Program Objectives

- To utilize the vast array of Wisconsin dairy farms as a research resource – providing practical and relevant data to the farming community and its advisors.
- To conduct basic research into management and environmental risk factors for diseases in dairy cattle which are of economic significance.

Faculty Members

Nigel B. Cook MRCVS, Sheila M. McGuirk DVM, PhD, Kenneth V. Nordlund DVM, Garrett R. Oetzel DVM MS, Simon F. Peek DVM PhD

Background

The University of Wisconsin-Madison, School of Veterinary Medicine has a unique Food Animal Program, utilizing internationally recognized faculty with expertise in nutrition, internal medicine, milk quality control, and building design to troubleshoot problems occurring on Wisconsin’s dairy farms, while teaching the next generation of food animal veterinarians.

As the dairy industry has grown and developed in Wisconsin we have been challenged by herd owners to find answers to health and production related problems. Increasingly we have become aware of the role that environment and herd management factors play in triggering disease and poor productivity, and we have used our on-farm experiences to focus our questions and shape our research program.

Unlike many other successful research programs, which utilize purpose built research facilities to conduct trials, we have no research farm. Instead, we are committed to conducting research on working dairy farms utilizing a network of herd owners to help us answer the questions that perplex the industry. Our situation provides many advantages over traditional research programs. Some of these include:

- Unparalleled access to a wide range of dairy farms of different designs and management systems
- Our findings are immediately applicable to commercial dairy herds and do not have to be extrapolated from an artificial research environment

Projects Completed Since 2005

Investigation of calf air quality and risk for respiratory disease in naturally ventilated calf barns

Development of new diagnostic techniques to help diagnose respiratory disease

Investigation of the behavior of non-lame and lame cows in sand and mattress free stalls

Development of a new index of comfort called the Stall Standing Index to assess herd lameness problems

Creation of a new hoof lesion scoring system for hoof-trimming records

Trialed the use of an indwelling reticular wireless probe to record reticular pH

Examined differences in feeding behavior in 2-row and 3-row barns

Characterization of individual cow time budget changes in response to heat stress
• We have a proven track record in troubleshooting herd health problems and performing applied clinical research, which enables us to interpret findings in a way that is immediately relevant to farmers
• We have an array of mobile monitoring equipment which may be moved between farms including video cameras, temperature and humidity trackers, and air quality samplers

Projects Ongoing in 2006

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<thead>
<tr>
<th>Project Description</th>
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<tr>
<td>Development of an interactive lameness troubleshooting guide called ‘FirstStep’ for Zinpro Corporation</td>
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<td>Examination of differences in time budgets between lame and non-lame cows in ‘Comfort Zone’ stall designs</td>
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<td>Monitoring of herd performance data following stall design changes in 8 herds</td>
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<td>Development of the Best Practices Wisconsin guide to responsible drug use on farm for the WVMA</td>
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<td>Creation of new transition cow monitors for AgSource DHIA and a new Fresh Cow Report</td>
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<td>Updating of the Udder Health Summary for AgSource DHIA</td>
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<tr>
<td>Survey of risk factors for transition cow health and performance in large free stall herds</td>
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<tr>
<td>Evaluation of ketosis treatments</td>
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<td>Calf pneumonia evaluation tools</td>
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Funding

Basic research into the interaction between the dairy cow and her environment receives little attention from government funding agencies. Instead, we have relied upon internal grants from the UW system budget to provide seed money to perform our research. It is now becoming clear that the State Budget will not continue to support the kind of work that we believe is so important to the industry.

In 2005 we set up the UW-SVM Cow Comfort and Well-Being Consortium to solicit financial support for a range of projects to be performed over a period of four years. These projects covered a diverse array of subjects shown in the inset boxes. A number of industry leaders have contributed to the program over the last two years and we are looking to grow and develop into the future. In order to do this we need your help.

The money donated to the program is used to support the salaries of our team, which include program coordinators, information technology consultants, research assistants, statistical consultants and student helpers. In addition, funds are used to purchase state of the art monitoring equipment to facilitate data capture and processing.

The Future

Over the coming years we have plans to continue our research into dairy cow well-being with your help. The direction of the program will be driven by problems identified in the industry, but will continue to focus on calf health, transition cow health, lameness and mastitis. Information will continue to be distributed to the farming and scientific community through the pages of the farming press, via our website at http://www.vetmed.wisc.edu/dms/fapm/index.html, through the peer reviewed scientific literature and via many appearances at local and regional meetings.

Donations

If you wish to contribute to the program, please call Nigel Cook at 608 265 4981 or Kenneth Nordlund at 608 263 6811. Donations are made to the UW Foundation and should be sent to: Nigel Cook, School of Veterinary Medicine, UW-Madison, 2015 Linden Drive, Madison, WI 53706-1102.

Consortium Members

- Zinpro Corporation
- Pfizer Animal Health
- Vitaplus Corporation
- L and L, Inc
- Wisconsin Veterinary Medical Association
- AgSource Cooperative Services