UNIVERSITY OF FLORIDA
IFAS
Department of Animal Sciences

Dairy Update

Quarterly Newsletter **Spring (April) 2004**

41ST ANNUAL FLORIDA DAIRY PRODUCTION CONFERENCE - MAY 5, 2004

Please join us for the 41st Annual Florida Dairy Production conference on May 5th, 2004. This year's conference will be held at the **Hilton University of Florida Conference Center,** located at 1714 SW 34th Street, Gainesville, FL 32607. The Hilton also has guest rooms available. Call the Hilton Conference Center directly at (352) 371-3600 or visit http://www.ufhotel.com.

Agenda

Tuesday, May 4, 2004
Hilton Board Room
3:00 p.m. Southeast DHIA Board Meeting

Wednesday, May 5, 2004
8:30-10:00 a.m. Registration

Dogwood Room
Presiding: Mary Beth Hall
10:00 a.m. Welcome and Remarks
F. Glen Hembry, Chair, UF/IFAS Animal Sciences
10:15 a.m. Bedding Strategies in Free-stall Barns
John Bernard, Tifton Research Center, Univ. of Georgia.
10:50 a.m. Strategies for Dairying Success in the Future
Richard Waybright, Mason Dixon Farms, Gettysburg, PA
11:30 a.m. Latest on Tunnel Barns for Cow Comfort
David Bray, Extension Specialist, UF/IFAS Animal Sciences

Albert's Restaurant Dining Room
12:15 p.m. Lunch (Buffet at Hilton) and Awards

Dogwood Room
Presiding: Charles Staples
1:30 p.m. Can Dairy Farming be Profitable in 2010?
Terry Smith, President and CEO, Dairy Strategies, LLC.
2:25 p.m. Break

Joint Afternoon Session With Beef Cattle Short Course

Century Ballroom
Presiding: Todd Thrift
2:45 p.m. Under Construction: U.S. Animal Identification Program
Glenn Smith, Ag Infolink, Macon, GA
3:30 p.m. Political Climate of BSE and COOL: How Does It Affect You at the Ranch?
Bryan Dierlam, NCBA, Washington, D.C.
4:00 p.m. Have Marketing Plans Changed Given Ramifications of BSE?
Randy Blach, Cattle-Fax, Inglewood, CO

4:45 p.m. Adjourn to Trade Show

5:00 p.m. Allied Industry Trade Show and Reception
Sponsored by Allied Industry Exhibitors. Hors d'oeuvres provided compliments of exhibitors. Cash bar.

Thursday, May 6, 2004
Room 151 Animal Science UF Campus
9:00–Noon PCDART Workshop - This Workshop for Dairy Managers and Consultants will be at the Animal Science Building Room 151. Advance registration is requested since space is limited. Call (352) 392-5592 or email Christina Dore at dore@animal.ufl.edu by April 30th.

Registration

The early registration fee is $65 and includes the program, one copy of the proceedings, refreshment breaks, Wednesday's lunch and reception. The regular registration fee is $80 for payments received after April 21, 2004. To register, visit http://conference.ifas.ufl.edu/dairy/reg.htm or complete and return the registration form enclosed in the flyer along with payment. Refund policy: No refunds given after April 21, 2004.

Additional Information

The Program and registration information can also be viewed at the UF/IFAS Dairy Extension website http://dairy.ifas.ufl.edu. For more information, contact **Dan W. Webb**, Conference Chairman, Phone: (352) 392-5592, Fax: (352) 392-5595, Email: webb@animal.ufl.edu, or **James E. Umphrey**, Conference Co-Chairman, Phone: (352) 392-5594, Fax: (352) 392-5595, Email: umphrey@animal.ufl.edu, or **Kim Brand**, Conference Registration, Phone: (352) 392-5930, Fax: (352) 392-9734, Email: khbrand@mail.ifas.ufl.edu

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BUSINESS COW COLLEGE

The Business Cow College will be held in Gainesville on May 25+26. For more information visit http://dairy.ifas.ufl.edu.

FEEDING MORE PHOSPHORUS DOES NOT IMPROVE REPRODUCTION

Charlie Staples

Lactating cow diets containing phosphorus (**P**) concentrations of 0.35 to 0.36% (dry matter basis) are recommended by the national committee of dairy nutritionists in 2001. This is a lower P concentration than what was recommended in the previous dairy feeding guidelines of 1989. Guidelines for feeding P in 1989 were largely based upon studies published prior to 1950 that used cattle grazing pastures deficient in P and likely other nutrients as well. These grazing cattle had decreased calf crops.

New research indicates that the 2001 recommendations are just fine. Wisconsin researchers have conducted several experiments in which they fed different dietary concentrations of P and measured both milk production and reproduction. For 308 days of lactation, Holstein cows were fed a diet containing 0.31, 0.40, or 0.49% P by increasing the amount of monosodium phosphate in the diet (Wu et al., 2000). Overall milk production was not different among the three groups (24,361 lbs average) although cows fed the 0.31% P diet produced less milk during the last third of lactation.

The number of days to first estrus and to the first AI was the same for cows fed the 0.31% and the 0.49% P diets but were greater for cows fed the 0.40% P diet. Unexplainably, the number of services per conception by 206 days in milk increased as the intake of P increased.

A second experiment was done that lasted for two consecutive lactation cycles. Holstein cows were fed one of two diets. The low P diet contained 0.31 to 0.38% P and the high P diet contained 0.44 to 0.48% P throughout the 2 years (Wu and Satter, 2000). During the first lactation cycle, cows performed the same regardless of dietary P concentration (19,831 lbs average in 308 days).

All cows were pregnant by 230 days in milk. During the second lactation cycle, milk production was again the same between the two groups of cows (21,784 lb average in 308 days). In both years, the cows fed the higher P diets did not have better pregnancy rates nor did they have fewer days open at 230 days in milk.

In a third Wisconsin study just published in 2004 involving a lot more cows (267), diets of 0.37 and 0.57% P supported similar amounts of milk production and similar conception rates (Lopez et al., 2004).

In summary, these studies indicate that productive and reproductive performance will not be improved by increasing the dietary concentration of P above 0.37 to 0.38% (DM basis). It was only when diets got down to 0.31% for two years that high producing cows showed potential harmful effects of low P intake (low P in sampled rib bones). Even if P intake is somewhat deficient during the early days postpartum when DMI is low, cows are likely able to mobilize P (1.3 to 2.2 lb) from bone to meet a temporary P deficiency and then to replace the bone P when P intake exceeds P requirement later in lactation.

2004 CORN SILAGE FIELD DAY - MAY 27, 2004

The 2004 Corn Silage Field Day will be held on Thursday May 27, 2004 at the UF/IFAS Plant Science and Education Research Unit, 2556 West Highway 318, Citra, Florida 32113

Agenda

AM

8:00 Registration at Plant Science and Education Research Unit, Citra, FL
Coffee, milk, and donuts provided by the Florida Farm Bureau Federation

8:15 Introduction
Drs. Jerry Bennett and **Glen Hembry**

8:20 Demonstrations in the Field
Dr. Carrol Chambliss, **Mr. Jerry Wasdin**, and **Corn Seed Representatives**
- Varieties
- Roundup-Ready varieties
- BT Varieties
- 15 inch rows
- Twin rows

9:15 Fertigation/Timing of N Application and Other Nutrient Management Recommendations
Drs. Carrol Chambliss, Danny Colvin, and David Wright

10:00 Break (*Provided by Agrilianc)*

10:15 Triple Cropping Forage Systems for Greater Sustainability
Dr. Ray Gallaher

10:35 Weeds and More Weeds, Transgenic Varieties, and Corn without Atrazine
Dr. Greg MacDonald

10:55 Management of Silage in Hot and Humid Areas
Drs. Limin Kung, Jr. and **Gbola Adesogan**

11:25 My Experiences in Corn Production:
Panel Discussion

PM

12:00 Lunch
Provided by Diamond R. Fertilizer; Farm Credit of North Florida; Helena Chemical Co.; Southern States, Trenton; Magnum Plus Fertilizer; Marty Karle, Gromore UAP; and Ring Power Corporation

12:45 **Equipment Field Demonstrations**
- Chopping
- Bagging
- Tillage
- Planting – conventional, strip-till, no till
- Other

Static Equipment Displays
- Feed Mixer Wagons
- Handling Equipment
- Irrigation Fertilizer Injection Pumps
- Irrigation Systems
- Moisture Testing Equipment
- Silage Bags

Refreshments
Provided by Lake Butler Farm Center

Registration and Additional Information

To register, please visit the UF/IFAS Dairy Extension website at http://dairy.ifas.ufl.edu. For further information contact Jerry Wasdin at wasdin@animal.ufl.edu or (352) 392-1120.

IT'S SPRING CLEANING TIME AGAIN! # 10

David R. Bray

Now is the time to prepare for the long hot summer. I'm going to repeat this thing until you do these tasks:

1. Clean out high organic matter dirt (MUD) in lots and add new dirt, especially in calving areas.

2. Clean out cooling ponds – pump out the water, and clean out the sludge and spread it some place where the cows do not have access to it.

3. Let ponds sit dry for the sun to work on the bacteria. Mycoplasma and other nasty stuff live in ponds. You must clean them out, at least once a year if you continuously add water to the pond. If you *DO NOT* continuously add water, you need to sample the ponds for Mycoplasma and pump and clean out the ponds once or twice during the summer.

4. Clean your fans. Dirty fan shields can reduce fan efficiency by 50%. You can purchase and install twice as many fans if you wish not to clean them. If cows are in the barn or holding area, run fans 24 hours a day. This not only moves air to cool cows it also helps to remove moisture and dry the place out.

5. Make sure your sprinklers, foggers, etc, work. It was a cold winter, many pipes froze and/or broke, and dirty nozzles don't add much water. Check timers for the proper time for adding water. Constant water is not as efficient as intermittent sprinkling and saves water. Set your sprinkler thermostat at 75 degrees F or lower during the hot season. Sprinklers need to run at night because cows get hotter at night than daytime on those hot nights. To repeat the above message, you need timers to control sprinklers or you will waste great volumes of water.

6. Clean and rebuild your pulsators. Wash out and change the filters on your vacuum controller, (unless you have a variable speed drive). Make sure all ATO's work.

7. Replace all milk hoses, wash hoses, pulsator hoses and jetter cup holders. Replace all rubber hoses that may be in the milk house that may add water to the pipeline and /or bulk tank wash, these hoses harbor Pseudomonas and Coliforms and can raise your bacteria count. If rubber hoses are used to wash udders, change them also.

8. Clean your condenser fins on your milk coolers. Dirty fans cut down cooling and efficiency and you get warmer milk at higher electric costs.

9. Mow and spray careless weeds in pastures.

10. Cull your chronic mastitis cows now. It will lower your cell count and your help is sick of treating them.

11. Dip the dogs – To keep the fleas out of your pick-up and your bed.

Keep a smile on your face, people will wonder what you are up to ☺.

NEW CALENDAR WEBSITE LISTS UF/IFAS STATEWIDE EXTENSION EDUCATION PROGRAMS

http://calendar.ifas.ufl.edu

Everything you need to know about statewide University of Florida IFAS Extension education programs is now just a few clicks away thanks to a new calendar of events Web site.

"Whether it's a workshop for master gardeners, a local 4-H club seminar, a field day for peanut farmers, a nutrition seminar for seniors, a parenting class, or hundreds of other timely topics, we have programs statewide," said Larry Arrington, acting dean for extension with UF's Institute of Food and Agricultural Sciences (UF/IFAS). "Our new calendar of events Web site is a convenient, one-stop source of information for what's going on in all 67 Florida counties."

Arrington said the extension service provides educational outreach programs for all Florida residents, both rural and urban.

"IFAS Extension is your gateway to the vast resources of UF, providing research-based information on a wide range of useful topics," he said. ""To reach more people and expand our extension programs, we've added an online calendar – http://calendar.ifas.ufl.edu -- that has a complete, up-to-date listing of extension workshops, seminars, training programs, field days and planned events."

Millie Ferrer, interim associate dean for extension, said there are many programs going on at any given time. Many of these workshops provide continuing education units. "Now Florida residents can click on programs and courses for a specific month, geographical area, or specific topic and get what they need quickly."

2004 FLORIDA DAIRY REPRODUCTION ROAD SHOW PROCEEDINGS NOW ON-LINE

Albert de Vries

Over 90 people attended the 2004 Florida Dairy Reproduction Road Show, a series of three meetings held at the extension offices in Okeechobee (March 2), Ocala (March 4), and Chipley (March 5) with a focus on practical ways to improve reproductive performance of dairy cows.

Topics discussed were "Trends In Reproductive Performance In Dairy Cows: What Do The Numbers Tell Us?", "Managing The Postpartum Cow To Maximize Pregnancy Rates", "Successful Timed AI Programs: Using Timed AI To Improve Reproductive Efficiency Of High Producing Dairy Cattle", "Economic Importance Of Improved Reproductive Performance", "Strategies For Healthy Herds", "Reproductive Data Management With PCDART", "Embryo Transfer That Works: Embryo Transfer As A Tool For Improving Fertility During Heat Stress", "Getting Anovular Cows Pregnant" and a PCDART Reproduction Workshop.

The Reproduction Road Show was sponsored by USDA-IFAFS Grant 2001-52101-11318 (*"Improving Fertility of Heat-Stressed Dairy Cattle"),* Florida Cooperative Extension Service, and Pfizer Animal Health.

The proceedings that accompany the presentations are now available in pdf format at http://dairy.ifas.ufl.edu.

FLORIDA DAIRY STUDENTS PARTICIPATE IN THE 3RD NORTH AMERICAN INTERCOLLEGIATE DAIRY CHALLENGE

Albert de Vries

A team of Florida dairy science students participated in the 3rd North American Intercollegiate Dairy Challenge (NAIDC) in Altoona, PA, on April 2 and 3, 2004. This year's contest was hosted by Penn State University.

The UF team consisted of Melanie Burson, Kassie Krieg and Jose Aparicio. Coach was Albert de Vries.

Created to inspire students and enhance university dairy programs nationwide, the NAIDC is a 2-day dairy management contest that incorporates all phases of a specific dairy business in a fun, interactive and educational forum. It enables students to apply theory and learning to a real-world dairy, while working as part of a team.

The first day of the contest consists of a thorough analysis of a dairy farm's records and a farm visit. The teams prepare a presentation outlining what they believe are strengths and opportunities, including their recommendations to the dairy farmer. The second day the team presents these finding to a jury consisting of dairy farmers, allied industry, and educators.

In addition to the contest, the NAIDC gives students and sponsors plenty of opportunity to interact and many students are recruited for internships or jobs.

The 2004 contest was the largest ever, with twenty-five teams representing 23 North American universities' dairy science programs from coast to coast. The Florida team did well and obtained a silver award.

The NAIDC is supported financially through generous donations by industry and coordinated by a volunteer steering committee. More information about this exciting contest can be found at http://www.dairychallenge.org.

REPORT ON ROBOTIC MILKING CONFERENCE

Dan W. Webb

I had the pleasure to attend the International Symposium on Automatic Milking in Lelystad, The Netherlands on March 24 -26. This conference was organized by the Animal Sciences Group of Wageningen University which is the primary dairy research institution in The Netherlands. More than 340 persons from 24 countries were in attendance for the 48 presented papers and 80 posters representing research and reports of robotic milking applications, world-wide. The complete proceedings of the conference are available in the book "A Better Understanding of Automatic Milking" from Wageningen Academic Publishers. This book can be ordered at http://www.wageningenacademic.com/automaticmilking.

An introductory presentation by Rodenburg of Canada and de Koning of The Netherlands summarized the extent of robotic milking, citing over 2200 commercial farms with one or more robotic systems, mostly in Europe but also in North America, Japan, Australia and New Zealand. Most robotic installations include a single stall with one robot capable of identifying the cow, sanitizing the udder, attaching and detaching the unit, post-milking flush, recording milk production, times and other data, followed by release of the cow. Enthusiasts state that "robotic milking" is more than just milking, it is a different way of dairy farming". A typical single-stall system is capable of milking 60 cows, 3 times per day. The largest automatic milking system (AMS) (this is the term used most often to describe robotic milking), is located in California with 32 milking boxes, in 4 interconnected barns each with a central cluster of 8 milking units. Adoption of automatic milking continues to increase around the world.

I was impressed by one very interesting paper by M.W. Woolford from New Zealand. He began his talk by saying that New Zealand had turned off to automatic milking because it did not seem to fit their industry. Additional consideration of the successes in Europe resulted in a major research project to see if "an extensive pasture driven New Zealand dairy farm could use AMS technology to improve existing productivity and labor utilization". The research effort is called the "Greenfield Project". This New Zealand approach to AMS is entirely different than that in Europe. Cows are motivated to move through the system by offering fresh pasture and water. The objective is 1.3 milkings per cow per day, compared to 2.8 in Europe. Greenfield seeks to get 110 cows per AMS box, or about twice that found in Europe. Detail on the Greenfield Project can be seen at their website (http://video.dexcel.co.nz/).

Another highlight for me was a paper presented by Rod Claycomb of New Zealand, entitled "An on-line somatic cell count sensor". This paper was a progress report on the development of a sensor for use with various milking machine systems that will provide real-time somatic cell readings similar to a CMT score. Results presented by Mr. Claycomb of Sensortec Ltd. are promising that such a unit will be on the market in the near future.

Because robotic milking raised a number of questions, an extensive research project was initiated by the EU (European Union) in 2000. That project is still underway. Its results and publications are available at their website (http://www.automaticmilking.nl).

While my opinion about the future of AMS for immediate application to Florida's dairy industry is that it is still doubtful, there is an immense amount of technology spin-off that will surely be useful in the future.

The Florida Dairy Update newsletter is published on a quarterly basis by the University of Florida, Department of Animal Sciences as an educational and informational service. Please address any questions comments or suggestions to Albert de Vries, Editor, Dairy Update, PO Box 110910, Gainesville, FL 32611-0910. Phone: (352)392-7563. E-mail: devries@animal.ufl.edu. UF/IFAS Dairy Extension website: http://dairy.ifas.ufl.edu