

BUFFALO PRESS WEEKLY REGIONAL FARM & RANCH NEWS



Animal manure management could go 'green'

COLLEGE STATION -- A recent Texas AgriLife Research survey of Texas and California dairies found that cows, like people, are big energy users. That's the bad news. The good news is there's enough potential energy within the manure dairy cows produce to pay their electrical bill and more -- a lot more, according to Dr. Cady Engler, AgriLife Research agricultural engineer.

"Total energy usage ranged from as low as 464 kilowatt hour per year per animal for a pasture dairy in Northeast Texas to as high as 1,637 kilowatt hour for a hybrid facility in Central Texas," Engler said.

"The estimated daily potential energy availability from manure -- 25 kilowatt hours per day per cow -- is much greater than the average daily on-farm energy requirement of 3.2 kilowatt hours per day per cow," he said.

Engler will be presenting a paper, "Energy Usage Survey of Dairies in the Southwestern United States" at the upcoming Texas Animal Manure Management Issues, scheduled Sept. 29-30 at the Austin Marriott North in Round Rock. More information can be found at the conference's Web site at <http://grovesite.com/tamu/tammi>.

The energy survey included electrical, diesel, gasoline and natural-gas usage related to milking, waste management, feeding and water. The survey did not look at energy expenditures related to the production of feeds.

"That energy usage also does not cover transport of milk to market or processing," Engler said. "Those would add a considerable amount to the total energy required for production and processing of milk."

Several speakers at the manure management conference will talk about the latest research on energy production from manure, said Dr. Saqib Mukhtar, Texas AgriLife

Extension Service Service agricultural engineer and conference coordinator.

"The speakers will be talking about different ways of improving the efficiency of the gases that are produced from manure and other biomass, and how we can then efficiently convert those gases into energy including electrical power," Mukhtar said.

Energy production from both anaerobic digestion and gasification will be discussed, he said. Anaerobic digestion uses naturally occurring bacteria in the absence of oxygen to produce biogas that is primarily composed of methane and carbon dioxide, Mukhtar said. The biogas may be used to generate heat or electricity.

The system has the advantage of not only producing energy but also reducing methane emissions, methane green house gas, he said.

Gasification, the other process discussed, converts manure or other biomass by heating it at high temperatures under oxygen-starved conditions, Mukhtar said. The process produces a mixture primarily of hydrogen and carbon monoxide called "syngas."

Syngas can be processed into other fuels or burned directly to heat a boiler.

"It can also be used in place of natural gas in a gas turbine," he said. Dr. Sergio Capareda, AgriLife Research agricultural engineer, said the two processes could work hand-in-hand. Potentially, sludge leftover from the anaerobic process could be dried and used in a gasification system.

Mukhtar, Engler and Capareda have built mobile gasification and digester systems that can be taken to commercial dairies and other confined-feeding operations. The mobile systems will be used to test the feasibility of the systems under different conditions and as demonstration units for producers.

Both systems have the potential advantage of not only producing electricity, reducing emissions, but of also reducing the amounts of nutrients that must be disposed of on or near the dairy, Capareda said.

"The gasification process reduces the volume of wastes by more than 80 percent, so you are limiting the amount of manure to be disposed of and controlling some of the run-off issues associated with confined-feeding operations," he said.

Registration for the two-day conference is \$75 until Aug. 1 and \$125 thereafter. There will also be presentations and discussions on other new advances in animal manure management and lessons learned from Hurricane Ike in dealing with animal mortality, Mukhtar said.



An energy-use survey of Texas and California dairies included electrical, diesel, gasoline and natural-gas usage related to milking, waste management, feeding and water. (Texas AgriLife Extension photo by Robert Burns)

A&M plans 'Beef Cattle Short Course'

One of the largest cattle and forage events in Texas is coming up next month.

The 55th Annual Texas A&M Beef Cattle Short Course is scheduled August 3 - 5 at Texas A&M University.

"Planning committee members from around the state have met with us and helped us put together another outstanding program," said Dr. Jason Cleere, Texas AgriLife Extension beef cattle specialist and conference coordinator.

Drought, high production costs, emerging diseases and a weakened market have made this a challenging year for cattle producers, Cleere said.

The short course, sponsored by Texas AgriLife Extension Service, will address these issues as well as other topics during the three-day event, providing information for both the novice and experienced rancher.

"The short course has become one of the most comprehensive beef cattle programs in the U.S. with 20

different educational sessions taught by more than 50 different speakers," Cleere said.

The Cattlemen's College portion of the short course provides participants with an opportunity to choose workshops based on their level of production experience and the needs of their ranch, Cleere said. "These concurrent workshops will feature information on ranch management, nutrition, reproduction, genetics, pastures, carcass evaluation, record keeping, brush busting, cattle handling, landowner issues and much more," he said.

In addition to classroom instruction on Aug. 3-4, participants can attend one of the popular demonstrations on the morning of Aug. 5, said Dr. Larry Boleman, associate vice chancellor for agriculture and life sciences at Texas A&M and conference director. "There will be demonstrations on chute-side calf working, cattle behavior, penning, selection and brush busting," Boleman said. "These provide an opportu-

nity for ranchers to see beef cattle production practices put to use."

Along with the Cattlemen's College, a key general session will be offered on the afternoon of Aug. 3. "The goal of the Short Course each year is to provide the most cutting-edge information that is needed by beef cattle producers," Cleere said. "This year's program is titled "Ranching for the Future" and will address several hot issues affecting beef cattle producers."

Participants can receive a pesticide applicator's license during the short course, and can earn numerous pesticide continuing education units if already licensed.

An industry trade show will be held during the event featuring more than 100 agricultural businesses and service exhibits. Registration is \$140 per person, and includes educational materials, a copy of the 600-page Beef Cattle Short Course proceedings, trade show admittance, admission to the prime rib din-

ner, meals and daily refreshments.

Registration information and a tentative schedule will be mailed to previous participants in June and can also be found on the short course Web site at <http://beef.tamu.edu>.

A Small Business/ Entrepreneur Workshop is planned for July 28th in Anderson County. The workshop will layout the common senses steps to help us; help our existing and future entrepreneurial business. Topics to be address will include: Focus on Local - Community Based Approach, preparing your Community for Entrepreneurs, Youth Entrepreneurship, Implementation Strategies, Developing an Action Plan.

The Workshop will be held at the Ben E. Keith meeting room beginning at 8:30 am and running until 5:00 pm. Pre-registration will be conducted by the Palestine Chamber of Commerce and a small fee will be charged to cover lunch.

Summer 4-H camp attracts hundreds

Almost three hundred 4-H youth and adults from Leon and surrounding counties took a break from the hustle and bustle of the busy summer to attend the District 8 County Camp at the Lakeview Conference Center on July 10-12, 2009! This camp was designed especially for youth ages 9-17 with opportunities to meet new friends, develop new skills, and learn how to work with others.

The 2 night-3 day event was the ticket to rejuvenate and recharge all who participated! A well trained team of Teen 4-H Leaders under the direction of Youth Development Professionals coordinate camp activities. Activities include: swim-

ming, crafts, fitness, public speaking, Leadership styles, cooperative games, dancing and much more! Special evening activities such as the Team Challenges for the whole camp were used to promote teamwork and cooperation!

Serving as teen leaders from Leon County 4-H this summer were Jacob Rodell, James Knippa, Kastan Martin, Ryan McCarty, Reagan Robertson, Kelcey Cockrell, Cassie Ferguson, Taylor McGill, David Roach and Casey Helfenbein. Participants were housed in modern, air-conditioned dorms, staffed by an extension agent and/or adult volunteer leader. Leon County was repre-

sented by Cameron Biddle, Taylor Biddle, Charlee Cockrell, Shalyn Cotton, Mikayla Cox, Parker Davidson, Cullen Douget, Gracie Ferguson, Jacob Fishbeck, Logan Freeman, Natalie Freeman, Andy Johnson, Tobe Johnson, Gatlenn Johnson, Matt Gilliam, Emily Grissett, Dylan Harris, Kendal Honeycutt, Kaydee Honeycutt, Cassidy Johnson, Macey Jonas, Kendall Lee, Blake McCarty, Clay McGill, Lindsey McGill, Dylan Pistone, Justin Pistone, Savanna Pistone, Kayla Ray, Rhett

Read, James Rodell, Kyle Simpson, Erin Trahan, Hannah Weedon, Tyler Weedon, Courtney Windslow, and Mark McLeod.

The Leon County 4-H members were supervised by County Agents Tommy and Wendy Neyland, Extension Assist Ben Reese, and Intern Cayla Christianson. The members of Leon County 4-H would like to Thank Mrs. Andrea Freeman for volunteering her time to be a part of the weekends activities as well.

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