

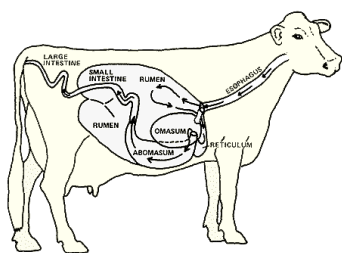
Introducing Tim Hackmann

Dr. Tim Hackmann recently joined the Department of Animal Sciences at UF as an Assistant Professor of Gastrointestinal Microbiology. Tim was born in St. Louis, MO and educated at University of Missouri (BS, Biological Sciences; MS, Animal Sciences) and The Ohio State University (PhD, Nutrition). He hopes you won't hold his past football teams against him!

Tim wants his research with rumen microbes to improve predictions of diet formulation software for dairy cattle and enable dairy producers to feed less protein safely. Rumen microbes flowing from the rumen supply most protein



digested by cattle. Diet formulation software predicts the size of that microbial protein supply, but it often does so inaccurately. Because predictions can be inaccurate, protein often has been overfed for safety. To improve software predictions and reduce protein overfeeding, Tim identifies factors that influence the supply of microbial protein. He has found that rumen microbes waste a lot of energy by producing excessive amounts of heat, potentially reducing their supply to cattle. This waste is not represented in software predictions, but he is further characterizing it so that it can be. He has also found that microbes can store large amounts of energy, which is less wasteful but could still



reduce supply of microbial protein. He also wants to better characterize this energy storage to facilitate improvement of software. Tim's long-term goal is to release

improved diet formulation software to dairy producers and allied industry in Florida and around the globe. This will help dairy producers feed better and more cost-effective rations. Contact Tim Hackmann at

thackmann@ufl.edu

Introducing Corwin Nelson

Dr. Corwin Nelson joined the Department of Animal Sciences in June of 2013 as an Assistant Professor of Physiology. His research and teaching interests are to promote animal health and production through understanding how environmental and genetic factors influence immune function of production animals.

Dr. Nelson grew up on a small beef and dairy farm in Minnesota and has maintained an interest in beef and dairy production. One of the main issues faced by dairy producers that he is interested in is mastitis in dairy cattle. His research primarily aims to understand how factors such as nutrition, genetics or environment affect the immune response of the udder to bacterial pathogens. The end goal of his research is to develop practical measures for dairy producers to use in their efforts to minimize losses to mastitis and produce high-quality milk.



Dr. Nelson's graduate research at Iowa State University and the USDA National Animal Disease Center revealed a role for vitamin D in the immune response of the udder. Dr. Nelson's research at the University of Florida aims to identify the genes that are affected by the vitamin D hormone, and how vitamin D metabolism is regulated in immune cells. Dr. Nelson's work is expected to result in improved vitamin D



feeding recommendations for dairy cattle through a better understanding of how vitamin D is involved in the immune system. In addition to his research interests, Dr. Nelson looks forward to becoming

acquainted with the dairy industry in Florida and learning of additional ways he can serve the Florida dairy industry through his position at the University of Florida. Contact Corwin Nelson at cdnelson@ufl.edu

Florida Dairy Industry Statistics: DHI Herd Performance Measures from 2002 to 2012

Kathy Arriola and Albert De Vries

We compiled average herd performance measures from DHI herds in Florida from 1993 to 2012 from various sources. Below are results for 2002 to 2012. Other current statistics and older can be found at <http://edis.ifas.ufl.edu/an286>.

Measure	2002 ^{1,2}	2003 ^{1,3}	2004 ^{1,3}	2005 ^{1,3}	2006 ^{1,3}	2007 ^{1,3}	2008 ^{1,3}	2010 ^{1,3}	2012 ⁴
No. Cows on DHI	30,879	56,366	57,510	54,375	54,978	51,406	51,711	47,128	45,954
No. Herds on DHI	47	92	82	71	66	62	59	58	56
Average Herd Size	657	613	698	766	833	829	876	812	821
In Milk on Test Day, %	85	84	84	86	85	86	86	87	83
Pounds of Milk per Year	19,461	18,160	18,307	18,987	18,835	19,607	18,982	19,825	18,751
Peak Milk - 1st Calf (lbs/day)	72	70	68	72	72	74	75	70	68
Peak Milk - 2nd & Later (lbs/day)	87	88	87	85	91	94	93	91	80
Fat %	3.7	3.8	4.0	3.7	3.6	3.6	3.4	3.4	3.5
Projected Minimum Calving Interval (months)	15.6	16.0	15.6	15.5	15.7	15.7	15.3	15.2	14.8
Days Dry	75	78	77	75	72	74	73	72	NA*
Days to 1st Breeding	102	107	106	112	110	109	107	103	102
Days Open	194	197	192	193	196	197	190	182	165
% Cows Open > 100 at 1st Breeding	22	33	28	31	27	25	25	20	32
No. Breeding per Conception	3.3	3.0	3.0	2.8	2.8	3.1	2.7	2.8	3.0
Age at 1st Calving (months)	25	25	25	26	26	25	25	25	25
Average PTA\$ Service Sires	329	344	354	239	304	291	343	336	NA
% Left Herd	34	39	33	31	34	32	33	34	44
Preg Rate-Year Ave, %	NA	NA	NA	NA	NA	NA	NA	NA	12.9
SCC Actual (x1000)	NA	NA	NA	NA	NA	NA	NA	NA	291

¹Source: Southeast DHIA, September 30, of the respective year. ²Source: Southeast DHIA, Cows in Herds on official types of test (01–34). ³Source: Southeast DHIA, Cows in Herds on all types of test (01–74). ^{1,2,3} Source: Appendix, Florida Dairy Production Conference, accessed December 21, 2012, <http://dairy.ifas.ufl.edu>. ⁴ Source: Dairy Records Management Systems, accessed December 21, 2012, <http://www.drms.org>. *NA = not available. Note: For a further explanation of measures used in this table, visit <http://www.drms.org/PDF/materials/glossary.pdf>

Prediction of the Future Florida Mailbox Price: May 2013 - April 2014

Using the Class III and Class IV future settle prices of July 18, 2013 and the announced Class III and IV prices until June 2013, the University of Wisconsin predicts the Florida mailbox prices for May 2013 to April 2014 as follows:

Month	Year	Class III settle price*	Class IV settle price*	Predicted FL mailbox price
May	2013	18.52	18.89	22.30
June	2013	18.02	18.88	22.04
July	2013	17.35	19.07	23.06
August	2013	17.89	19.40	23.50
September	2013	18.77	19.72	24.10
October	2013	18.62	19.50	24.12
November	2013	18.29	19.04	23.73
December	2013	17.75	18.28	23.09
January	2014	17.21	17.68	21.87
February	2014	17.11	17.58	21.77
March	2014	17.09	17.53	21.74
April	2014	17.10	16.39	20.39

* Class III and IV settle prices as of July 18, 2013.

Daily updated Florida mailbox price predictions are found at http://future.aae.wisc.edu/predicted_mailbox/?state=Florida

Dairy Extension Agenda

- **Tuesday December 3, 2013 (tentative).** Heat Stress Road Show meeting, Okeechobee Extension Office, Florida:
 - Bob Collier: “Nutritional additives and facility modifications to reduce heat stress”
 - Todd Bilby: “Tools and technologies to assess heat stress on commercial dairies”
 - Geoff Dahl: “Should we cool dry cows?”
 - Peter Hansen: “Current and future opportunities to reduce the impact of heat stress”
- Meeting time is 9:30 am – 3:30 pm. Lunch is free.
Contact Courtney Davis, cbdavis@ufl.edu, for more information.

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