



**40TH FLORIDA DAIRY
PRODUCTION
CONFERENCE**

Gainesville, April 29-30, 2003

**Monday Afternoon, April 28
Special Activities**

**2:00 pm - PCDART Workshop for
Consultants and Dairy Managers**
(Animal Sciences Building) - Dan
Webb, leader.

**Tuesday Morning, April 29
Special Activities**

**7:00 am - Dairy Science Club Golf
Tournament** (University Golf Club)
(Until 10:30 am)

**9:00 am - 12:00 pm - Conference
Registration** (Farm Bureau
Building)

11:30am - DHIA Luncheon
(Gainesville Woman's Center) - Ed
Henderson, DHIA President,
Presiding. Luncheon. Agenda:
DHIA Recognitions - Dan Webb,
SE DHIA

Florida Milk Quality Awards - Ed
Nix, Div. Dairy Industry, Florida
DACS

Tuesday Afternoon, April 29
(Farm Bureau Building)

Session 1: Florida Dairy Situation -
F. Glen Hembry, Presiding

1:05 pm - Welcome - F. Glen
Hembry, Chair, Department of
Animal Sciences, UF/IFAS

**1:15 pm - State of Affairs in the FL
Dairy Industry** - Calvin Covington,
Southeast Milk, Inc.

**1:45 pm - Simple ways to get 3 a
day** - Michele Cooper, Dairy
Farmers, Inc.

Session 2: Nutritional Updates -
Bill Thatcher, Presiding, Department
of Animal Sciences, UF/IFAS

**2:15 pm - Transition Cow
Management to Reduce Metabolic
Diseases and Improve
Reproductive Performance** - Jose
Santos, VMTRC, University of
California, Davis, CA

3:00 pm - Break

**3:30 pm - Feeding Ryegrass Silage
in the South East US** - John
Bernard, Department of Animal &
Dairy Science, University Of
Georgia, Tifton, GA

**4:00 pm - Selecting Fats for
Feeding Lactating Dairy Cows** -
Charles Staples, Department of
Animal Sciences, UF/ IFAS

**4:30 pm - Putting it All Together
to Stay in Business** - Mary Beth
Hall, Department of Animal
Sciences, UF/ IFAS

5:15 pm - Wrap-Up

5:30 pm - Adjourn

6:15 pm - Reception + Dinner
(Horse Teaching Unit).
Prime Rib Dinner. Agenda:
Farm Family of the Year - Frankie
Hall, Florida Farm Bureau

Student Awards - James Umphrey,
UF. Department of Animal Sciences
Entertainment

Wednesday Morning, April 30
(Farm Bureau Building)

Session 3: Brent Broaddus,
Presiding, Dairy Extension, UF/IFAS

**8:30 am - Productive Life of Dairy
Cows in Florida** - Albert De Vries,
Department of Animal Sciences, UF/
IFAS

**9:00 am - Effects of Gossypol on
Fertility in Dairy Cattle** - Jose
Santos, VMTRC, University of
California, Davis, CA

**9:45 am - Feeding Whole
Cottonseed in the 21st Century** -
John Bernard, Department of Animal
& Dairy Science, University Of
Georgia, Tifton, GA

10:15 am - Break

10:45 am - Why did you do that? -
Roger Natzke, Department of
Animal Sciences, UF/IFAS

**11:15 am - How to Select Products
to use on your Dairy** - Nick Place,
Department of Agricultural
Education and Communication;
UF/IFAS

11:45 am - DHIA Update - Dan
Webb, Department of Animal
Sciences, UF/ IFAS

12:15 pm - Wrap-Up

12:30 pm - Adjourn

Conference Hotel

A block of rooms is being held for Dairy Production Conference participants at the Doubletree Hotel and Conference Center, located at 1714 SW 34 Street, Gainesville, FL 32607. The group rate is \$72 per night plus 10% tax. Call the Doubletree Hotel directly at (352) 384-3407. Be sure to mention that you are attending the Dairy Production Conference to receive the group rate. For directions to the Doubletree Hotel, visit www.ufhotel.com.

Registration Information

The early registration fee is \$80 and includes the program, one copy of the proceedings, refreshment breaks, Tuesday's luncheon and reception. The regular registration fee is \$100 for payments received after April 21, 2003. To register, contact:

Sylvia K. Beauchamp
Department of Animal Sciences
Phone: 352- 392-2186
Fax: 352-392-1913
Email: sylvia@animal.ufl.edu

Refund policy: No refunds given after April 21, 2003.

Additional Information

James E. Umphrey,
Email: umphrey@animal.ufl.edu

David R. Bray,
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SILVER BULLETS AND PHOSPHOROUS

Mary Beth Hall

In Okeechobee now, but in due time all around the state and nation,

phosphorous (P) is going to be a nutrient management issue. It is not necessarily a good thing for phosphorous to build up on farms and in the environment. That said there are some basic things you need to know about phosphorous:

- It is an element. It does not change into anything else.
- It is not volatile. Unlike nitrogen, it will not just blow away.
- What goes in does come out. It is used for growth to make tissue, for bone, for pregnancy, for milk, and for manure.
- The phosphorous content of milk is about 0.09%, and it does not change much.
- For milking cows, roughly, intake minus milk equals manure for phosphorous.

The best way to reduce the amount of phosphorous you have to deal with in manure is to feed less phosphorous to your cows. Dr. Larry Satter of USDA recommends feeding phosphorous as 0.35% of ration dry matter (in his research he's fed cows as little as 0.31% without negative effects). Reaching this amount often means feeding more forage and carefully selecting the byproducts you use. Many of the high protein byproduct feeds and wheat midds tend to be high in phosphorous. Hominy contains roughly twice the phosphorous (0.65%) that ground corn does (0.30%). Often, no additional phosphorous from minerals needs to be added into rations to meet the animals' phosphorous requirements.

Another way to reduce phosphorous in manure is to increase feed efficiency: get more pounds of milk out of each pound of feed the cow eats. At a set amount of phosphorous in the ration, each additional pound of milk ships another 0.4 grams of phosphorous off the farm. That's a small amount, but multiply it by the number of cows, 365 days in a year, and increasing

pounds of milk, and it adds up to something that matters.

Never say never, but if someone offers you a product that reduces phosphorous in manure or the lagoon without changing the amount of phosphorous being fed into the system, ask them where it goes away to. Even in cows, phosphorous is neither created nor destroyed.

CELL COUNT DIFFERENCES - WHO DO YOU TRUST?

Roger P. Natzke and Lokenga Badinga

While working with dairy producers on somatic cell count situations it is common to hear a comment like "I don't know what the State is doing wrong because the count I get from them is always higher than the one I get from SMI". And then have another producer say "SMI must have a real laboratory problem because their counts are always higher than the official State sample". To me it is clear that if we are going to be serious about improving the cell count situation in the State we need to have confidence that the results that are being provided to the dairymen are reliable. As a first step toward that goal, representatives from the State, SMI and the University met to set up a comparison study. The State people collected 30 one gallon milk samples from dairies in the State and brought it to the Animal Sciences Department where we split each gallon into 8 sub-samples. Each of the four laboratories that count somatic cells received 60 samples to count; the 30 farm samples and a duplicate of each. The duplicates were randomly assigned numbers between 31 and 60 so that the technician would not know which sample was the duplicate. In addition four standard samples were purchased from a commercial laboratory and given to

each of the laboratories. The SMI laboratories analyzed the samples using their electronic counters and counted the number of cell under the microscope. The State laboratories used their standard method of counting cells.

The analysis of the results was very exciting and reassuring. When one compared the original sample and the duplicate, the differences were extremely small. Similarly, the comparison between laboratories revealed great consistency. Yes, and contrary to what some would have expected there was no significant difference between the State laboratory results and those of the SMI laboratories. However, as expected, the results from those samples counted under the microscope were more variable. That is not a bad reflection on the laboratory technician's abilities. Microscopic counting is always going to be more variable, no matter who is doing the counting. The final test was to compare the results from our four laboratories to those of the commercial standards. Again it was reassuring to note that the results were very similar. **To make a long story short, producers should be proud of the quality of their laboratory people and should recognize that the results they get are accurate and reliable.**

So if the differences that dairymen see are not the result of laboratory error, then how can we explain the difference that we see from samples taken within the same week? Fact number one is that somatic cell counts of cows are highly variable. If you take an AM and a PM sample from a cow on one day you should expect that the results will be different. In fact, if you take individual quarter samples at each of the milkings, you will see that the results of some of the quarters will go up while the others may go down or stay the same.

A second fact is that the proper mixing of the milk is very important. The somatic cells tend to congregate with the fat globules. Thus if milk is not mixed properly and a sample is taken off the top of the tank, then you can expect a high somatic cell count. Conversely if the sample is taken from the bottom of the tank the count will be abnormally low.

Fortunately, sample handling technique has very little effect on somatic cells. In contrast to bacteriological samples which can increase in numbers with improper cooling, somatic cells cannot increase in number once the sample is collected.

With SMI now going to a penalty system for high somatic cell counts, dairymen may want to consider observing how the truck driver goes about mixing the tank and sampling the milk. You can't afford to have him take shortcuts because it could cost you money.

IT'S SPRING CLEANING TIME AGAIN!

David R. Bray

Now is the time to prepare for the long hot summer with low milk prices:

1. Clean out high organic matter dirt (MUD) in lots and add new dirt.
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, because Mycoplasma and other nasty stuff live in ponds. You must clean the ponds 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.

5. Make sure your sprinklers, foggers, etc. work. It was a cold winter, many pipes froze and/or broke. Also, 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 intermittent sprinkling saves water.

6. Clean and rebuild your pulsators. Wash out and change the filters on your vacuum controller, (unless you have a "Freak 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. Dip the dogs to keep the fleas out of your pick-up.

11. Wash your truck. With these milk prices you probably can't afford a new one.

MYCOTOXINS: ANTIBIOTICS WE DON'T APPRECIATE?

Mary Beth Hall

Something curious I've seen when I'm out on farms: everything looks fine with the ration (on paper, in the bunk, etc.), but still, there's a scattering or more of cows in the herd that have just very loose, bad looking diarrhea. It doesn't look like acidosis, but what is making these cows sick? More often than not, the cause seems to be feeding spoiled feed, rotten silage or moldy grain. My guess is that it usually doesn't hit cows evenly across the herd because the spoilage doesn't mix evenly into the ration. There's not much research in this area, just observations. One explanation for how moldy feed might affect cows this way is that some of the toxins produced by the spoilage organisms may act on bacteria in the gut, perhaps killing off the more beneficial microbes, and leaving less favorable ones, rather like antibiotics might. If the wrong bacteria become the main occupants of the gut, the cow has problems. Think about it: when people take a course of antibiotics, they sometimes eat live culture yogurt to try and keep good bacteria alive and well in the gut, rather than what the antibiotics allow to live.

If you see this kind of problem with your cows, walk the feedbunk: are there chunks/balls of moldy or spoiled feed there? If you break the chunks open, they usually smell rotten. When you look at the feeds, check the commodity shed to make sure that feeds stored up against concrete walls haven't taken on moisture and molded, or that the feed that was supposed to be dry wasn't damp when it was delivered and it heated.

How to solve this problem: don't feed bad feed. Pitch the spoilage off the silage and don't feed it. This also means managing the bunk silo so that you minimize the spoilage on the feeding face. Keep dry feeds dry. Rotate feeds to feed the oldest loads of a commodity first.

FUNDED MILK CHECK-OFF PROJECTS 2003-2004

Bernard, West – Feeding value of whole fuzzy cottonseed with elevated concentrations of free fatty acids. **Braun** – Milk Check-off scholarship **Bray, Bernard** – Evaluation of environmental bedding materials for mastitis pathogens. **Bray, Boyd** – Multi-lingual milking videos for Florida dairies. **Bray, Natzke, Bucklin, West, Bernard** – Environmental modifications for reducing summer stress on S.E. US dairy farms. **Bray, Webb, Natzke, Broaddus** – Florida mastitis and SCC reduction study. **Buckling, Shearer, Bray, Giesy** – Alleviating the stresses of concrete floors in Florida feed barns. **Ely** – Dairy Business Analysis Project – Georgia 2003. **Hall, Holtshausen** – Do carbohydrate blends give the same amounts of nutrients as individual carbohydrates? (Do associative effects help or hurt us?). **Head, Liboni, Gulay, Belloso** – Use of management strategies throughout the transition period of dairy cows to improve their liver function, health and milk production. **Hembry** – Milk check-off recovery funds. **McKee, Graves** – Evaluation of the effectiveness of decreasing the dose of GnRH used in Ovsynch protocol for synchronization of ovulation and timed AI in dairy cows. **Risco, Archibald, M. Thatcher, Hansen** – The value of postpartum rectal temperature and calving status in the prediction of metritis and milk production in dairy cows. **Scully,**

Hall – The development of corn silage varieties and a year-round cropping system for south Florida dairy farms. **Van Amstel, Shearer** – Thin soles in dairy cattle. Investigation of factors affecting sole wear. **Shearer, Melendez, Risco, Donovan** – Dairy herdsman seminars and cow college in Spanish. **Steenholdt, Risco, Donovan** – Reproductive efficiency of natural service and artificially inseminated dairy herds in Florida and Georgia. **Thatcher, Silvestre, Risco** – Use of a degradable deslorelin implant (2.1 mg) in lactating dairy cows to enhance uterine involution. **Umphrey, Bachman, Gilson, Graves** – Florida and Georgia youth programs, 4-H activities and youth events, dairy judging team support, undergraduate programs and scholarships

DBAP SUMMARIES AVAILABLE

Albert de Vries and Russ Giesy

The 2000 and 2001 financial summaries of the Dairy Business Analysis Project are now available on the DBAP website: www.animal.ufl.edu/dbap. These reports summarize the data that was collected on 23 (2000 data) and 39 (2001 data) farms that participated in DBAP. The reports have lots of tables with financial data sorted by net farm income per cwt, return on assets, state (FL vs. GA), milk per cow, herd size, total cost per cwt, raised heifers per cow, and assets and liabilities per cow. Take a look and see how your operation compares. Or contact any of us and we'll send you the reports.

DBAP data collection spreadsheets for the 2002 data can also be downloaded from the DBAP website.