

**Dairy Education Center
and
National Center of Excellence in Dairy
Veterinary Medicine Education**


UNIVERSITY OF MINNESOTA

College of Veterinary Medicine
Driven to DiscoverSM

**Program Report
2009-2015**





Operated as a private/public affiliation with Davis Family Dairies, the Dairy Education Center was established in 2009. The Dairy Education Center is integrated into Davis Family Dairies' 4,500-cow facility at New Sweden Dairy in southcentral Minnesota. In 2013, Davis Family Dairies added High Island Dairy to their production system. In total, New Sweden Dairy, Northern Plains Dairy, and High Island Dairy milk approximately 9,000 cows within a 10-mile radius of New Sweden Dairy. New Sweden Dairy has more than 10,000 calvings per year.

The mission of the Dairy Education Center

- To educate veterinary students to prepare them for successful careers in dairy practice, dairy management, and food systems and public practice. The U.S. Department of Agriculture has designated the Dairy Education Center as the nation's first National Center of Excellence in Dairy Veterinary Medicine Education.
- To provide outstanding continuing education for dairy veterinarians, dairy production managers, and advanced professionals in dairy-related industries.
- To serve as a public education and demonstration site for the value of modern dairy production: excellent animal welfare, environmental protection and sustainability, and efficient and high-quality food production.
- To serve as a site for applied research and development that will enhance dairy science and veterinary medicine.

The Dairy Education Center program

Veterinary student education

The Dairy Education Center provides three main educational experiences for senior veterinary students, in addition to other activities.

Dairy Production Medicine course

2015 saw the fifth round of the eight-week Dairy Production Medicine course in the Dairy Education Center's unique role as the U.S. Department of Agriculture-designated National Center of Excellence in Dairy Veterinary Medicine Education. The USDA Higher Education Challenge Grant Fund awarded the College of Veterinary Medicine a large grant to develop and present a curriculum in dairy production

medicine for senior veterinary students, starting with the class of 2013. The course was the first of its kind for senior veterinary students. Students live and learn at the Dairy Education Center. The curriculum is taught by experts from across the U.S. and includes lectures, wet labs, work on-site at the dairy, and trips to local dairies for practice evaluating on-farm and developing practical recommendations for improvement in dairy cow health, animal welfare, and farm profitability.

A significant effort has also been made to develop educational and reference materials on a comprehensive dairy production medicine website to support the educational program and to provide a resource for program graduates after they graduate and enter their careers. The website is also designed to provide other distance education offerings for dairy professionals.

A total of 73 students from the veterinary classes of 2013, 2014, 2015, and 2016 have participated in this unique experience. The students came from colleges of veterinary medicine in 10 states, including Minnesota, Illinois, Georgia, Missouri, Washington, California, Colorado, Mississippi, Wisconsin, and Kansas. Two veterinarians from the veterinary college in Munich, Germany, have also taken part in the course.

For the Dairy Education Center's class of 2016, applications were accepted from students at any veterinary college, thus broadening the opportunity for veterinary students focused on a dairy career whose college cannot offer the breadth and intensity of this curriculum. The next round of the Dairy Production Medicine course will be taught at the Dairy

Education Center July through August 2016, when more than a dozen students will participate. Students who complete the course have gone on to active careers in dairy practice across the United States.

Clinical training rotations

The Dairy Education Center also offers two-week clinical training rotations for senior veterinary students planning a career serving dairy farms. During the rotation, students live at the Dairy Education Center and participate in identifying, diagnosing, and providing medical, surgical, and obstetrical treatment of sick cows in the dairy. Since its inception, more than 240 senior veterinary students have participated in this experience. Roughly two-thirds of the students have been from Minnesota; the other third have been from other veterinary colleges across North America.

Rotations in dairy reproductive techniques, reproductive management, and lameness management

Also offered are two-week rotations in dairy reproductive techniques, reproductive management, and lameness management. Students in this rotation spend time at the Dairy Education Center and St. Paul dairy learning about bovine medicine as related to diagnostics, treatment, and management of reproduction and foot health in dairy cattle. This allows students to sharpen their palpation skills, think about lameness management on a herd level, and apply on-farm data analysis related to reproductive performance and health measures. More than 200 senior veterinary students have experienced this educational offering.

In addition, the Dairy Education Center often serves as a one-day training site for veterinary students in other aspects of dairy management: feeding management, cow comfort, lameness and hoof care, milk quality, and more. In 2012, 2014, and 2015, the Dairy Education Center hosted dairy herd evaluation challenge competitions in which students from several veterinary colleges came to the center for a weekend competition in dairy herd evaluation and consulting skills.

Dairy Education Center Continuing Education 2009-2015

	Courses	Days on-site	Participants
2009	9	21	155
2010	7	17	160
2011	15	24	271
2012	14	22	176
2013	11	17	152
2014	9	22	154
2015	14	32	264
Total	79	155	1,332



Continuing education programs offered at the Dairy Education Center

- Transition cow management
- Mastitis, milk quality, and milking system analysis
- Dairy herd evaluation and management training
- Dairy reproductive disease and management
- Feed delivery, computer feed management systems, and nutrition
- Dairy young stock
- Dairy production management tech service
- Dairy producer/herdsman training
- Dairy breeder training
- Hoof trimming and lameness therapy
- One-week training for high school agricultural educators from across the U.S.

Continuing education

The Dairy Education Center has an important mission to provide continuing education opportunities for practicing dairy veterinarians and other professionals serving the dairy industry. The Dairy Education Center is unique in the nation in its ability to host such programs, providing housing, classroom, laboratory, and on-dairy experiences. The Dairy Education Center's convenient location makes it the ideal base for field trips and on-farm training at neighboring dairies.

For the past four summers, the Dairy Education Center has also hosted weeklong courses for high school agriculture educators to learn Curriculum for Agriculture Science Education materials. A similar course is planned for the summer of 2016.

Public outreach

The Dairy Education Center serves as a public outreach and education hub for information about the dairy industry, wholesome milk production, and the role of modern dairy production systems in food production. The center hosts one to three tours or events per week for a variety of audiences: dairy managers and other dairy professionals, school groups,

**Dairy Education Center Public Tours
2009-2015**

	Tours	Visitors
2010	32	401
2011	84	1,409
2012	87	1,069
2013	85	1,565
2014	69	1,420
2015	81	1,077
Total	438	6,941

boards, interested people from the community, government officials, and various clubs. In the past six years, nearly 7,000 people have toured the Dairy Education Center. The Dairy Education Center has also attracted a variety of visitors from other countries (125 international visitors in 2015 and 80 international visitors in 2014).

Research

The Dairy Education Center provides a fruitful site for applied and clinical research, with particularly strong opportunities for work with transition cow management and health, mastitis, reproduction, and calf rearing and health. With more than 4,500 adult cows at New Sweden Dairy, 10,000 calvings, and 6,000 heifer calves born per year, there are significant opportunities for applied studies to gather relevant, statistically significant data. Several summer projects have been completed by veterinary students, and two graduate students are currently conducting trials at the dairy.

Conclusion

The Dairy Education Center is unique in the world. Over its short history, the center has demonstrated that it is a productive, effective, and cost-effective national resource in dairy veterinary education, professional continuing education, research, and public outreach. The University of Minnesota College of Veterinary Medicine looks forward to the Dairy Education Center's continued productivity and impact.

By the numbers

4,500
adult cows at New Sweden Dairy

10,000
calvings per year

6,000
heifer calves born per year

73
students have taken the eight-week Dairy Production Medicine course

240
students have taken the two-week clinical training rotation

200
students have taken the two-week rotation in dairy reproductive techniques, reproductive management, and lameness

79
continuing education courses have been presented for

1,332 participants

438
public tours have been given to

6,941 people

The College of Veterinary Medicine thanks these sponsors for their generous support of the Dairy Education Center and its programs:

