

## L.E. "RED" LARSON DAIRY SCIENCE BUILDING NAMED

The building formerly simply known as building 499 was renamed the "L. E. "Red" Larson Dairy Science Building" in honor of Florida dairy producer L.E. "Red" Larson during a ceremony on June 14, 2006. The building on the UF campus, part of the Department of Animal Sciences, houses most of the dairy science faculty, their laboratories and graduate students, as well as a classroom and conference room.

The naming follows a gift of \$1.5 million by Mr. Larson's four children who are establishing three endowments at the University of Florida's Institute of Food and Agricultural Sciences. Dr. Jimmy Cheek, UF Senior Vice President for Agriculture and Natural Resources, thanked the Larson family for the generous gift and said it will enhance teaching, research and extension programs in dairy science and the 4-H Youth Development Program.

Red Larson, owner and president of Larson Dairy Inc. in Okeechobee has been a dairy farmer in Florida for more than 57 years. His farm covers 10,000 acres and includes more than 6,000 cows that produce 45,000 gallons of milk daily. Mr. Larson has received numerous awards and honors for his leadership and service to the dairy industry.



*UF Senior Vice President for Agriculture and Natural Resources Dr. Jimmy Cheek (left) with Reda and Red Larson at the Larson Building Dedication on June 14, 2006. The name was put on the building a few days earlier.*

## ROGER P. NATZKE RETIRED

Dr. Roger P. Natzke retired May 31, 2006 after 25 years of service to the University of Florida. Roger Natzke grew up on a dairy farm in Wisconsin. He received his advance training from the University of Wisconsin in the Department of Dairy Science. Upon completion of the doctoral degree he accepted a faculty position at Cornell University with responsibility in extension and research. His primary area of expertise is in dairy cattle management with emphasis on milking equipment and mastitis control.



After coming to UF in 1981, Natzke was first chair of the Department of Dairy Science and later the Department of Dairy and Poultry Sciences until 2000 when the Department was merged with Animal Science to form the Department of Animal Sciences. Natzke then took an assignment for one year in Mexico at the University of Veracruz and returned to spend his last three years as Senior Associate Dean and Director of International Programs. After briefly returning to the Department of Animal Sciences in 2006, Natzke will for some time continue to be involved in international programs after his retirement. He plans to stay active in serving the dairy industry.

## DEPARTMENT CHAIR UPDATE

Following his announcement in November 2005, Dr. F. Glen Hembry has resigned as chair and returned to the faculty of the Department of Animal Sciences on July 3, 2006. Glen Hembry came to the University of Florida in 1990 to serve as chair of the Department of Animal Science and since 2000 as chair of the Department of Animal Sciences. He plans to continue to be involved in teaching and extension.

The search for a new department chair has led to the appointment of **Dr. Geoffrey E. Dahl** to assume the position of Professor and Chair of the Department of Animal Sciences. Geoff Dahl comes to UF from the University of Illinois at Urbana-Champaign where he has been working on the effect of photoperiod on lactation, growth and health of dairy cattle and effects of various milking frequencies.



Assistant chair Dr. Joel Brendemuhl has accepted the request from the IFAS administration to serve as interim department chair until the new chair has arrived.

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**FLORIDA DAIRY BUSINESS CONFERENCE  
MONDAY, SEPTEMBER 11, 2006**

The annual Florida Dairy Business Conference is planned for Monday, September 11, 2006 starting at 1 PM. Location is again the Marion County Extension Service Auditorium in Ocala, Florida.

The main focus will relate to how Florida dairy farms will look and be managed 5 to 10 years from today. What changes do we need to be considering being ready to be competitive in the future? Speakers and topics reflect that theme and a dairy producer panel will include **David Temple**, North Florida Holsteins, **Travis Larson**, Larson Dairy Farms, **Calvin Moody**, Brookscow Dairy and **Dale Eade**, Cindale Dairy Farms.

Out-of-state speaker **Tom Quaife**, editor of Dairy Herd Management magazine will update us on issues that relate to the 2007 Farm Bill. **Tom Kriegl** of the University of Wisconsin Center for Dairy Profitability will discuss organic production economics and provide an update on profitability of grazing.

From UF, **Dan Webb** will report on production responses on several Southeast dairy farms with newer facilities. **Albert de Vries** will discuss optimizing calving patterns especially as it relates to seasonality issues such as a possible seasonal price adjustment program and parlor pressure. **Ann Wilkie** will talk about future opportunities for our nutrient management systems. **Russ Giesy** will talk about positioning your dairy for the future and **Adriane Bell** will show us which geographical areas in the Southeast might provide the most opportunity for profitability in the future, based on the most recent and past DBAP data.

Welcoming is scheduled for 12:30 PM with the program starting at 1 PM. Registration is free and dinner will be served. RSVP for the dinner at (352) 793-2728. The program will conclude about 7 to 7:30 PM. Southeast Milk, Inc. will meet on September 12, so producers can travel once and catch two meetings. For more information, contact Russ Giesy at (352) 793-2728 or [giesyr@aol.com](mailto:giesyr@aol.com).

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**WHAT'S NEW IN MASTITIS (STILL)**

**David R. Bray**

Florida cows have always had a love affair with mastitis. We went from the mud E. coli period, to the Strep ag. period that thrived because we used wand teat sprayers. Mycoplasma loved the summer heat and humidity. My outstanding extension and research program in mastitis control has closed down those problems, along with world peace.

Strep uberis now gives extraordinary high cell and bacteria counts. Mycoplasma is more prevalent in the winter than summer. I am expanding my educational efforts to teach those two organisms how they are to act. Strep uberis is an environmental organism that is supposed to live in the udder for only a short period of time. Then it clears up and becomes clinical again. It seems to be more of a long time udder inhabitant now.

A few cows with high cell counts were cultured for pathogens and SCC counts. The results are in Table 1. The very high cell and bacteria counts on this dairy with a high Strep uberis bulk tank count were not expected. A few cows can be raising high counts in the bulk tank.

**Table 1.** Early Strep uberis research results.

Cow	Standard Plate Count	DMSCC
A	-	21,448,028
B	185,800	21,820,800
C	164,900	16,274,680
D	167,200	17,729,400
E	3,904,000	24,366,560
F	1,092,000	11,955,980
G	139,600	21,229,820
H	264,200	13,683,460
I	156,200	20,734,660

Another bit of data from another Florida dairy with a high bulk tank cell count was also different than expected. We usually think that the Strep ag cows are the only ones that give the high SCC and SPCs. Table 2 has the breakdown. This data also show what happens when you are sloppy with treatment procedures. The Nocardia cows have very high counts. This organism was injected into the udders by the person treating cows for some other type of mastitis or in dry treating. This organism will never leave the udder while the cow is alive. This is a very expensive man-induced form of mastitis. We can also see that the very popular organism "no growth" was also higher than nothing. "No growth" does not necessarily mean you sampled the wrong quarter, just that the growth of the organism was inhibited by the somatic cells or something else.

**Table 2.** Organism vs. SCCs. Strep ag. problem herd.

Organism	# cows	Average SCC	High SCC
Nocardia	4	16,563,385	23,639,200
Strep ag.	18	12,471,921	31,140,100
Strep uberis	8	12,421,684	41,186,316
Strep dys.	7	9,876,637	18,411,300
E. coli	7	5,206,803	13,000,560
Coag + Staph	10	5,100,000	17,088,144
Prototheca	1	4,957,633	5,964,523
Contaminated	14	3,179,172	5,591,558
Coag - Staph	15	3,041,748	14,138,060
C. bovis	2	2,041,136	2,095,670
No growth	31	508,453	3,057,600

## FIRST SOUTHERN REGIONAL DAIRY CHALLENGE BEING PLANNED

**Albert de Vries**

The first Southern Regional Dairy Challenge is being planned for November 19-21, 2006 in Roanoke, VA and is hosted by Virginia Tech University.

Since its start five years ago, the North American Intercollegiate Dairy Challenge (NAIDC) has organized (inter)national Dairy Challenge events with participation from over 30 universities from the US and Canada. The Dairy Challenge allows dairy science students to apply theory and learning while analyzing and formulating recommendations for a real-world commercial dairy farm. Teams develop a comprehensive analysis including recommendations for nutrition, reproduction, milking procedures, animal health, housing and financial management.

As an extension of the original event, regional events have been organized in the Northeast, Midwest, and West. A Southern Regional Dairy challenge is now being organized to improve the learning experiences of dairy students at universities in the South. The regional events focus more on learning than on competition. Working in five-member multi-university teams, students build teamwork skills in a real-world dairy consulting environment. The Southern Regional Dairy Challenge provides a unique opportunity for tomorrow's Southern dairy leaders and is guided and strongly supported by the allied dairy industry. A team of dairy science students at the University of Florida is expected to participate in Virginia.

For more information, contact Albert de Vries, [devries@ufl.edu](mailto:devries@ufl.edu), phone (352) 392-7563, or visit <http://www.dairychallenge.org>.



### FORMATION OF NEW UF ANIMAL SCIENCES ALUMNI ASSOCIATION (UFASAA)

The Department of Animal Sciences announces the creation of the UF Animal Sciences Alumni Association (UFASAA). The intent of this organization is to foster an atmosphere of better communication, networking and support among graduates, friends, and current students/faculty of the Department of Animal Sciences. Some of the benefits of being a member of the UFASAA will include receiving a quarterly newsletter and ability to participate in upcoming alumni events. We are very excited about the possibilities that this new organization will provide to us all.

*Summary.* High cell counts and high bacteria counts in the bulk tank can be caused by a few cows. Only a few cows can raise your bulk tank counts over the legal limit. We have discussed before ways to find these cows:

1. Fore strip the whole herd (by someone in a management position), CMT those cows, and do something with them. Also band all dead quarters, this can lower SCC and SPC significantly.
2. If you have high DHI SCC, anything over a million, CMT them and do something with them (treat, dry-off and dry treat, cull, or sell to your neighbor).
3. If you do a routine bulk tank analysis at AFVL and you have a high uberis count, a high coli count or even a high bacillus count, an average lab. pasteurized count for your herd and an average SCC count for your herd, then you are probably milking dirty cows. If your uberis count is above your average, while coli and bacillus are low or normal for you, and your SCC and SPC is above normal, then you have a cow problem.
4. If you can't be safe - be sanitary.

If you have questions, don't hesitate to contact Dave Bray at [bray@animal.ufl.edu](mailto:bray@animal.ufl.edu), phone (352) 392-5594.

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### 2006 FLORIDA DAIRY PRODUCTION CONFERENCE PROCEEDINGS AVAILABLE

**Albert de Vries**

The 43<sup>rd</sup> annual Florida Dairy Production Conference was held on May 2, 2006, in Gainesville, FL. In attendance were approximately 125 dairy producers, allied industry representatives, UF students, staff, and faculty and others. Attendance was increased by about 25% compared to previous years and the program was well received. A copy of the 2006 proceedings is now available on the UF/IFAS Florida Dairy Extension website at <http://dairy.ifas.ufl.edu>. The website contains the complete proceedings 1990 to 2006.

The 2006 proceedings included articles on 1) How the South can competitively produce milk, 2) Genetics for the future of the Southeast dairy industry, 3) Supply of milk to Southeast markets, 4) Use of RFID for dairy cattle management, 5) Economic considerations of sexed semen on your dairy, 6) Ranking dairy cows for optimal breeding decisions, 7) How to optimize corn silage in Florida, and 8) Various summaries of financial and production statistics, as well as, summaries of funded Southeast Milk Inc. Dairy Check-off projects.

The 44<sup>th</sup> annual Florida Dairy Production Conference is tentatively scheduled for **Tuesday May 1, 2007**. For more information, contact Albert de Vries, [devries@ufl.edu](mailto:devries@ufl.edu), phone (352) 392-7563.



More information about the new association will follow as we finalize plans. At this point, we are only asking for contact information from alumni and friends of the Department of Animal Sciences so we can start our contact list. If you would like to receive further information about the UFASAA, please contact Sylvia Beauchamp at [sylvia@animal.ufl.edu](mailto:sylvia@animal.ufl.edu) or (352) 392-2186.

## HOW MUCH CAN YOU SPEND TO FIX A BROKEN COW?

Albert de Vries

Hoard's Dairyman of April 25, 2006, had a story on putting a value on fixing broken cows. I was interested in the article because the author tried to educate dairy producers about how much they could afford to spend on sick (broken) cows and keep them in the herd. More specifically, the problem cow in the article was diagnosed with a displaced abomasum. Was surgery to keep the cow in the herd the best decision or should the cow be culled and replaced with, usually, a heifer?

To calculate the most profitable decision, one needs to calculate the discounted future cash flows if the cow were treated and if she were culled and replaced. The difference in both discounted future cash flows equals the cost you can make to fix the broken cow. This sounds easier than it is done without help.

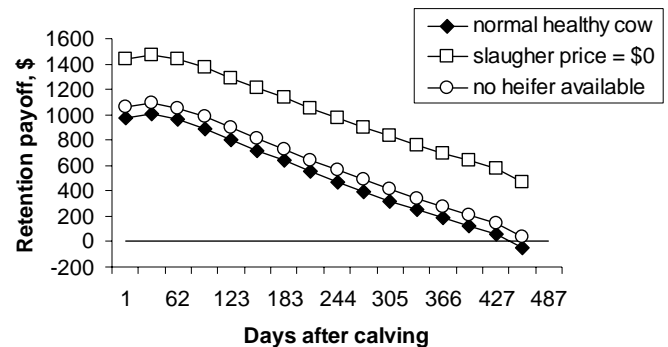
Most cash flow projections that I see, like those in the Hoard's story, are based primarily on the difference in the price of a new heifer (say \$2000) and the price at slaughter (say \$500). The argument goes that the difference, \$1500, can be spend on fixing the broken cow if treatment is 100% successful and the cow recovers completely. Unfortunately, such math is incomplete and ignores differences in cash flow between the fix and cull decisions in the months/years after the initial treatment or replacement costs. For example, depending on the stage of lactation and pregnancy status of the broken cow, milk sales in the coming months for the cow can be significantly different from those of a replacement heifer. Differences in expected milk yield, chances of pregnancy, the risk of involuntary culling etc. all affect future cash flow predictions. The difference in discounted future cash flows between the fix and replace decision is typically less than the difference between the heifer price and the slaughter value for average cows. For most cows in the herd, a dairy producer should not spend up to \$1500 to keep the cow in the herd.

Part of our work here at UF is to develop computer programs that help dairy producers make optimal treatment, breeding, and culling decisions. These programs predict future cash flows for each possible

decision and remember those decisions that maximize profitability.

The difference between the future cash flows of the decisions to keep or cull a cow is called retention payoff (RPO). This is the amount (in \$) that can be spent on fixing the cow if she is going to recover completely. Given typical inputs under Florida circumstances, the RPO of an average open cow by stage of lactation is shown in the figure. The RPO decreases by days in milk if she fails to get pregnant. When the RPO drops below \$0, the cow should be culled and replaced with a heifer. The RPO is similar to the difference between her market value and her slaughter price.

The RPO is the lowest when a replacement heifer could replace the cow at any time and the cow has a normal slaughter value (\$500). If no heifer is available to take the place of the culled cow, in the example for 1 month, then the RPO is greater: it makes sense to try to keep the cow that month because there is no alternative. If the cow will have a slaughter value of \$0, then her RPO\$ is even greater: you can spend more on a sick cow to keep her in the herd if the only alternative is death.



*Retention payoffs of a nonpregnant normal healthy cow with the opportunity to replace her, when her slaughter value is \$0, and if no replacement heifer is available for 1 month.*

Pregnant cows have greater RPO because there is value in the pregnancy. The value of the pregnancy increases with the stage of gestation. You can typically spend a lot more to keep a pregnant cow in the herd than a nonpregnant cow.

The average RPO of cows in a herd, both nonpregnant and pregnant, is about \$800 to \$900. This is what can be spent to fix the average broken cow and complete recovery is guaranteed. If the chance of successful treatment is less than 100%, then the amount that can be spent is less.

Later this year, dairy producers will have access to user-friendly farm-specific programs that calculate the RPO for each cow in the herd every day. Such programs are the best decision aids to make informed treatment and culling decisions. For more information, email [devries@ufl.edu](mailto:devries@ufl.edu) or phone (352) 392-7563.