Regulation

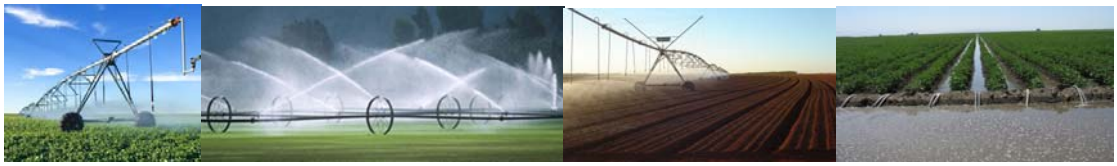
In accord with legislative requirements for setting desired future groundwater conditions within each water district, the High Plains Underground Water Conservation District No. 1 has set the management conditions at "50/50" within the district's 16-county region. This means the District's goal is to conserve water so that 50 percent of the saturated thickness available in 2010 remains in 2060. To reach this goal, changes to the rules of this district have been proposed. Some of the proposed changes include, but are not limited to:

- Designations of high water decline areas in the district in 2011 based upon annual winter water level measurements;
- Metering/reporting requirements for water wells in high decline areas; and
- Setting an initial allowable production rate of one and one-quarter feet of water per acre for all new/existing water wells beginning in 2012.

Public meetings are scheduled to receive comments on the proposed rule changes:

- **March 23**, 9 a.m.-Noon, Hereford ISD Banquet Room, 601 N. 25 Mile Avenue, Hereford, TX.
- **March 23**, 3-6 p.m., Robert Dysart Room, Lamb County Rural Electric Cooperative, 2415 S. Phelps, Littlefield, TX.
- **March 24**, 9 a.m.-Noon, Dimmitt Middle School Auditorium, 1505 Western Circle, Dimmitt, TX.
- **March 24**, 3-6 p.m., Plains Cotton Cooperative Association Board Room, 3301 E. 50th, Lubbock. (Entrance at southwest side of building).
- **March 25**, 9 a.m.-Noon, Plainview Country Club and Conference Center, 2902 W 4th, Plainview, TX.

For more information and to view all the proposed rule changes, visit the High Plains Water District website at http://www.hpwd.com/.



Southwest Dairy Day and Grand Opening

Plan to attend the Southwest Dairy Day and the Grand Opening of the Southwest Regional Dairy Center at Stephenville on Thursday, May 5, 2011. The event will be held at the Southwest Regional Dairy Center off Hwy 281 just north of Stephenville starting at 9:30 a.m. and concluding at 4 p.m.

A special attraction at this year's Dairy Day will be the ***Dairy Discovery Zone*** provided by DairyMax. Other activities include:

- Tour state-of-the-art research/teaching/extension dairy facility
- See 300-head free-stall barn
- Observe 24-cow rotary parlor with sort gates
- View heifer research barn and special needs facility
- Discover the latest in research technology
- Visit with vendors displaying their products

The grand opening ceremony for the Southwest Regional Dairy Center will be at 10:30 a.m. sharp.

In 2010 there were over 550 in attendance with more than 70 booth exhibitors and equipment dealers. This year's event is being hosted by Texas AgriLife Extension Service and Tarleton State University. For those attending Dairy Day, lunch will be provided by Hi-Pro.

For more information on the event or booths contact Choyia Holley at 254-968-4144; e-mail at c-holley@tamu.edu; or visit our website http://texasdairymatters.org

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

Final Report Approved

The Dairy Industry Advisory Committee voted Thursday (March 3rd) to approve a final report to Agriculture Secretary Tom Vilsack that offers recommendations concerning dairy farm profitability and milk prices.

The vote, which was held during a public meeting via conference call, supports a report that offers 23 public policy recommendations.

The Dairy Industry Advisory Committee was chartered to review farm milk price volatility and dairy farmer profitability. The committee was asked to make recommendations to the Secretary on how USDA can best address these issues to meet the dairy industry's needs, both short and long-term. The committee also was asked to provide feedback on how actions taken by USDA in 2009 have affected the dairy industry.

For a written copy of the final report contact Solomon Whitfield at: Solomon.Whitfield@wdc.usda.gov. An electronic version of the current draft report can be obtained by visiting: http://www.fsa.usda.gov/Internet/FSA_File/diac_final_rpt_0302.pdf.

Source: USDA

Text excerpted from Dairy Herd Network Website (http://t.co/5Eg78Lb)

The average dairy cow drinks from 30 - 50 gallons of water each day

There are 9 million dairy cows in the USA which is 30 million LESS than 50 years ago. We make more milk now than 50 years ago and most of this is due to the embracing of technological advances in the dairy industry. This has a tremendous positive environmental impact because we can make more milk feeding, housing and disposing of the manure of far fewer cows.

Panhandle Water Use: Dairy and Other Commodities

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

The primary source of water for the Texas High Plains is the Ogallala Aquifer, which has been the center of controversy for many years. The basically non-renewable aquifer has garnered the attention of policy makers who are imposing or considering restrictions on the amount of water pumped in an effort to extend the usable life of the aquifer.

A recent study by Texas AgriLife Extension, West Texas A&M, and Texas Tech University has evaluated the impacts of confined livestock operations, irrigated crops, and ethanol plants on the aquifer in the Texas High Plains. The study area, referred to as the Texas High Plains, includes the state water planning Regions A and O. These regions encompass a 42 county area that lies over the Ogallala Aquifer, which is the primary water source for the Panhandle. Approximately 88% of the states' fed beef, 95% of swine and 48% of dairy cattle are located in this region. The National Agricultural Statistical Service (NASS), U.S. Agricultural Census, and Texas Regional Water Plans comprised the majority of the data utilized in this report.

In the 2011 plans for the Texas High Plains, it was estimated that 6,111,751 acre-feet of water was pumped for municipal, industrial, steam-electric power generation, mining, irrigation, and total livestock in 2010 (Table 1). Agricultural industries in total used an estimated 5,793,933 acre-feet with irrigated crop production accounting for 93.25% of the total water use. Direct water use for all types of livestock operations consumed 1.48% of the water. Of the 1.48% livestock water usage, confined livestock operations accounted for 1.13% and other livestock operations utilized 0.35%.

There are both direct and indirect water demands for livestock operations and ethanol plants. Direct water use is the water required for drinking, dust control, washing and other daily needs; while indirect water use is the water required to produce feedstock and forage for each operation. Total water use accounts for feedstock and forage grown within a region, as well as the feedstock imported from outside the region; while regional water use is only from feedstock and forage grown within the Texas High Plains region (Table 2). It is important to note that dairies typically recycle a portion of the water used on the dairy, as refuse and other waste is typically used for irrigation, which was not accounted for in this study.

In conclusion, results from this study suggest that the impact on water use in the Texas High Plains from future expansion of confined livestock production and/or ethanol production in the region will be minimal.

Table 1. Texas High Plains Direct Water Use by Sector

Percent Water Use by Sector		Livestock Water Use by Species (Total 1.48 %)	
Irrigation	93.25 %	Fed cattle	0.84%
Municipal	2.94 %	Other*	0.35%
Livestock	1.48 %	Dairy	0.19%
Manufacturing	0.99 %	Swine	0.10%
Steam Electric	0.84 %		
Mining	0.50 %		

*Other includes poultry, range beef, equine, sheep and goat, and summer and winter stocker water use estimates.
Source: Region A & O 2011 Water Plans and Water Use by Confined Livestock Operations and Ethanol Plants in the Texas High Plains – Final Report; Amosson et al., 2010.

Table 2. Regional water use from livestock operations and ethanol plants in the TX High Plains

	Regional Water Use (acre-feet)
Fed cattle	~ 1,000,000
Ethanol	140,000
Swine	120,000
Dairy	~ 215,000

Source: Water Use by Confined Livestock Operations and Ethanol Plants in the Texas High Plains – Final Report; Amosson et al., 2010.

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

Organic Dairying in Texas

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

Nationally, organic milk accounts for 1.5% of the milk produced in this country based on results of the 2008 Organic Production Survey. This in-depth study conducted by the National Agricultural Statistics Service of the U.S. Department of Agriculture was a follow-up to the 2007 Census of Agriculture.

In 2008, Texas ranked 7th in milk production in the nation; however its organic production was 3rd in the nation. Although producers selling organic milk in Texas received nearly $9.77 more per cwt., production per cow was reduced. Based on the number of cows and the total pounds of milk produced, the annual production was calculated at 15,071 pounds of milk/cow from the organic herds compared to 21,040 pounds of milk/cow under conventional systems (Table 1).

This means that approximately $4,290 per cow of gross income was generated from the production of each organic cow, which is greater than the $3,934 per cow of gross income from each conventionally managed cow. Production expenses are not readily available for the organic herds. Grain and forage commodities were included in the survey. Total quantities of the products and the value of the products sold off the farm were presented; however the quantity used on the farm was not given.

Consumer demand has driven the organic milk production market. Each month Federal Milk Order Market Administrators survey retail milk prices for selected cities during the first 10 days of the month. From this information, a simple U.S. average, as well as an average by city, is published. The retail milk prices for whole milk and 2% milk from 2008 to 2010 are presented in Table 2 for Dallas and the U.S. Note that the organic milk is priced in half gallons.

Dairy producers continue to work to provide a quality product to the consumer. Those that have chosen to invest their time and effort in organic production are providing. consumers with the choice of foregoing technological advances in the production of their food. These producers have different costs of production, management issues and returns; but are an integral part of the dairy industry in Texas.

Table 1. Select statistics compiled from the 2008 Organic Production Survey, 2008 Agricultural Statistics Service Quik Stats, and the Market Administrator's Report, Southwest Marketing Area.

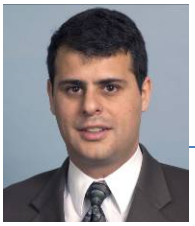
Category	U.S.		Texas	
	All Milk	Organic	All Milk	Organic
Pounds Produced, Billion	190.0	2.76	8.416	0.284
Licensed Herds	57,127	2012	640	9
No. of Cows	9,315,000	201,960	400,000	18,854
Cows/Herd	163	100	625	2,094
Price/cwt	$18.29	$27.21	$18.70	$28.47

Table 2. Retail price for milk in Dallas and across the US compiled from information obtained by the USDA, Agricultural Marketing Service Milk Order Market Administrators from 2008-2010.

	2010[1]		2009		2008[2]	
Product, Cost	Dallas	U.S.	Dallas	U.S.	Dallas	U.S.
Whole Milk, $/ gallon	2.25	3.23	2.44	3.16	3.26	3.77
2% Milk$/ gallon	2.22	3.18	2.44	3.10	3.26	3.77
Organic Whole Milk, $/ half gallon	3.17	3.70	3.17	3.79	3.21	3.81
Organic 2% Milk, $/half gallon	3.17	3.69	3.17	3.78	3.21	3.81

[1]The 2010 data is only for the first eleven months.
[2]The organic milk retail price series began in April 2008; thus only 9 months of data is included in the 2008 organic milk values.

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



Insuring Cow Comfort

Ralph Bruno, DVM, MPVM, PAS
Texas AgriLife Extension Service – Canyon, TX

This article is part of our TDM fact sheets series (Jan, 2011) and can also be viewed at http://texasdairymatters.org

The growth of the dairy industry in the Southwest region of the US has been remarkable. Large dairy operations adopted several housing styles for their animals and equipped the facilities with new production-enhancing technologies to optimize production of high quality milk.

For economic and animal care reasons, the dairy industry incorporated housing and management practices that reduce environmental risks while improving cattle health and comfort. The new systems accommodate normal cow behavior, enhance animal well-being, and result in fewer sick cows that require treatment. Improved consumer confidence and dairy product image results.

Animal scientists and dairy farmers continually explore different ways to improve the comfort of dairy cows. Cows must be doing one of three things: eating/drinking, milking or resting.

In order to promote cow comfort, follow these practices:

Housing

- Provide cows free access to feed and clean water 24 hours a day – Modern dairy design allows cows to eat, drink and rest whenever and wherever they choose.
- Equip barns/freestalls with fans and cooling systems to minimize heat stress.
- Ensure skid-resistant floors to reduce injuries; increase mobility to feed, water and resting areas; and accommodate estrous activity.
- Adjust the freestall size to the animal size and create a comfortable bed, preferably of sand.

To evaluate stall design for cow comfort, ask these questions:

1. Do cows appear comfortable and content when standing or lying in stalls?
2. Do cows lie backward in stalls or in alleys?
3. Do cows stand half-in or half-out of stalls?
4. Do cows stand in stalls in an angular fashion?
5. Are all stalls used equally?
6. When cows normally rest, are more than 20 to 30 % standing in the stalls?
7. Are cow udders dirty?

Answering questions 2, 3, 4, 6, and 7 with a "yes" or questions 1 and 5 with a "no" identifies areas that need improvement.

Ventilation

- Design ventilation systems to prevent high humidity in winter and heat build-up in summer. Provide air flow across all cows.

Poorly ventilated barns have an ammonia odor. Cows may be coughing, have nasal discharge, or moisture on their hair coat.

Feeding

- Design diets to provide all the nutrients required for the cow's stage of lactation and reproductive status. Provide feed at least 20 hours a day.
- Push-up feed frequently during the day.
- Clean feed bunks at least once a day and discard refusals.

Animal Handling

- Move cows slowly at their speed and minimize stress.
- Move cows in groups of no less than ten to minimize stress and animal interactions.
- When required, transport or restrain animals carefully to reduce stress.

Animal Health

- Provide cows regular veterinary care including: periodic check-ups, preventative vaccinations and prompt treatment of illness.
- Treat sick cows appropriately. Separate cows from the milking herd until after prescribed withdrawal times.
- Score cows on locomotion. Identify and treat lame cows promptly as prescribed by the herd veterinarian.
- Record body condition score several times during lactation. Identify thin or fat cows and handle them accordingly.

Milking Parlor and Holding Pen

- Plan milking to keep cows no more than an hour in the holding area. Check to see if cows are ruminating, a sign they are comfortable and content.
- Develop the milking routine to minimize stress and fear. Loud noise startles cows, causing erratic behavior.
- Apply pre- and post-dip solutions before and after milking.
- Minimize time in the holding pen, one of the most stressful places on a dairy. Prevent overcrowding; and reduce time standing on concrete without feed and water, as much as possible.

Following the procedures outlined previously can improve cow comfort and well-being.

DOPA Credits in East Texas

As part of the Hopkins County Environmental Summit, April 21, 2011 three hours of DOPA credits will be available. Producers in the eight Dairy Outreach Program Area (DOPA) counties in East and Central Texas are required by the Texas Commission on Environmental Quality to have 8 continuing education credits every two years to maintain their permits.

The Dairy Plenary Session will be from 1-4 p.m. at the Hopkins County Regional Civic Center in Sulphur Springs, Texas. Topics include: Using the self assessment National Air Quality Site Assessment Tool (NAQSAT), Dr. Saqib Mukhtar, Texas AgriLife Extension; Environmental requirements for small dairy producers, Cindy Ramirez, Texas Water and Soil Conservation Board; and Greenhouse gases (GHG): Why should dairy producers bother about GHG emissions, Dr. Mukhtar.

For more information contact: Hopkins County Extension office at 903-885-3443.

Corn and Sorghum Variety Trials

In early March, producers in East Texas learned about the latest corn and sorghum variety trials from Dr. Juerg Blumenthal. For those that couldn't attend, the latest information is available at:

http://varietytrials.tamu.edu/

Dr. Ellen Jordan provided tips on harvesting and storing silages. In addition, she provided some comparisons for valuing normal cut, high cut and BMR silages based on the milk production responses.

The program concluded with Dr. Blumenthal discussing nutrient management issues associated with silage production. He compared organic and inorganic fertilizer sources, as well as when to apply the fertilizer for optimal crop performance.

The program was conducted by Mr. Mike Berry, Franklin/Delta County Extension Agent and Dr. Mario Villarino, Hopkins County Extension Agent.

2011 Herdsman Short Course

The Herdsman Short Course is a series of labor trainings designed by the Texas AgriLife Extension Service with the objective of providing the latest information about new technologies and training aspects of dairy management directly to dairy employees. Last year, topics targeting parlor workers included lactation physiology of dairy cows, milk quality, and prevention and treatment of mastitis. Training was delivered in classroom and wet laboratory settings in seven locations across TX for 158 dairy employees representing 27% of the dairy cows in TX.

This year, between May and June, our Herdsman Short Course Series will focus on the postpartum management of dairy cows including basic clinical exam, nutritional aspects of postpartum diseases and proper handling and correct usage of medicines for lactating dairy cows. This module will target dairy workers involved with handling and taking care of dairy animals with an emphasis on postpartum cows.

This training will consist of a single day event with classroom instruction and laboratories (practical instruction) taught in English and Spanish. Please check our 2011 spring newsletter for dates and locations of our 2011 Herdsman Short Course or visit our website http://texasdairymatters.org.

Illigal Immigration has been a hotly debated issue lately. In some states legislation has been more strict than in others. In order to comply with immigration policies, dairy producers should have their employees fill out the I-9 form the first day of work. Instructions can be found online: http://www.uscis.gov/files/form/i-9.pdf

People from the Texas Dairy Industry

Dr. Wesley Bissett

Wesley Bissett, DVM is an assistant professor at Texas A&M University in College Station. Dr. Bissett is the lead faculty member for the recently developed mobile Veterinary Emergency Team (V.E.T.) to respond to disasters that can affect animals state-wide. This preparedness response plan is a joint effort between the Texas Animal Health Commission and the Texas A&M University College of Veterinary Medicine and Biomedical Sciences.

Dr. Robert Sprowls

Dr. Robert Sprowls is the Resident Director of the Texas Veterinary Medical Diagnostic Laboratory (TVMDL) at Texas A&M University, based in Amarillo, TX. Dr. Sprowls is one of the experienced pathologists at the TVMDL and has served in his position since 1975. Recently he was involved in the process of renovating the TVMDL, elevating the lab to biosafety level 3 for animal disease diagnosis.

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

Texas AgriLife Extension Service Dairy Team

Todd Bilby, PhD

Ralph Bruno, DVM, MPVM

Ellen Jordan, PhD

Kevin Lager, MS

Save the dates:

March 22 – Heat Stress Seminar, Comanche, TX, - http://texasdairymatters.org

March 26 – Texas State Holstein Show, Abilene, TX - http://texasdairymatters.org

April 12 – Dairy Manure Technology Seminar, Dublin, TX, - http://texasdairymatters.org

April 20 - 21 – Mid-South Ruminant Nutrition Conference, Grapevine, TX - http://txanc.org

May 5 – Southwest Dairy Day, Stephenville, TX - http://texasdairymatters.org

May15 - 17 – National Dairy Producer Conference, Omaha, NE - http://nmpf.org/NDPC

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; and Kevin Lager, kjlager@ag.tamu.edu. Fact sheets are based on peer reviewed research and edited by the Dairy Team.