

Dairy Heat Stress Road Show Comes to Okeechobee

The Dairy Heat Stress Road Show was a big hit two years ago and the road show will travel again in the fall of 2013 and spring of 2014 bringing new answers to the problem of heat stress in dairy cows.

Dr. Todd Bilby, Dairy Technical Services Manager with Merck Animal Health, said heat stress on dairies not only affects cow comfort, but also lowers milk production and fertility, which costs the dairy industry millions of dollars annually.

Surveys conducted of participants in the last Dairy Heat Stress Road Show showed that dairy heat stress costs dairy operators over \$81 per cow per year. Producers at a road show event also reported that by attending they estimated that implementing the strategies they learned, their dairy operation could save over \$40 per cow, per year.

“The Dairy Heat Stress Road Show, financed by the U.S. Department of Agriculture in collaboration with several universities (including the University of Florida), is a series of educational programs that will travel to four states and Puerto Rico,” Bilby said. “The effort’s purpose is to teach producers how to overcome some of the negative effects of heat stress by implementing strategies such as nutritional changes, hormonal treatments and facility improvement.”



The dates and locations this fall, 2013 will be:

- **Dec. 3, County Extension Office, 458 Highway 98 North, Okeechobee, Florida.**
- Dec. 5, Camuy, Puerto Rico, to be delivered in English and Spanish.

The 2014 dates and locations are:

- April 1, Texas A&M AgriLife Research and Extension Center, Stephenville, Texas.
- April 2, Hilton Garden Inn, East Elwood St., Phoenix, Arizona.
- April 4, Consumer Education Pavilion, Vet Medicine Center, Tulare, California.

All the sessions will run from **10 a.m.- 2:45 p.m.** with lunch provided.

Topics and speakers include: Nutritional Additives and Facility Modifications to Reduce Heat Stress, Dr. Robert Collier, Professor, University of Arizona; Should We Cool Dry Cows?, Dr. Geoffrey Dahl, Professor and Chair of Department, University of Florida; and Current and Future Opportunities to Reduce the Impact of Heat Stress, Dr. Pete Hansen,

Distinguished Professor, University of Florida. Dr. Bilby will speak on Tools and Technologies to Assess Heat Stress on Commercial Dairies.

Along with on-site instruction, the road show will provide the latest research technology, software tools and proceedings in English or Spanish at each program. The road show is free and open to the public, Bilby said.

Learn more about the Dairy Heat Stress Road Show, managing heat stress in dairy cattle or the U.S. Department of Agriculture’s Research and Education initiative by contacting Dr. Todd Bilby at todd.bilby@merck.com.

For questions about the meeting in Okeechobee, Florida on December 3, you may also contact Courtney Davis, cbdavis@ufl.edu.

Renewable Energy – 2013 Florida Energy Summit

Ann C. Wilkie

The Florida Department of Agriculture and Consumer Services (DACS) will host the 2013 Florida Energy Summit at the Rosen Shingle Creek Resort in **Orlando, October 14-15, 2013**. As the successor to the previous Farm to Fuel initiative, the Florida Energy Summit encompasses not only agricultural-based fuels, but also all renewable energy and energy conservation activities in the state. Leaders from the agricultural, utility, solar, government, academic, technology, and financial communities will gather to discuss the future of the energy industry in Florida. The 2013 Florida Energy Summit will examine the changing energy sector and how Florida can prepare to take advantage of future economic opportunities. Panel discussions will include how Florida’s changing demographics are affecting energy usage and aging infrastructure for electricity, natural gas supplies and transportation fuel delivery facilities. Other panel discussions will focus on the economic impact of increased energy production, how businesses can cut costs by increasing energy efficiency and the influence of energy on the housing market. Homeowners, businesses, local governments and energy producers will have an opportunity to learn and share ideas to help advance the development of the state’s energy industry and conservation practices.



For the 2013 Summit agenda and registration information visit the summit website:

<http://www.floridaenergysummit.com>

For questions or issues about bioenergy, contact:

Dr. Ann C. Wilkie at acwilkie@ufl.edu or (352) 392-8699, or visit the website Biogas – A Renewable Biofuel at <http://biogas.ifas.ufl.edu>. Ann Wilkie is in the Department of Soil and Water Science.

Prediction of the Future Florida Mailbox Price: July 2013 - June 2014

Using the Class III and Class IV future settle prices of October 1, 2013 and the announced Class III and IV prices until August 2013, the University of Wisconsin predicts the Florida mailbox prices for July 2013 to June 2014 as follows:

Month	Class III settle price*	Class IV settle price*	Predicted FL mailbox price
Jul-13	17.38	18.90	22.99
Aug-13	17.91	19.07	23.35
Sep-13	18.12	19.41	23.62
Oct-13	18.13	20.26	24.22
Nov-13	17.93	20.30	24.13
Dec-13	17.27	19.57	23.45
Jan-14	16.86	18.75	22.19
Feb-14	16.64	18.10	21.77
Mar-14	16.57	17.99	21.68
Apr-14	16.51	17.40	20.54
May-14	16.60	17.43	20.61
Jun-14	16.75	17.55	20.74

* Class III and IV settle prices (\$/cwt) as of October 1, 2013.

Daily updated Florida mailbox price predictions are found at http://future.aae.wisc.edu/predicted_mailbox/?state=Florida

Observations from New Zealand

Mary Sowerby

On Saturday, September 7, 2013, I had the opportunity to lose a day by crossing the international dateline and gain the experience of touring New Zealand for six days as part of a graziers' study tour assembled by Dr. Dennis Hancock, UGA Forage Specialist.

Ten blurry-eyed Americans (seven university Extension personnel from three states, Dennis' wife, and Don and Betty Heatwole, dairy producers from South Carolina) assembled at the Auckland, N.Z., Airport McDonald's golden arches at 6:30 AM Monday morning, September 9. We piled our luggage and ourselves into a mini-bus and with Dennis Hancock fearlessly sitting in the driver's seat on the right side of the bus, we proceeded southward into traffic, driving with everyone else on the left side of the road.

Spring was in full swing on the North Island of New Zealand (it is in the southern hemisphere). The perennial ryegrass pastures we drove by were all emerald green and seemingly straight up and down their mountainsides. How

did they plant and fertilize these impossible-to-drive-a-tractor hillsides? – by helicopter, of course! Flowers were blooming everywhere in all colors adding to the visual delight.

First stop was the farm and home of Graeme and Cheryl Henderson near Hamilton. Graeme is one of three partners who also own two grazing dairies near Waynesboro, GA. The Hendersons provided hospitality equal to that anywhere in the southern US and provided a delicious meal including New Zealand "golden" kiwi fruit (which is sweeter than the green kiwis we are accustomed to), tasty breads and a variety of vegetables and meats.

Obesity is not a national problem in New Zealand. Outside of the airport, greasy fast food is much harder to find and even New Zealand breakfasts are served with lots of fruits, including tomatoes. Not just the mountain-grazing sheep and cattle seem to get more exercise in New Zealand too.

The Henderson Dairy is divided into unirrigated paddocks contoured with the land. Very little ground is irrigated on the North Island of New Zealand. Some dairies do use center pivots on the South Island. The Hendersons milked in a double-40 swing parlor built in the 1990's and were planning renovations in the next three years. Milk was stored in an outside tank, which was picked up daily by a double-trailer Fondera milk co-op truck. Four milk samples were captured automatically as the milk entered the truck for milk fat, protein, somatic cell count (SCC), bacteriological and other tests.

Although we only saw one cow at the Henderson's (they had about 600), the others were divided in two groups pasturing on the endless perennial ryegrass in paddocks on the other side of rolling hills. The cattle were also fed corn silage with other supplements to balance their ration. Their Friesian x Jersey cows were seasonally bred to optimize ryegrass availability.



The vast majority of New Zealand milk is dried and exported, primarily to China and other Asian countries. There is not much need for year-around milk to supply New Zealand's four million residents (who seem to mostly put their milk in their coffee).

Fast forwarding as the week progressed, we were only on one other dairy farm owned by David and Pip Fullerton. David had 500 registered Holsteins and could tell you a multi-generational pedigree of every cow on the farm. David's cows were milked on a 24-stall carousel. He sold breeding stock internationally, enjoyed showing his cattle, and was leaving the next day to go judge a dairy show in Melbourne, Australia.

We had the opportunity to visit a farm raising red deer (which quite profitably sold breeding stock, antler velvet, full racks of antlers, cull animals for venison and trophy stags to hunting preserves) and a sheep and beef farm (the grazing styles of both are complimentary for optimal grass utilization). At the latter farm we saw a heliport for fertilizing steep hillsides and got a "top of the world" view from the crest of one of their mountain pastures – gorgeous.

It seems the demand for goat milk is on the increase in New Zealand or wherever they were selling it in the world.

One entrepreneur contractor we met had just built a 108-stall rotary parlor for dairy goats (in operation only 3 months). He was milking over 1000 goats and planned to expand to 3000 in the only animal confinement barn we saw. Goats are very susceptible to parasites, so his nannies (does) were all loose-housed, and fed by mixer wagon in a vast barn. He figured the new facilities would be paid for in five years.

Contractors are very important to dairy producers in New Zealand. Corn silage has become the feed supplement of choice, but most dairy producers do not own the equipment to plant and harvest it. The two contractors we met were incredibly organized businessmen, who owned incredible amounts of equipment which they used to go from farm to farm planting, fertilizing and harvesting crops. The fields they planted were almost all relatively small, so they had many clients scattered about to keep happy. These contractors were also corn seed dealers for companies like Pioneer and seemed to have many other side enterprises like selling feed supplements and hedging on the futures market.

We also toured several dairy grazing related companies: Milfos International, Ltd. (makers of rotary milking parlors), Gallagher Animal Mgt. Systems (makers of electric fencing, cattle prodders, etc.), and CRV Ambreed (a Dutch bull stud with a bull sampling program in New Zealand which specializes in bulls for grazing dairy cattle).

Milk quality is not regulated by government in New Zealand. The dairy industry has its own specifications to insure milk quality and meet international standards. All testing is done by Milk Test New Zealand which has labs on both the North and South Islands of New Zealand. The Fonterra milk truck we saw at the Henderson's farm left off a printed ticket giving the amount of milk just loaded and the milk test results (fat, protein, SCC, etc.) from the previous day. If they had a mastitis outbreak or equipment cleaning problem, it could be caught very quickly.

Dairyman Graeme Henderson succinctly summed up the farming and industry which we saw in New Zealand: "I farm for profitability, not lifestyle." The practical use of resources (they throw away a fraction of the "stuff" found in our wastebaskets and recycle most of that), work ethic, and striving to meet the needs of their customers were all most admirable in New Zealand.

On Saturday, September 14, we left New Zealand, five of us journeying on to Sydney, Australia to attend the 22nd International Grasslands Congress. The Congress proved to be full of interesting talks and people from all over the world. Sydney is a beautiful city and so is the countryside around it.

I had the opportunity to visit four dairy farms and drive by several more south of Sydney in New South Wales. The dairy graziers primarily depended on a perennial summer grass called kikuyu which seemed like a stockier version of stargrass. (We cannot import this grass because of its tenacious ability to take over the landscape.) They usually overseeded the kikuyu with ryegrass (and in some cases clover too) for winter forage. This grass was supplemented to increase production, very like our US graziers. Herds seemed to average 200-500 cows. Free stall barns were non-existent.

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Observations from India

Albert De Vries

End July, 2013, I had the opportunity to visit India for a week as part of a USDA sponsored Emerging Markets project on dairy cattle genomics organized by CRI Genex. Our travel team consisted of 2 people from CRI Genex, a veterinarian from Tufts University, and myself. Goal of the visit was to educate influential people in India's dairy industry on the use and accuracy of genomically proven US sires. India has import restrictions on dairy semen for sires that are not highly proven (without lots of daughters). Little semen has been imported into India for a long time, also due to other reasons. Most of today's top US genetics are young bulls with no daughters milking yet. For example, of the top 100 Holsteins ranked in the April 2013 CDCB sire evaluations for lifetime Net Merit dollars, only 2 bulls had daughters. The breeding values for the other 98 bulls were determined by only genomic testing and pedigree. Genomic testing implies that a DNA sample of an animal is taken and compared with the DNA from other animals that also have phenotypic records (the reference population). Consequently, we can now say something with about 70% reliability about the breeding values of an animal, for all important traits like milk yield, productive life, daughter pregnancy rate etc., at a very young age. Waiting for data from daughters then adds little additional information. Selection of the best bulls now happens at a much younger age than when AI studs had to wait for young sires to have daughters. One benefit of genomic testing is that it reduces the generation interval (the sires of the sires are now much younger) and approximately doubles genetic progress in US bulls per year. Our message to the Indians was that they were getting more behind with their less improved cattle and should rethink their policies of restricting the import of US semen.



Cows are everywhere on India's streets.

India is a fascinating country. It is crowded with people and cattle on the streets everywhere. With a population of 1,237 million people, it has 3.9 times as many people as the US on an area that is only 32% of the area of the US. India has about 200 million cattle and 100 million buffalos and is the largest milk producer in the world. Many local breeds of cattle exist, most with *Bos indicus* blood, which can be seen in their fatty hump on their shoulders, drooping ears and a large dewlap. As a developing country, many people work in agriculture and about 70 million households own cattle.

Most of these farmers own only a few head of cattle that either wander around the farm or are kept in tie-stall sheds. Maybe a third of the milk that is produced is marketed compared to direct consumption. More than 10 million dairy farmers belong to 100,000 local dairy cooperatives. Such coops may own a bull tank in the village. Farmers then bring their farm's milk in milk cans to that bull tank in the morning and the afternoon on their motor cycles. The milk is somewhat tested on the spot and dumped into the bulk tank. Once a day, a truck picks up the village's bulk tank milk. One processing plant we visited employed 600 people and processed the milk of 50,000 farmers into fluid milk, butter, cheeses, yoghurts etc. Not that all these 600 people had to work very hard; we were told the work could easily be done with 200 people but the plant's leadership was politically active and needed the votes when elections were held. This attitude is not uncommon in India. Social stability is an important objective of the federal and local governments in a country with such a diverse population.



One milk plant processing the milk of 50,000 farmers.

After we arrived in New Delhi, the capital in the north of India, and gave our first seminar to about 50 decision makers, we traveled to Pune near Mumbai on the west coast. The next 3 days, the fine folks from BAIF Development Research Foundation took us to see many farms and cooperatives. BAIF is a NGO based on the principles of Mahatma Gandhi, the father of India, which promotes sustainable livelihood in India, for example through cattle improvement programs. Most of the farms we visited had a handful of cows and some youngstock. Many of the cattle were black and white, mostly descendants of Holstein Friesian semen imported in the 1970s. The farmers liked their black and white cows because their resale value was high and they were thought to produce more milk than the local breeds. Still these cows produced on average only 3000 lbs per year. Used cows would typically be sold on the village market. Cows are holy animals in Hinduism. Only 2 of the 28 states in the India allow cattle slaughter. In the other 26 states, cows mostly die of natural causes, are shipped to states the allow slaughter, or are slaughtered illegally. Feed was mostly grown on a few acres around the farm. We saw corn, pearl millet, and sorghum. Everywhere we went we received a heartily welcome. People would invite us into their house to drink chai, a spiced milk tea, which was indeed very good.

Traffic is crazy in India. It was lifesaving to have Indian drivers who knew the local driving customs. Even when you rent a car, you get a driver with it. Markings on roads mean little, there is much horn blowing, and cars, motorcycles, trucks, people and cattle all share the same roads. Yet nobody seemed frustrated and people kept a pleasant demeanor.



One farm's youngstock.

At the end of our visit, we gave our second seminar in Pune. Again there was good interest in the application of genomics in dairy cattle. As might be expected, the Indians were particularly interested in applying the technology to their own cattle, and not so much in importing semen. Unfortunately for them, it takes a good data set of phenotypic records and homogeneous populations, in addition to the genomic tests, to make genomically enhanced genetic selection work. Especially routine and extensive data collection is lacking in India. Genomic selection works well in the US because our breeds are homogenous and an excellent national database exists built by DHI data and type traits. The jury is still out on whether our visits and seminars will open doors regarding imports of US semen into India.

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Dairy Extension Agenda

- **October 14-15, 2013.** Florida Energy Summit, Orlando, Florida. <http://floridaenergysummit.com>
- **October 15-17, 2013.** Sunbelt Ag Expo, Moultrie, Georgia. <http://sunbeltexpo.com>
- **Tuesday December 3, 2013.** Heat Stress Road Show meeting, Okeechobee Extension Office, Florida. Meeting time is 9:30 am – 3:30 pm. Lunch is free. Contact Courtney Davis, cbdavis@ufl.edu, for more information.

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