

DAIRY SCIENCE DEPARTMENT 1988-89
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"CHANGE"

It is often said that we live in a world of change. When that change occurs and you have no control over it--it can be very threatening. If change occurs and you are in control, it is called progress. Our goal in the Dairy Science Department is to keep the majority of the change we experience in the latter category--progress.

Let's look at the progress for 1988-89.

Faculty

The first obvious area is in new positions. Mr. James Umphrey arrived in December to take on the position of half-time recruitment and half-time 4-H and Youth Development. Initiation of a position like this is a real "change" for us and becomes one of the first in the country. In the last few months, several other Animal Science departments have initiated similar positions. Enrollments in the Colleges of Agriculture continue on the decline. It will take a real recruiting effort at the department level to get the trend to turn around, and James is off to a good start. His work in the 4-H program will definitely help in recruiting.

A concern of many administrators is whether the efforts in the department are swinging too much toward the applied or too much to the basic. This year we struck a perfect balance because, to go along with our recruitment program, we were also able to attract a biotechnologist.

Dr. Frank Simmen will join the faculty on May 15. His wife, Rosalie, also a biotechnologist, accepted a position in the Animal Science Department. Combining the strengths of this team with our existing faculty will allow the basic animal reproduction program to continue to be one of the world leaders and provide further expertise for an already strong and productive basic research program. The Simmens have been on the Ohio State faculty for the last four years. We feel very fortunate to have been able to attract two biotechnologists that have an understanding of and appreciation for farm animals.

Publications

The research faculty had a banner year by publishing a record number of articles in refereed publications. That information will soon start showing up in extension publications and in materials presented at meetings. In addition to increasing the number of publications, they were also effective in competing for grant funds from industry and the Federal Government.

Milk Check-off

The first full year of the check-off brought in a total of \$241,308. The majority of the money enters the University through the Florida Foundation SHARE with a smaller portion going through the Grants office. By going different routes, we can maximize the effectiveness of the program. In 1988, the project review committee placed \$190,000 into projects, thus leaving a reserve of \$51,308. For 1989, it is anticipated that the check-off will accumulate approximately \$250,000. At this year's meeting, the committee awarded grants in the amount of \$253,543. Here is a list of the topics:

- Dairy Scholarships for Undergraduates
- Environmental Modifications for Reducing Summer Stress on Florida Dairy Farms
- Teaching Materials for Adult Education (Herdsman's Seminars and Cow Colleges)
- Automatic Data Collecting System on Vacuum Fluctuation and Water Temperature
- Recruitment Coordinator position/one third support
- Development of Videotape for Training Bulk Milk Haulers
- The Effect of Microbial Inoculant and/or Supplemental Sugars on the Fermentation and Aerobic Stability of Bermudagrass Ensiled at Two Moisture Levels
- Dietary Electrolyte Balance Effect on Performance During Lactation and Metabolism of Calcium During the Dry Period
- Improved Breeding Management in Florida Dairy Herds
- Insulin-like Growth Factors-I and Postnatal Growth of Calves
- 4-H Dairy Science Youth Programs--support for the judging teams and quiz bowl
- The Seasonal Demand and Supply Imbalance--an in-depth analysis
- Passive Protection of Calves Against Cryptosporidiosis with Colostrum from Cows Immunized with a Host-Protective *Cryptosporidium Parvum* Antigen
- Establishment and Milk-producing value of Mott Dwarf Elephantgrass
- Partial Support of Visiting Sabbatical Scientist Dr. David Wolfenson from Hebrew University of Jerusalem, Dept. of Animal Science
- Automated Pre- and Post-milking Sanitation on Florida Dairies
- Effect of Heat Stress and Bovine Growth Hormone on Leukocyte Function in Cattle
- Alleviating Heat Stress and Associated Infertility in Dairy Cows
- Florida Dairy Business Management Project--a modeling approach.

The results of the first year's projects are very interesting. Some reports are being presented at this meeting. In addition to giving reports at the Production Conference, we will continue to make reports at FDFA's regional meetings and prior to the TIDFA board meetings. I just wish I could adequately describe what the check-off has meant to the department and what it will do for

the Florida dairy industry. The number of projects underway has increased dramatically, the faculty have never reached their limit on the number of projects they can handle, facilities are totally utilized, and the faculty is enjoying every minute of it.

Patents

U.S. universities are taking a new look at their roles in patenting of products and procedures. University of Florida is taking the posture of being more involved in aggressively pursuing patents. Our department has entered the picture with two applications being applied for this year.

- 1) Use of Interferon of the Alpha Family to Enhance Fertility in Mammals

University of Florida

P. J. Hansen
W. W. Thatcher

University of Missouri

R. M. Roberts
K. Imikawa

- 2) A Novel process for Facilitating Bovine Embryo Transfer and Otherwise Controlling the Estrous Cycle in Mammals

University of Florida

W. W. Thatcher

Raukura Animal Research
Station, New Zealand

Keith (Jock) Macmillan

We don't anticipate major economic rewards from the patents, but we do hope that the findings will have an impact in reducing the effect of heat stress on reproduction.

Facilities

One of the spin-offs from accepting commercial grants is that we can use some of the money to upgrade our facilities. This year we completed a free stall barn which provides 100 Calan gates for individual feeding. We now have capacity to individually feed 184 cows. These facilities will be in heavy demand for the type of trials being funded through the check-off grants.

We are still struggling with our waste management problem. It has been difficult to find enough funds to complete the project as drawn by SCS. Hopefully, we can make another step forward this year.

Thanks

A special thanks to all who made this another good year for the department. That includes all the dairymen in Florida who contributed to the milk check-off program; to our advisory committee and the project review

committee who give so unselfishly of their time; to the donors to the bottle fund who completed their \$2500 pledges this year; to Woody and Grace Larson, Emory Walker Company, Inc. and McArthur Farms, Inc.; and finally to those dairymen who allowed us to use their facilities and animals to increase the scope of our research.

Dairies

Levy County Dairy
Parrish Dairy
North Florida Holsteins
Larson Dairies
Frank Denham
Perrets Dairy
Meadowmilk Dairy
Wisteria Dairy

Fort King Dairy
Trinity Dairy
M & M Dairy
Wiggins Dairy
Oaklane Dairy
Hilltop Dairy
Bart Bongers
Vernon Blackadar

Not included in the list are those dairymen who allowed us to use their financial data, and those DHI members whose data adds much to our program.

We are pleased with the "changes" which took place this year. There is no question that the changes we observed would fit in the progress category.

Thanks, it's great to have your continued support.