

### New Device for Measuring Body Temperature

Pete Hansen

Summer means employment of fans, sprinklers, foggers, and cooling ponds to keep cows cool and minimize summer declines in production and fertility. The best way to determine whether you are being successful in fighting summer is to measure body temperature. An easy way to do that is to measure rectal temperature in a few sentinel cows in the afternoon, between 3:00 and 5:00 PM, when animals are at rest. A good rule of thumb is that cows experiencing rectal temperatures of  $>102.2^{\circ}\text{F}$  in the afternoon are being adversely affected by heat stress.

It is also now easy to measure body temperature continuously so that times of day and animal routines associated with higher body temperature can be identified. We monitor vaginal temperature with a reusable device called the Thermocron<sup>®</sup> iButton from Maxim in Sunnyvale, CA. Data can be downloaded by touching the iButton to an interface plugged into a personal computer. The iButton fits securely in a hollowed out space in the center of a blank CIDR device (see accompanying figure). The battery lasts several years and the iButton's can be reused.

There are a variety of iButtons manufactured. We use model number DS1921H-F5# (\$22 at the time of writing). A more accurate iButton (precision of  $0.0625^{\circ}\text{C}$  instead of  $0.125^{\circ}\text{C}$  for the DS1921) is the DS1922L-F5# (\$45.75 at the time of writing). See [http://www.embeddeddatasystems.com/Thermochrons-Hygrochron\\_c\\_29.html](http://www.embeddeddatasystems.com/Thermochrons-Hygrochron_c_29.html) for more information. Placing an iButton or a similar device in a few cows may give you information to correct weaknesses in housing systems or cow handling routines that cause cows to become too hot.



Picture: iButton, intravaginal device, and glue. Contact Pete Hansen at [pjhansen@ufl.edu](mailto:pjhansen@ufl.edu) for more information.

### Strategies to Deal with the Impact of Heat Stress in Dairy Cattle: Now More Information On-Line

The University of Florida is a member of a consortium that studies new ways to get cows pregnant during times of heat stress. Another objective of the consortium is to teach producers how to overcome some of the negative effects of heat stress by implementing existing strategies such as nutritional changes, hormonal treatments and facility improvement.



In December 2011 we held a series of presentations in Okeechobee Extension Office for Florida dairy producers. The topics were: 1) Cooling strategies during heat stress; 2) Economics of heat stress: implications for management; 3) Nutrition programs for the heat stressed herd; and 4) Strategies to improve reproduction during summer heat stress.

In the spring of 2012 these presentations were given as webinars for a national audience. Now you can view the recorded webinars and PowerPoint slides here: <http://www.extension.org/pages/15830/archived-dairy-cattle-webinars> The written proceedings papers that accompany these presentations, in both English and Spanish, are available at <http://www.extension.org/pages/13879/materiales-en-espaol> (scroll to the bottom of the page). The consortium is sponsored by USDA NIFA AFRI grant no. 2010-85122-20623. For more information, contact Pete Hansen, [pjhansen@ufl.edu](mailto:pjhansen@ufl.edu), Jose Santos, [jepsantos@ufl.edu](mailto:jepsantos@ufl.edu), or Albert De Vries, [devries@ufl.edu](mailto:devries@ufl.edu).

### Summer Super Savers

David R. Bray

How to conserve water and electricity:

1. Adjust the timers for sprinklers in your barns. The object of evaporative cooling is to wet the cows to the skin and have the fans evaporate the water off, which cools the cow, then wet the cows again etc. Pouring excess water on the cow does not cool more, it just wets the floor.
2. Set the temperature the sprinklers come on by when you observe the cows need cooling. If cows start to get uncomfortable, it's time to start them. There is no magic number.
3. If you have multiple barns, be aware that each barn needs to be set to its conditions; water pressure may be



quite different in each barn. As you get farther from the water supply the less water you may get. Wet the cows to the skin, then quit.

4. In some cases the sides of the barn are very different. In our barns at the UF Dairy Unit, the cows on the north side are cooler than those on the south side due to sunlight intrusion, wind currents etc. It may be wise to adjust sprinklers differently on each side of the barn.
5. Night time cooling can waste a lot of water. In our area it is a necessity to use sprinklers at night, but they are not efficient if all the cows are resting in the stalls and the sprinklers are cycling off and on. Setting an on/off timer in the system will allow you to shut the sprinklers off when the majority of cows are in the stalls and turn them on for an hour or so after they come back from the parlor and are eating. Again, on large dairies these barns will need to be set individually.
6. Holding area cooling is a necessity in most places, but most often the sprinklers just cycle on and off all the time. In many cases they are just on all the time. You should decide if this is the best way or should timers be used.
7. Cow washers mounted to the holding area floor are also great cow coolers. Many people have stopped using them to save water or because stall maintenance has improved and they are not necessary. If you have stopped using yours it might be a good idea to check some rectal temperatures in the parlor to see if your cows are not overheated.
8. Beware of tank tipping. There had been a big push in the past to provide lots of clean drinking water to cows. On many dairies they have the help dump the tilt tanks every time somebody walks by them. This can be a huge waste of water; dumping 100 gallon water tanks 10 times a day is not necessary. The cows won't be damaged by a couple of cotton seeds floating in the tank. They need to be cleaned when dirty.
9. To conserve energy, keep all fans clean and belts tight. Dirty fans really cut down on cooling capacity. Fans need adjustment when needed: when they slip, sag, get hit by pay loaders etc.
10. Don't forget to clean your milk cooling condensers to get the most efficient milk cooling.

### UF Dairy Veterinary Extension Programs

Klibs Galvao and Carlos Risco

The UF Dairy Veterinary Extension Programs provide educational leadership and assistance to the Florida dairy industry in matters related to health and health management of dairy cattle. The only cost to Florida's dairy farmers for these programs is transportation cost at \$3.00/mile driven one way. Drs. Carlos Risco and Klibs Galvao offer the following programs to Florida's dairy farmers upon request:

- Employee training in the following areas:
  - Calving management
  - Newborn care and calf raising
  - Identifying and treating sick animals
  - Hoof health and hoof trimming

- Milking routine and milk quality
- Artificial insemination
- On farm euthanasia

Each training session lasts about 1.5 hours, can be taught in English and/or Spanish, and includes a PowerPoint presentation followed by hands-on application of acquired knowledge.

- Herd evaluation and troubleshooting in the following areas:
  - Record analysis
  - Reproductive performance
  - Transition cow performance
  - Milk production
  - Welfare assessment



The herd evaluation can be performed in each area separately or as a whole herd evaluation. A complete herd evaluation would include record analysis and a walk through the feed commodities, transition cows monitoring (body condition score pre and postpartum, subclinical ketosis incidence, endometritis incidence), stocking density, and cow comfort.

- Program development and implementation:
  - Standard operating procedures (SOP) development
  - Reproductive programs including synchronization programs
  - Vaccination programs for adult and young stock
  - Herd health monitoring; diagnosis and treatment
  - Management of down cows

Program development is focused on the dairy's needs. For our suggested SOP follow the link: <http://extension.vetmed.ufl.edu/dairy-extension/publications/> and click on University of Florida Dairy Unit SOP.

Drs. Galvao and Risco are in the Department of Large Animal Clinical Sciences, College of Veterinary Medicine, University of Florida. Contact Dr. Klibs Galvao at [galvao@ufl.edu](mailto:galvao@ufl.edu), or call (352) 294-4788. Contact Dr. Carlos Risco at [riscoc@ufl.edu](mailto:riscoc@ufl.edu) or call (352) 294-4320. The number for the Food Animal Reproduction and Medicine Service office is (352) 294-4387.

### Renewable Energy – 2012 Florida Energy Summit

Ann C. Wilkie

The Florida Department of Agriculture and Consumer Services (DACCS) will host the *2012 Florida Energy Summit* at the Rosen Shingle Creek Resort in Orlando, August 15-17, 2012. 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. The summit will explore

how Florida can secure a stable, reliable and diverse supply of energy. Leaders from the agricultural, utility, solar, government, academic, technology, and financial communities will gather to discuss the future of the energy industry in Florida. Discussion topics will include state energy policy and the impact of the recently enacted Florida energy bill (HB7117), as well as innovative energy-related research efforts throughout the state. 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 2012 Summit agenda and registration information visit the summit website:

<http://floridaenergysummit.com>

For questions or issues about bioenergy, contact: Dr. Ann C. Wilkie at [acwilkie@ufl.edu](mailto:acwilkie@ufl.edu) or (352) 392-8699. Ann Wilkie is in the Department of Soil and Water Science.

### Participants for Dairy Benchmarking Study Sought

Mary Sowerby, Albert De Vries, Curt Lacy, and Mohammed Ibrahim

Dairy producers interested in benchmarking their costs of production and financial performances are again invited to participate in the Southeast Sustainable Dairy Farms project.

The first 60 producers in Georgia and Florida that sign up will receive \$100 per year for the three years of the project. In addition to the compensation for their time and effort, dairy families will receive individual farm and risk-management assistance with their operation.



To schedule an appointment for data collection, or for more information about this project, dairy producers in Florida should contact Dr. Mary Sowerby at (386) 362-2771, [meso@ufl.edu](mailto:meso@ufl.edu). Kory Sgrignoli, a student in the Food and Resource

Economics program at UF, is assisting with data collection and analysis. Dairy producers in Georgia should contact Dr. Curt Lacy at (229) 386-3512, [clacy@uga.edu](mailto:clacy@uga.edu). Albert De Vries, [devries@ufl.edu](mailto:devries@ufl.edu), and Mohammed Ibrahim, [ibrahimm@fvsu.edu](mailto:ibrahimm@fvsu.edu), also lead the project. For more information about this project, see the Spring 2012 issue of Dairy Update at <http://dairy.ifas.ufl.edu/dairyupdate>

### Are Low Priced Milk and High Priced Feed Adversely Affecting your Bottom Line?

Mary Sowerby

Here are three ways to improve your knowledge and better control your price risks:

1. Join Dr. John Van Sickle, UF Food and Resource Economics Department Professor, during his monthly Adobe Connect Dairy Outlook meetings. These meetings highlight the numbers released from the monthly World Agricultural Supply and Demand Estimates (WASDE

reports) and other market fundamentals which affect the price you are paid for your milk and you pay for feed. You can join these live meetings from the computer in your own home or office with a headset and microphone. You will be gaining timely information and can type in questions at any time.

Dates of the next Dairy Outlook meetings (which all start at 7 PM EST) are:

Thursday, July 12

Tuesday, August 14

Thursday, September 13

Thursday, October 11

Contact Mary Sowerby (office: 386-362-2771; cell: 865-250-7761; email: [meso@ufl.edu](mailto:meso@ufl.edu)) for more information to make your Adobe Connection run smoothly for the Dairy Outlooks.

2. If you miss the live meeting, after each Dairy Outlook meeting an archive of it is saved. A website is currently under construction for Dairy Outlook information. For now, go to <http://ufifas.adobeconnect.com/p9lahtbhko9/> to listen to the June meeting.
3. An Introduction to the Dairy Futures Market class will be starting on Tuesday, September 11. Part of this class will be in person and part will be on-line through Adobe Connect, so that anyone in Florida (or elsewhere) can attend. This class will be taught by Dr. John Van Sickle using FACTSim (Financial and Agricultural Commodity Trading Simulation), which permits making on-line real time futures and option trades without the gain or loss of real money. It is a fantastic learning tool to become familiar with the futures market and all the factors which affect it. Whether you ever actually make a real trade or not, the knowledge learned will help you make advance feed purchases with greater confidence and use margin insurance to your best advantage.

There will be a \$40 class fee for the use of the FACTSim program. If you are interested in joining the class, please contact Mary Sowerby (office: (386) 362-2771; cell: (865) 250-7761; email: [meso@ufl.edu](mailto:meso@ufl.edu)).

### Dairy Extension Agenda

- **Monthly Risk Management Workshops.** Now also available by webinar. Next meeting: Dairy Outlook provided by John VanSickle. A discussion about feed and milk prices following the July 11 WASDE report from USDA. When: Thursday 12 July, 7 PM (Eastern Time). To join the meeting: <http://ufifas.adobeconnect.com/dairy0712>. For more information, contact John VanSickle at [sickle@ufl.edu](mailto:sickle@ufl.edu) or Mary Sowerby at [meso@ufl.edu](mailto:meso@ufl.edu) or (386) 362-2771.



**Prediction of the Future Florida Mailbox Price:  
June 2012 - May 2013**

Albert De Vries

Using the Class III future settle prices of June 29, 2012 and a University of Wisconsin formula based on historical prices for the association between the Class III settle price and the Florida mailbox price, we predict the Florida mailbox prices for June 2012 to May 2013 as follows:

Month	Year	Class III settle price*	Predicted Florida mailbox price
June	2012	15.65	18.68
July	2012	16.87	20.01
August	2012	17.62	20.59
September	2012	17.73	20.67
October	2012	17.62	21.09
November	2012	17.32	20.86
December	2012	17.24	20.80
January	2013	17.06	20.19
February	2013	16.66	19.88
March	2013	16.60	19.83
April	2013	16.60	19.41
May	2013	16.60	19.41

\* Class III settle price as of June 29, 2012.

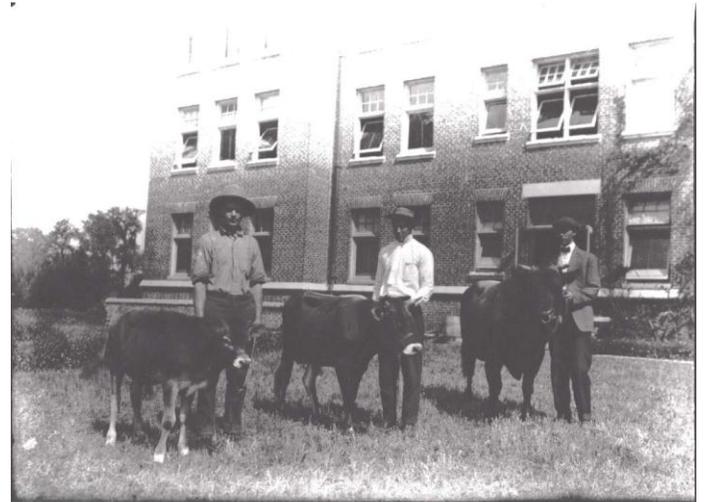
**UF/IFAS Celebrates 150 Years of the Morrill Act**

UF/IFAS can trace its roots to the Morrill Act of 1862 which established the Land Grant university system. On July 2, 1862, President Abraham Lincoln signed into law what is generally referred to as the Land Grant Act. The new piece of legislation introduced by U.S. Representative Justin Smith Morrill of Vermont granted to each state 30,000 acres of public land for each Senator and Representative under apportionment based on the 1860 census. Proceeds from the sale of these lands were to be invested in a perpetual endowment fund which would provide support for colleges of agriculture and mechanical arts in each of the states. The establishment of Florida Agricultural College at Lake City in 1884 under the Morrill Act marked the beginning of what became the College of Agriculture of the University of Florida.

The Florida Agricultural Experiment Station was established in 1888 as a part of the Florida Agricultural College at Lake City. In 1906, the East Florida Seminary combined with the Florida Agricultural College and was moved to Gainesville. The renamed University of Florida was now the land grant college in Florida and the Agricultural Experiment Station became a unit of the College of Agriculture at UF.



Mr. John M. Scott came to the staff in the Animal Industry Department on December 29, 1906 and participated in moving the Florida College of Agriculture to Gainesville. Professor Scott built the registered Jersey herd from the small beginning of two registered cows (obtained in 1901) and was the first major researcher in Dairy Science.



Three Jersey bulls of the Florida Agricultural Experiment Station on the main campus of UF in Gainesville. Date: April 18, 1915. Picture taken by J.M. Scott

Now in 2012 UF celebrates the 150<sup>th</sup> anniversary of the Morrill Act. President Abraham Lincoln visited the UF Dairy Unit during its Open House on March 24, 2012 to help commemorate his signing of the Morrill Act. Watch a video of his visit on <http://youtu.be/7YRu28hnh38>.



President Abraham Lincoln visited the UF Dairy Unit in March 2012 during the UF Dairy Unit Open House