



MARY BETH HALL ACCEPTS NEW POSITION

"On June 14, I started a job as a research scientist with the USDA at the U.S. Dairy Forage Research Center in Madison, WI. The job is focused on sorting out issues with carbohydrates in order to come up with clearer feeding recommendations so that dairy farmers can keep their cows more productive, healthy, and maybe even more environmentally friendly. I took the job in the hopes that if I could focus on this area, I'd be able to make quicker progress on things that affect the whole dairy industry.

I want to offer a heart-felt "THANK YOU!!!" to the dairy farmers of Florida and the allied industries for the support, discussions, and the education you gave me over the last eight years. You've been an excellent group to work with. I look forward to continuing to serve the needs of the dairy industry in the Southeast. Somehow, heat stress and tropical grasses have already made it into the discussions here in WI."

Mary Beth Hall

The extension dairy nutrition position in the Department of Animal Sciences is with the departure of Dr. Mary Beth Hall to Wisconsin currently vacant. It is unclear when the extension dairy nutrition position will be filled again.

IN CASE YOU MISSED IT: PROCEEDINGS NOW ON-LINE

Albert de Vries

The 2004 Florida Dairy Production Conference was held in Gainesville on May 5th, 2004, in conjunction with the Beef Cattle Short Course. The proceedings are now on-line at the UF/IFAS Dairy Extension website <http://dairy.ifas.ufl.edu>.

The proceedings features articles on bedding strategies in free-stall barns, strategies for dairying success in the future, the latest on tunnel barns for cow comfort, can dairy farming be profitable in 2010?, the U.S. Animal Identification Program, the political climate of BSE and COOL (How does it affect you?), and have marketing plans changed given ramifications of BSE?

The proceedings of the 2003 Florida Dairy Production Conference are now also available at <http://dairy.ifas.ufl.edu>. We are currently working to make all previous proceedings (back to 1990) available on this website.

In addition, the proceedings of the 2004 Florida Ruminant Nutrition Symposium (and previous years) are also available at <http://dairy.ifas.ufl.edu>.

BEDDING PROJECT UPDATE

David R. Bray

Two years ago Dr. John Bernard (UGA Tifton) and I were funded by the check-off committee to perform a study to evaluate bedding material for mastitis pathogens. The reason for this was that *Strep uberis* has been one of the biggest causes of mastitis and high SCC counts in the Southeast. In addition to this, coliforms are a major cause of clinical mastitis. Both of these organisms are environmental and live in our soils, bedding, sand and ponds.

We have done quite a bit of work with recycled sand at the UF Dairy Research Unit and the UGA Dairy Research Unit in Tifton. We now think that we have some baseline numbers for washed recycled sand. I have also sampled many calving lots, mud holes, and bedded pack barns for these pathogens. Dr. Bernard reported on some of his work at this year's Dairy Production Conference (see <http://dairy.ifas.ufl.edu> for a copy of his article).

Results Thus Far

1. Literature has determined that recycled sand should not have less than 3% organic matter. This means that if your recycled sand is put into a pile to heat, you do not have recycled sand, you have recycled manure. This will probably be a mastitis outbreak if you try to use it. Recycled manure is fine in California or Arizona for bedding but recycled manure is fertilizer in the Southeast.

2. What about additives? Research has shown that adding lime to bedding, sand, sawdust etc does lower bacteria counts IF YOU ADD IT EVERY DAY.

We did a trial on this at the UF Dairy Research Unit until last year. We added a few grams of a product a couple times a week to the freestalls on both fresh and recycled sand. Guess what? This method did not work. The reason is because a few grams of anything placed in a freestall bed will be kicked out that day. The average freestall loses about 30-50 pounds of sand every day so our two grams are in the alley the first day.

3. We hope to try several other materials to apply to recycled sand. We would apply the product as we pile the recycled sand; maybe we can kill what is there before we use it and the whole pile will be much lower in pathogens and the stalls will stay that way. This might allow us to use the recycled sand with more than 3% organic matter.

4. The more one grooms freestalls the cleaner they are. The best grooming method seems to be with a flat blade or scraper; usually the scrapers with spikes bring up the wet material from the base of the stall which is higher in bacteria and bring the pathogens to the top where the udders will reside when the cows lay down.

5. A pasture with mud on it looks bad but it is a large area with the sun shining on it and manure is deposited in many places. It is usually always lower in bacteria than a poorly bedded freestall. A fresh pile of manure can have in excess of 40,000,000 CFU'S/ml of *Strep uberis*. Klebsiella bacteria are usually lower in pastures than in freestalls; this causes a lot of our coliform type mastitis. If you replace the material in mud holes with good clean dirt each year you will have bacteria numbers you can live with. This will not be as good as a nice well bedded freestall bed, but it doesn't cost as much either. A filthy freestall bed will give you higher bacteria numbers as a mud hole in the pasture; the pasture mud hole was free, and the freestall was not.

What's Next?

1. I will continue to sample material where the cows lay, at the surface and 6" below as well as I try to get to moisture levels of materials at various dairies. Then I will compare the pathogens found in the bedding to the pathogens in the bulk tank.

2. We continue to try new additives to reduce bacteria numbers in stalls, lots and pastures.

Summary

If you have clean material in your stalls, or keep replacing mud with fresh dirt every year, and clean your cooling ponds every year, you should not have a big problem. And don't forget to mow your weeds!

GET WIRED! – THE INTERNET AS A RESOURCE FOR DAIRY INFORMATION

Pete Hansen

According to the Wisconsin Agricultural Statistics Service, 48% of US farms have Internet access as of 2003. If you are one of those farmers, the Internet is better than ever as a source of accurate and up-to-date information on a wide variety of topics related to dairy cattle management. If you are not one of the lucky 48%, think about getting on board since, more and more, the Internet is going to be a go-to source for extension information.

Just five years ago, there was very little in the way of hard information about dairy cattle on the Internet. That is not the case anymore as all sorts of information brokers (universities, bull studs, breed organizations, veterinary clinics, and individual dairy farmers among others) are creating web pages and filling them with information. The USDA has ambitious plans to create an E-Extension Program that draws on the resources of all the nation's extension programs to deliver up-to-date information to its users in a comprehensive manner. The Dairy Science Extension Team at Florida is also putting

together information on dairy cattle management generated in IFAS as well as links to other sites at <http://dairy.ifas.ufl.edu>

How else can you find the information that you are looking for? The easiest way is to use a search engine like



Google or Yahoo. Google, for example, can be accessed at <http://www.google.com>. Google is the world's most popular search engine with over 4 billion

web pages indexed. Simply type in a few words that describe what you are looking for and hit search. An almost mind-boggling number of links to pages containing those keywords will be displayed. Pages are sorted by relevance, however, and one can always perform a more refined search (using more or different key words or doing a search on the collection of articles found in the first search).

When writing this article, I searched Google using four words typed in the Google search bar: *mastitis dry cow therapy*. A total of 4480 pages were identified and ranked for relevance. Among the top 10 pages were fact sheets from the National Mastitis Council and the Ontario Ministry of Agriculture, extension publications from University of Vermont and Oklahoma State University, and a page from a dairy consultant in England. While reading these pages, I came across some information on Cefa-Dri®, the dry cow treatment produced by Wyeth. After performing another Google Search using the word *Cefa-Dri*, the first 10 pages identified included a link to the guidelines for use of the product prepared by Wyeth. Not everything you pull out will be relevant of course; when searching for Cefa-Dri, I was also directed to information about effectiveness of wildfire fighting techniques.

If you find you like Google (and millions of people do), it is easy to add a toolbar or a button to Internet Explorer to put the Google search function on your desktop. See <http://www.google.com/options/index.html> for details. Google can also be used to search specifically for news articles, images, or to search specific university websites. Search tools provided by other companies also have special features that you may find useful.

One problem when surfing the Web is separating the wheat from the chaff – determining which websites have accurate, science-based information and which are filled with quackery, pseudoscience, slick marketing, and other misleading content. Obviously, commercial sites where something is being sold or marketed should be viewed with caution. Pharmaceutical companies selling drugs are regulated by the FDA, however, and are not free to make claims without substantial scientific support. Many universities maintain information-packed websites and these usually contain content that is trustworthy. Pay attention to the last time a page was updated (the date often appears at the bottom of the page) – old pages may contain information that has stood the test of time but may also contain ideas that may no longer represent the latest thinking.

Of course, the Internet will never be the only source of information. Nonetheless, information found there can lead to new ideas that you can bounce off with other dairy farmers, your veterinarian, and extension faculty.

**NATIONAL ANIMAL IDENTIFICATION
SYSTEM LISTENING SESSION – KISSIMMEE,
FLORIDA**



WHAT: A listening session to discuss the development, structure and implementation of a national animal identification program for all livestock and poultry animals.

WHO: Agriculture Under Secretary for Marketing and Regulatory Programs, Mr. Bill Hawks.

WHEN: **Monday, Aug. 16, 2004**, 3 pm. – 5:30 pm.
Registration for speakers will begin at 2 pm.

WHERE: Florida Cattlemen's Association State Office, 800 Shakerag Rd., Kissimmee, Florida
For directions, please call 407-846-6221

HOW: Members of the general public, especially those involved in the livestock industry, are welcome to attend the listening session. Those who wish to comment should register at the sign-in table. Registration begins at 2 p.m.

Reporters in and around the Kissimmee area are welcome to attend the listening session. They should register at the sign-in table as members of the media. Reporters may have the opportunity to interview Mr. Hawks at the conclusion of the meeting.



More details about these listening session are posted on <http://www.aphis.usda.gov/lpa/issues/nais/nais.html>

**WILL SHORTER DRY PERIODS PAY FOR YOU?
SELL MORE MILK THIS SUMMER**

Albert de Vries and Kermit Bachman

Milk is currently very valuable and replacement heifers are expensive. You can expand your milking herd, and produce more milk, without adding a cow. Start today by putting off something that you dread but had planned to do anyway. Wait to dry off those good-producing cows that you expect to calve in 50 to 60 days. If they are due to freshen in 60 days, keep on milking them for an additional 20 to 30 days. There, you have increased your milking herd without adding a cow. This summer, that is 20 to 30 days more milk at high milk prices.

By increasing days in milk for a given calving interval, you essentially have grown the size of your milking herd. But what will happen to milk production in the next lactation if you shorten the dry period to 30 or 40 days?

Recent experiments at the land-grant universities in Florida, Wisconsin, and Arizona have shown that milk production in the lactation that follows a 30-day dry period is somewhat decreased (See Table 1). The loss in milk in the next lactation in five studies with 30-day dry periods was at most 3.8% (if cows were not dried off at all, the loss was 11 to 15%). However, that loss in milk production can be more than offset by the amount of milk produced during the 20 to 30 day

extension of the current lactation. That is attractive, especially with the current milk prices.

Table 1. University research trials. Decrease in milk in next lactation due to a short 30-day dry period.

Cow experiment	Decrease in milk yield (%)	
	30 d dry	00 d dry
Florida 2001	0.0	
2002	1.8	
2003	1.2	
Wisconsin 2003	2.1	14.9
Arizona 2003	3.8	11.2

Break-even milk yield and off-set milk yield

How much milk must a cow produce to remain profitable while you continue to milk her during late lactation for the additional 20 to 30 days? First, let's define "break-even milk" and "off-set milk". Break-even milk yield should determine whether you dry a cow off based on her level of production (a production dry-off) or the time to her expected calving date (a timed dry-off). Off-set milk yield, on the other hand, is the average amount of milk that must be produced each day, during the 20 to 30 day extension of the current lactation, to offset the decrease in milk yield during the next lactation as a result of a shorter dry period.

Calculation of break-even milk requires estimates of your milk price and the daily variable costs of having the cow in the milking herd compared to in the far-off dry herd. Keeping the cow in the milking herd is more expensive because of a more expensive ration and the extra labor due to milking her. The difference between the two daily variable cost estimates divided by the milk price is your break-even milk yield. For example, if the difference is \$3.00 per cow per day and milk is priced at \$20.00 per cwt, a cow would have to produce at least 15 lbs of milk per day ($3.00 / 20.00 * 100$) to remain in the milking herd (See Table 2). Otherwise, it is more profitable if she goes dry.

Table 2. Break-even milk yield (lbs/day).

Difference in daily variable costs (\$)*	Milk Price (\$ / lbs)				
	0.14	0.16	0.18	0.20	0.22
2.00	14.3	12.5	11.1	10.0	9.1
3.00	21.4	18.8	16.7	15.0	13.6
4.00	28.6	25.0	22.2	20.0	18.2
5.00	35.7	31.3	27.8	25.0	22.7

* Daily cost per cow, milking herd versus far-off dry herd.

Today's cows and management have resulted in many cows that produce well above break-even milk as they reach seven months pregnant and traditionally are dried off. Thus, assuming there is room in the parlor, the question now becomes: what is the minimum time that a cow has to be dry before her next calving?

Based on Table 1, we might expect milk production in the next lactation to be reduced by 4 percent *at most*, when a 30-day dry period replaces a 60-day dry period. Thus, a 25,000 lbs cow would produce 1000 lbs less milk in the next lactation. To offset the 1000 lbs loss in milk, the cow will have to produce an average of 34 lb of milk per day during the additional 30 days that she is being milked (See Table 3). For lower producing cows it is even less. Clearly, most cows produce more milk during those additional 30 days than is lost

in the next lactation. Thirty-day dry periods most likely will pay for you.

Table 3. Average off-set milk yield*. Average milk (lbs / day) needed during extra 30 days of lactation to off-set a loss of 4% in the next lactation.

Production lbs / year	Next lactation 4% loss (lbs)	Off-set milk lbs / day
15,000	600	20
20,000	800	27
25,000	1000	34

*Minimum pounds/day during extra 30 days lactation.

What about these high milk prices?

The off-set milk yield calculation in Table 3 assumes that the price of milk remains the same. But the milk price is very high now and likely will return to more average prices later this year. Take the 25,000 cow and assume the milk price during her next lactation is on average \$16 / cwt. The 1000 lbs loss then is worth \$160. Further suppose she is seven months pregnant this summer and milk is worth \$22 / cwt. Now she only needs to produce on average \$160 / 30 days / \$22 * 100 = 24 lbs per day during those 30 extra days to off-set the expected economic loss in the next lactation. Thus, the current high milk prices make 30-day dry periods even more attractive this summer while high prices last.

Cow management

Based on the biology of the mammary cell population, a dry period longer than 30 days is not needed for second and later lactation cows. The experiments summarized in Table 1 also suggested that first lactation cows will benefit from a first dry period that is a bit longer than 30 days, but how much longer has not been determined.

Short dry periods require a balanced transition ration. Recommendations for feeding for short dry periods were recently presented by Dr. Tom Overton from Cornell University at the 2004 Florida Ruminant Nutrition Symposium (see <http://dairy.ifas.ufl.edu/FLRNS.html> for a copy of his paper). Considerations include body condition maintenance and avoiding of milk fever. Formulate for 0.70-0.73 Mcal/lb DM in the shortened (30d-40d) dry period diet using a moderately high concentration of starch-based NFC sources (34 to 36 %) with CP at 13-15% DM to provide 1100 - 1200 grams per day of metabolizable protein based on a group intake of 24 to 26 lbs DM. Include a DCAD strategy (i.e. reduce potassium to less than 1.3 % of diet DM by using low potassium forages or use a DCAD supplement) to achieve and maintain urine pH between 6 and 7.

Finally, short dry periods require accurate conception dates because a dry period significantly less than 30 days may cost you too much milk in the next lactation (See Table 1). Establish an approach that will work on your dairy, including a safety zone that you are comfortable with. Planning for 40 days dry is a good place to start.

Parts of this article have appeared in Hoard's Dairyman, May 10, 2004, page 321.

2002 DBAP SUMMARY PUBLISHED

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The summary of the 2002 Dairy Business Analysis Project (DBAP) results has been published as an official UF/IFAS extension publication in EDIS (it takes some time to get through the IFAS editing process). The summary is available on <http://edis.ifas.ufl.edu/DS177> or at <http://dairy.ifas.ufl.edu> and contains lots of data on the cost of milk production in Florida and Georgia. The 2002 summary is based on financial and production data collected from 27 dairies. Results are sorted by assets/cow, debts/cow, net farm income/cwt, return on assets, herd size, and milk/cow. Take a look and see how your dairy compares.

It is still not too late to participate in DBAP. We're currently finishing up collection of the 2003 data. Participants receive a detailed report comparing their financial and production data with those of their peers. For more information, contact Russ Giesy (giesyr@aol.com, 352-793-2728), Albert de Vries (devries@animal.ufl.edu, 352-392-7563) or Lane Ely in Georgia (laneely@arches.uga.edu, 706-542-9107).

DAIRY BUSINESS CONFERENCE: OCTOBER 27

The 2004 Florida Dairy Business Conference will be held at the Marion County Extension Office in Ocala, FL, on Wednesday, October 27. For more information, contact Russ Giesy, email giesyr@aol.com, or phone (352) 793-2728.

