

University of Minnesota Swine Extension Programming Efforts

January 2008



Impact of the Swine Industry in Minnesota

Minnesota serves as a national leader in the swine industry, ranking 3rd among all states in hog production. Producers and pork industry members in Minnesota are considered to be extremely proactive and progressive, seeking and implementing cutting-edge technology and practices to continually improve and increase the size of the industry. In 2005, 15.1 million hogs were marketed by Minnesota pork producers, a 30% increase in 5 years, indicating it is a thriving and growing sector of the agricultural industry. The Minnesota pork industry serves as a major economic contributor to the state's economy, providing \$7.6 billion in economic impact during 2005.

Not only does the swine industry support Minnesota farm families that work on pork farms, but the industry also creates over 22,500 additional jobs in affiliated areas, including swine management and care, meat processing, construction and building, trucking, animal nutrition, and feed mill operations. The swine industry is a significant contributor to crop production, adding value to corn and soybeans grown in the state. The average pig will consume 3.8 bushels of soybeans and 10.5 bushels of corn in its lifetime. Nutrients found in swine manure add organic matter and fertilizing value to soils on which these crops are grown. Not only does the pig serve as the ultimate recycler in this way, it also increases crop yields and reduces foreign oil dependence through reduced usage of commercial fertilizers produced by petroleum products.

Contribution of UMN Swine Extension to the Pork Industry

The current integrated pork industry has increased needs for specific technical information in a variety of areas. A market research survey conducted by the University of Minnesota Extension Service in 2005 indicated that pork producers and allied industry members wanted information in areas addressing animal health (81%), business/financial management (72%), marketing/economics (72%), housing/equipment (70%), manure management (70%), nutrition (69%), and odor management (63%). Additionally, 85% of respondents indicated that University of Minnesota Extension events and programming were valuable in providing useful information for their operations.

The University of Minnesota Swine Extension program is an integral member and contributor to the Minnesota Pork Industry. The Swine Extension team works

cooperatively across several departments and colleges within the University of Minnesota to provide educational resources and communicate applied research to assist Minnesota's pork industry. Specific goals of the program are to:

- Improve the performance, health and welfare of pigs
- Enhance the economic, environmental and social sustainability of pork production
- Ensure a dependable supply of safe, nutritious pork for consumers

Partners

The UMN Swine Extension program also works very closely with a number of other state and national groups to most efficiently provide resources and meet program goals. These groups include, but are not limited to:

- State Pork Producer Associations
 - Minnesota Pork Board
 - Minnesota Pork Producers Association
 - Minnesota Institute for Sustainable Agriculture
- Minnesota State Colleges and Universities Farm Business Management programs
 - Riverland Community College
 - South Central College
 - Minnesota West Community and Technical College
 - Ridgewater Community and Technical College
- Minnesota State and National Agencies
 - Minnesota Pollution Control Agency
 - Minnesota Board of Animal Health
 - Minnesota Department of Agriculture
 - United States Department of Agriculture
- Other State Extension Programs
 - Iowa State University Extension and Iowa Pork Industry Center
 - South Dakota State University Extension
 - University of Nebraska Extension Service
 - Ohio State University Extension
- National Pork Producer Associations and Centers
 - National Pork Board
 - National Pork Producers Association
 - U. S. Pork Center of Excellence

The audience for our programs is varied and includes pork producers, swine unit managers and workers, agricultural professionals (veterinarians, nutritionists, consultants, etc...), county and state government officials, animal health and food industry companies and representatives, agricultural lenders, animal housing builders and equipment suppliers, and consumer groups and activists.

Current UMN Swine Extension Programming Efforts

State Activities/Programs

UMN Swine Extension website

The website (www.extension.umn.edu/swine), launched in January of 2006, has been a very successful tool to provide producers, industry, and agricultural educators access to information pertaining to the pork industry. With access to the Pork Industry Gateway and UMN articles, viewers can search thousands of research-based articles and fact sheets on various aspects of pork production. Monthly updates on new articles and educational events leads to timely dissemination of cutting-edge technology and information. Other information on various Swine Extension programs and team members/contacts, market information, emerging issues, and other useful links is also provided. Currently, over 2000 hits are being recorded per month to the website.

UMN Swine Extension Newsletter

This electronic newsletter provides monthly updates to registrants and supports the UMN Swine Extension website. Recipients are provided short summaries of new information, with direct links to the full articles on the website. Over 350 individuals are currently subscribed to the newsletter. Signup for to receive the electronic newsletter and email updates is available on the UMN Swine Extension website.

Swine Training Programs

A cornerstone of the UMN Swine Extension program, swine training programs are short courses designed to improved the production expertise of workers in commercial swine operations. Conducted in cooperation with the Minnesota Pork Board, courses are two days in length, and include classroom and hands-on activities at Research and Outreach Centers in Waseca and Morris. Courses include Farrowing Management, Breeding and Gestation Management, Alternative Breeding and Gestation Systems, Nursery Management, Wean-Finish Management, and Artificial Insemination. Participants take information provided from the course back to their units, often serving as trainers to further convey knowledge to fellow producers, managers and animal caretakers. During the past 5 years since the program's inception, 276 participants have completed the program and relayed information learned to their operations and fellow animal caretakers. This conservatively calculates to 2760 hours of contact time with attendees, or the equivalent of 345 days.

MN Nutrition Conference

This annual conference provides a forum for exchange of the most recent information in feeding livestock and poultry, and is attended by feed industry nutritionists and consultants. Considered the premier event of its kind in the upper Midwest, over 150 people annually attend, and thereby utilize the information to affect thousands of production units and systems.

PorkCast Online Seminars

A newly created distance learning program, this seminar series utilizes webcast technology to provide timely information on emerging issues and topics of interest to the Minnesota pork industry. The first program, co-sponsored with the Minnesota Pork Board, resulted in over 100 participants taking in the program either from their home or one of 12 download host sites throughout the state. Increased producer and industry use of the internet, combined with reduced cost to produce, make this format of information transfer very attractive in the future. Information on upcoming programs and recordings of previous presentations are available at www.extension.umn.edu/swine/porkcast.

Specialized Swine Training Courses

Half- and full-day courses are also offered on an as-requested basis to address specific topics not covered in other programs. Past courses have covered composting, marketing and risk management, and employee management. In addition, UMN swine research updates and more in-depth presentations on specific topics are available and presented to various veterinary, swine management, and grower groups during producer meetings held by these groups.

Newspaper and magazine articles

The UMN Swine Extension Team provides information on best management practices and applied research results related to swine production by contributing monthly articles to columns in *The Land* and *Agri-News*, news magazines that reach a broad agricultural base in Minnesota. *The Land* alone reaches 71 counties in Minnesota and approximately 34,000 farm households. Articles provide useful information and highlight UMN research activities.

MPPA's Pork Congress and NPB's World Pork Expo

Many specialists are enlisted by both the MN Pork Producers Assoc. and the National Pork Board to help with educational efforts at the Minnesota Pork Congress and the World Pork Expo. Our activities range from staffing a booth and interacting with producers to presenting educational seminars and designing and conducting workshops. Over 2,000 individuals annually attend MN Pork Congress, and over 30,000 attend World Pork Expo.

Alternative Production Systems

We serve as a resource to producers and other industry participants in analyzing options for positioning their swine operation in a changing industry. Activities include: working with specialty markets, marketing contracts, organic pork production, and cost of production issues. Meetings are held around the state to discuss cooperative formation and alternatives in marketing. Producers are provided various tools and opportunities to capture more profit in alternative, sustainable hog production systems. Additionally, intensive training courses are conducted at the West Central Research and Outreach Center in Morris.

MN Swine Educators Group

This group consists of UMN Extension, CVM outreach, MNSCU farm business management, MPCA, MPPA, and private industry representatives, and serves to improve communication and cooperative relationships across participating MN swine education groups. Information regarding upcoming swine-related educational events is shared, and collaborative efforts within educational events planned and organized.

Regional Multi-State Activities/Programs

Ventilation / Advanced Ventilation Workshops

These day-long workshops are designed to teach the principles and practice of properly ventilating swine barns and providing a proper environment for swine and swine caretakers. A traveling model barn is utilized in hands-on activities to reinforce classroom principles and materials. The multi-state effort was developed and is conducted by agricultural engineers and animal scientists at the University of Minnesota, South Dakota State, Iowa State, and University of Nebraska. Since 2005, 10 workshops in Minnesota alone have trained nearly 500 participants, and this number does not include numerous other workshops provided in other states with assistance from UMN staff.

PorkBridge Distance Learning Program

Another multi-state effort between the University of Minnesota, South Dakota State, Iowa State, University of Nebraska, and Ohio State, this distance learning program provides 90 minute learning sessions every other month on grow-finish management. Participants receive a CD containing speaker slides approximately 1 week prior to the program, and call into a toll-free conference line to listen to the speaker while following along on their own computer. A total of 55 sites are currently enrolled in the program. These sites conservatively represent 250 producers, managers, employees, and allied industry members involved in grow-finish swine production and producing in excess of 1 million hogs produced annually.

SowBridge Distance Learning Program

Tailored after the PorkBridge program, this program began in the fall of 2007 and addresses topics pertinent to breeding herd management and production. The University of Minnesota, South Dakota State, Iowa State, University of Nebraska, and Ohio State are involved in initial program development and delivery, but other state extension groups have expressed interest and will be phased into the program in the future. SowBridge programs are 40 minutes in length and presented monthly. It is anticipated that breeding herd employees and managers will tune into the program during their lunch breaks at work and will utilize the program to generate discussion and interaction within their own units. This program has been developed due to direct sow herd industry inquiries and requests.

National and International Activities/Programs

Distillers Dried Grains with Solubles (DDGS)

The University of Minnesota serves as a leader in conducting research and disseminating information regarding the use of DDGS in swine rations. Availability of the ethanol co-product has increased dramatically with biofuel production, providing opportunities for use in livestock diets. Requests for information have resulted in various presentations at conferences and creation of a DDGS website (www.ddgs.umn.edu) to disseminate emerging information.

Leman Conference and pre-conference workshops

The UMN Swine Extension team is directly involved in the planning, coordination, and successful implementation of the Allen D. Leman Swine Conference, an international conference that typically brings in 800 participants. In addition to participating in the main session program, team members also coordinate and conduct a pre-session nutrition workshop in cooperation with Kansas State University researchers and educators.

Producer certification courses

Producer certification courses, developed by the National Pork Board in cooperation with several of our UMN Swine Extension team members, are conducted throughout the year and convey best management practices in health product usage, food safety assurance and wholesomeness, animal handling and welfare. Pork Quality Assurance (PQA) and Swine Welfare Assurance (SWAP) programs have been conducted throughout the state, certifying hundreds of producers, and are now being melded together under a new Pork Quality Assurance Plus (PQA+) program. Trucker Quality Assurance (TQA) programs have certified in excess of 100 animal transporters throughout the state.

Producer Certification Train the Trainer courses

The PQAPlus program was developed by a committee at the National Pork Board (NPB), with assistance from several UMN Swine staff, to evaluate and enhance the welfare of swine in all types of operations, along with enhancing food safety and ensuring appropriate health product usage. John Deen and Lee Johnston are trainers for Minnesota, certifying other professionals to conduct training and assessments for all commercial swine farms in Minnesota.

Operation Main Street

A significant and increasing proportion of the general public has not been exposed to agriculture, especially animal production, lending towards mixed understanding and negative reactions to news media and activist accounts of agricultural production practices. Operation Main Street is a national consumer awareness and public education program designed to more closely connect the general public to modern swine production. We currently have 3 staff and students participating in and providing this program.