

U.S. Pork Center  
of Excellence  
Communities of National Cooperation



2008-2009 Annual Report



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## USPCE Mission

The mission of the U.S. Pork Center of Excellence (USPCE) is to add value to the pork industry by facilitating research and learning for U.S. pork producers through national collaboration.

## USPCE Vision

The vision of the USPCE is to advance

1. U.S. pork production as the world-class standard.
2. A new paradigm for how research is conducted and how information is delivered.
3. Society's understanding and valuing of U.S. pork producers' contributions to the economy, environment, community, and to consumer health and well-being.
4. A thriving U.S. pork production industry.

## USPCE Board of Directors

### Representing State Extension Directors

Dean Beverly R. Durgan  
*University of Minnesota*

### Representing Colleges of Agriculture

Dean Bobby Moser  
*The Ohio State University*

### Representing Colleges of Veterinary Medicine

Dean John Thomson  
*Iowa State University*

### Representing Departments of Animal Science

Dr. Alan Grant  
*Purdue University*

### Representing Iowa State University

Dean Wendy Wintersteen  
*Iowa State University*

### Representing National Pork Board

Chris Novak  
*National Pork Board CEO*

Leon Sheets  
*Ionia Pigs, Inc.*

Conley Nelson  
*Murphy Brown LLC*

### Representing National Pork Producers Council

Neil Dierks  
*National Pork Producers Council CEO*

Mike Wehler  
*Wisconsin Pork Association*

William Luckey  
*Luckey Farm*

### Representing State Pork Associations

Rich Degner  
*Iowa Pork Producers Association*

### Representing Corporate Sponsors

Dr. Paul Matzat  
*Elanco Animal Health*

### Representing USDA/ARS

Dr. Jerry Hatfield  
*USDA/ARS/NSC*

### Representing USDA/CSREES

Charlotte Kirk-Baer  
*USDA/CSREES*

## USPCE Staff



**David Meisinger**  
**Executive Director**

Dr. Meisinger oversees the operations of the USPCE. He is responsible for government and partner relations, public relations, and funding.



**Katie Beeler**  
**Communications Specialist**

Katie is responsible for managing the Pork Information Gateway (PIG), the USPCE website, and the other communications projects for the USPCE. Katie's role also includes planning meetings, working with the Pork Industry Handbook, and working with the National Swine Nutrition Guide.

**Barbara Kalsem**  
**Administrative Assistant**

Barb's time is shared with the Agriculture & Biosystems Engineering Department at Iowa State University. She is responsible for travel arrangements, accounts payable and receivable, and purchasing cards for employees.

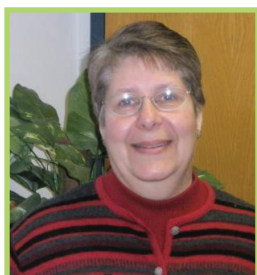


## Interns



**Cindy Walter**

Cindy is currently working on her B.S. in Public Service and Administration in Agriculture (PSA).



**Connie Cannon**  
**Grants Coordinator**

Connie is responsible for preparing grant proposals for submission to the federal government, foundations, and non-government organizations. Connie also oversees the USPCE finances.

**Jessica Sheeder**

Jessica is currently working on her B.S. in Animal Science with special interest in animal behavior and welfare.



**Claire Masker**  
**Program Coordinator**

Claire coordinates the Swine Science Online Program by working with swine educators across the country to develop and manage Swine Science Online courses. Her other duties include research priorities and the Sow Lifetime Productivity Management Guide.



As USPCE interns, Cindy and Jessica have been responsible for updating Pork Information Media Asset Portal (PIG MAP) and PIG Opportunities. They have also helped develop and compile the Swine Faculty Directory, ARS Research Results, and other important projects.

## Letter from the Director

Welcome to our fourth Annual Report. We have seen a lot of progress since our inception four years ago but the challenges for the future are many. We have been moderately successful in obtaining grants which have provided some much needed funding to enhance the core funding generously provided by all our partners. Our progress has been seen in pulling together most of the state extension specialists representing all disciplines in swine to help build and maintain the Pork Information Gateway as a national clearinghouse of information targeted for all pork producers. Moreover, many of these same specialists have helped us in the creation of the Swine Science Online program and the National Swine Nutrition Guide, both of which have seen much progress this past year. A small grant was received to assist in the development of an effort similar to what we are trying to accomplish with the Swine Science Online program but directed toward community colleges. This is a major effort primarily funded by the National Pork Board but one which also fits our mission of education and training. The intent is to develop a training and certification program which trains students and then tests graduates on skill sets for certification as a skilled technician or manager. Another funded grant from the National Pork Board has provided the means to develop a Sow Lifetime Productivity Guide.

A special grant from the Iowa Pork Producers Association this year was greatly appreciated. This grant, which matched their regular funding, not only helped us to develop the course on employee management for the Swine Science Online program, but also provided the funds to sustain our financial standing for another year. We certainly appreciate all the funding provided by all our partners from academia, government, and the state pork organizations, as well as from NPPC and the National Pork Board. The latter provides us with a great deal of support over and above their partner fees. We could not operate at the level we do without it.

One of the challenges moving forward is to realize our vision without being totally directed by which grants we are successful in obtaining. We find ourselves being very careful to select grant opportunities which perfectly fit our mission and vision, but some would require a lot of effort in somewhat tangential areas of focus. Another challenge will be to sustain and increase funding in a time of financial stress by many of our partners. That is one of the reasons that it will be so important to achieve the government funding authorized in the Farm Bill. Another challenge will be to develop areas of coordination in the research arena. The possibilities are endless and the grand challenges identified in the workshop held this past summer demonstrate that there is a need to have some coordinated effort to address them.

Our Board of Directors and our funding partners can be proud of the work we have accomplished in the four years of our existence. We have a very capable staff which albeit small has fulfilled all of the objectives we had addressed for our Center to accomplish this year. We will continue to seek to satisfy all of the focus areas identified for the U.S. Pork Center of Excellence so we can continue to fulfill the needs of the industry in terms of research, teaching and extension.

Please enjoy reading this annual report. Also, know that we are available at all times to answer any questions you might have or to recognize any of your suggestions as to how we can be better or how we can improve any of our product offerings. Thank you for your interest and support.

*David Meisinger*  
*Executive Director*



## Review of the Year

The past year has been another busy one for the U.S. Pork Center of Excellence. From projects and programs to important industry meetings, the USPCE has been working hard to uphold the standard of national collaboration for which we are known. With the help of our partners, staff, and members of our many program committees, the USPCE has continued to maintain our successful programs.

The USPCE Deans' Policy Council Meeting was held in Kansas City in October 2008. As always, this meeting was very productive and allowed our university partners an opportunity to hear updates on USPCE programs and provide input on the direction of the center. In December, the USPCE co-hosted the Swine Extension/Educators Conference where we were able to participate in an important discussion about swine education and the role that the USPCE can play. In June 2009, the USPCE, along with National Pork Board and National Pork Producers Council, hosted a workshop for educators, industry leaders, and producers to identify and discuss the critical issues facing the U.S. pork industry. The USPCE co-hosted a second Swine Extension/Educators Conference in July, where we were able to help identify priorities for the National Pork Board Strategic Plan of Work.

The success of the USPCE programs is reflective of the past year's accomplishments. The Pork Information Gateway saw some major website design changes, and following these site updates, PIG registration grew immensely. Beta-testing has begun for several Swine Science Online courses, and this program is on track for a Fall 2010 launch. In addition, the National Swine Nutrition Guide is near completion, and the "Managing Replacement Gilts" unit of the Sow Lifetime Productivity Guide is being finalized.

We have also received grants to begin some new projects at the USPCE. A community college swine education program, funded by a Secondary/Post-secondary Education Challenge Grant, is being developed with the National Pork Board. In addition, with help from a USDA conference grant, the USPCE has developed a prioritized list of critical issues as identified at a workshop we held earlier this year.

The USPCE staff has been working hard to make information more easily accessible for U.S. pork producers. One of the ways we have done this is with updates to the USPCE website. We have added swine production tools, teaching resources for swine educators, a guide to swine faculty across the country, and information about all of our programs in order to make it a more useful tool for producers.

The past year has been a productive and exciting time for the U.S. Pork Center of Excellence. With the support of our partners, we will continue to generate many successful programs and projects for pork producers. We thank everyone for their support and look forward to working with you all in years to come.

*Katie Beeler*  
*Communications Specialist*

## **New USPCE Website**

The U.S. Pork Center of Excellence has updated our website: [www.usporkcenter.org](http://www.usporkcenter.org). The new site design is focused on the resources and projects administered by the USPCE. Some new additions to the site include:

### *Swine Faculty Directory*

This directory contains information on faculty across the country who hold swine teaching, research, or extension positions. The directory is broken down by university and contains a picture, contact information, and background information on each individual.

### *Swine Management Tools*

The USPCE has been collecting swine management tools that are made available by many universities across the country. By compiling the links to these tools in one area, the USPCE can help producers find the tools they need more easily.

### *Teaching Resources*

Many swine educators have been looking for ways to share their teaching methods and information with one another, and the USPCE has found a way to help do this. By collecting teaching resources from several educators and making them available on our website behind a password-secure page, the USPCE can help educators share their resources.

Also available on the new USPCE website are links to other useful websites for pork producers; up-to-date information and news; a listing of USPCE Events and Activities; as well as a host of information about the U.S. Pork Center of Excellence programs and projects. The website serves as a great tool to promote the USPCE and our many projects.

## **New Hires**

In December 2008, the USPCE hired Katie Beeler as the Communications Specialist. Katie graduated from Iowa State University with a B.A. in English and minors in Technical Communications and Political Science. Katie previously held internships with the Iowa State Fair Competitive Events Department and in the office of Senator Charles Grassley in Washington, D.C.

In March 2009, Connie Cannon was hired as the Grants Coordinator for the USPCE. Connie earned her B.A. from South Dakota State University. Connie comes with experience as a high school teacher, a career development coordinator, and as a grant writer.

## New Partners

The USPCE welcomes the support of our new partners:

*Mississippi State University*

*Louisiana State University*

*Colorado Pork Producers Council*

## Addressing Grand Challenges through Science

In June, the U.S. Pork Center of Excellence held a conference to identify the critical issues facing the pork industry. The “Addressing Grand Challenges through Science” workshop was held June 4-5, 2009 at the Iowa State Fairgrounds, in conjunction with the World Pork Expo.

On the first evening of the workshop, NPPC CEO Neil Dierks discussed the need for U.S. pork producers to continue to produce a safe and competitive pork product. Dr. Roger Campbell, CEO of Pork CRC in Australia, followed by discussing the challenges facing the pork industry from a global perspective and explaining where the U.S. stands in comparison with the industries of other countries. Other speakers heard throughout the evening were Dr. Brian Knudson with Cargill, who discussed the role of the consumer in applying science; Dr. Terry Coffey with Murphy Brown, who talked about the need to shift the focus of the swine industry in order to attract more economical resources; Dr. John Dobrinsky with Minitube International, who explained the difficulties of agricultural research funding; and Dr. Bob Easter with the University of Illinois, who discussed a greater need for collaboration among universities, citing the U.S. Pork Center of Excellence as a catalyst. The slideshow presentations from some of these speakers are available at [www.usporkcenter.org](http://www.usporkcenter.org).

The speakers’ ideas set the stage for the small group discussions on the following morning, when participants helped identify the most critical issues facing the pork industry and brainstormed possible solutions for these pressing issues. Following the presentation of the identified issues and solutions, participants voted to help prioritize the importance of these issues in order to help set the agenda for upcoming scientific research.

The results of the meeting, including the discussion topics and the prioritized issues, have been compiled by the U.S. Pork Center of Excellence and reviewed by workshop participants. Two conference grants helped offset the costs of the workshop.

## Swine Extension/Educators Development Conference

The U.S. Pork Center of Excellence co-hosted the Swine Extension/Educators Development Conference with the National Pork Board on July 29-30, 2009 in Houston, TX. The purpose of this conference was for the swine educators, extension specialists, and producers in attendance to help identify tactics for the National Pork Board's 2010 Strategic Plan of Work. USPCE took part in the breakout group sessions to help provide input on how National Pork Board's contribution to the U.S. Pork Center of Excellence could assist in reaching these identified tactics. One suggestion from attendees was to continue to use the Pork Information Gateway and USPCE to relay National Pork Board research results to producers. Attendees also noted the importance of the USPCE in developing educational programs for U.S. producers and expressed the need to continue work in this area. During the conference, USPCE also had a chance to update the conference attendees on our projects and programs, as well as provide input on how the USPCE could collaborate with National Pork Board as they work to reach their goals. This conference is an important part of the relationship between National Pork Board and the U.S. Pork Center of Excellence, and several tactics were brought forth that encourage the continuation of this collaborative relationship.

## Grants in Review

USPCE experienced success with several grant proposals in the past year. A Plant and Animal Science grant through USDA and an NRI supplemental grant, together totaling \$15,000, were secured to support the "Addressing Grand Challenges through Science" conference and the publication of the final priority list. A Secondary/Post-secondary education challenge grant (SPECA) award is providing additional support to the partnership efforts with National Pork Board to develop both a community college system of courses to industry standard and a certification process for pork production workers and managers. Two grant applications have been submitted that would supply implementation support until these two systems can become self-sustaining. USPCE continues to develop the National Swine Nutrition Guide project through an award from United Soybean Board and the Swine Science Online project through a grant from USDA.

Objectives fundamental to USPCE grant efforts continue to follow the Board directives: continually pursue grant opportunities that are consistent with the USPCE mission/vision and the newly identified industry priorities, consistently implement a communication strategy that targets a broad variety of grant sponsors, and closely manage all grant resources ensuring compliance with sponsor requirements and project goals.

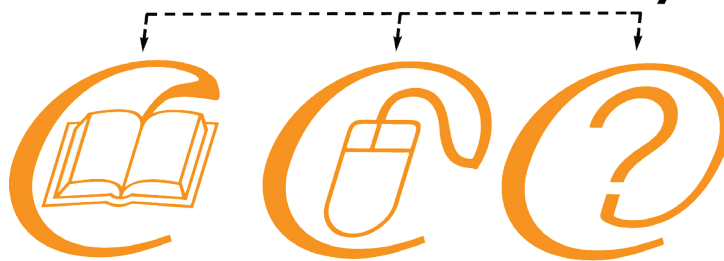
In conjunction with these efforts, USPCE has developed a new, more transparent accounting system that tracks expenditures against income sources and projections. These efforts will make it easier for the USPCE Board to make informed financial decisions and for the staff to maximize the impact of funds from all funding sources.

## 2008/2009 Year End Financial Report

USPCE Total Funding - All Sources			
Sources of Funding:	FY09 Year End Actual	Proposed FY10 Budget	Projected FY11 Budget*
<i>Partnership Support</i>			
Balance Forward Partnership Support	1,733	26,131	(21,080)
Partnership Support Received	370,956		
Anticipated Partnership Support		314,500	307,500
<i>Grant Support</i>			
Balance Forward Grant Support	406,701	635,725	143,551
Newly Awarded Grant Support	394,849	22,285	0
<i>Unrestricted Funds</i>			
Balance Forward Unrestricted Funds/Gifts	25,623	25,424	424
Unrestricted Funds/Gifts	901	0	
<b>Funds Available</b>	<b>1,200,763</b>	<b>1,024,065</b>	<b>430,395</b>
<b>Budgeted Expenditures:</b>			
Salaries/Wages/Benefits	361,703	395,962	374,097
Equipment	0	0	0
Travel Domestic	69,885	75,775	53,395
Travel Foreign	790	670	700
Student Tuition	2,404	0	0
Supplies/Materials	9,825	13,620	7,313
Subcontracts	6,991	150,793	40,312
<i>Other Direct Costs</i>			
Telecommunications	6,422	5,350	5,550
Computer Usage	49	2,000	2,000
Printing/Copying	6,598	42,887	5,400
Honoraria/Services	21,536	102,918	90,627
Postage	120	240	275
Other	9,130	55,408	0
Indirect Costs	18,030	55,547	12,292
<b>Total Expenditures</b>	<b>513,483</b>	<b>901,170</b>	<b>591,961</b>
<b>Projected Balance</b>	<b>687,280</b>	<b>122,895</b>	<b>(161,566)</b>

\*This column reflects reduction in partnership support, aging out of grants, and economic trickle down.

## ***Pork Information Gateway***



### **Pork Information Gateway**

The Pork Information Gateway (PIG) has gone through several updates in the last year. Most recently, the site was redesigned with a new look and feel aimed at improving producers' access to information. These changes were released at the World Pork Expo in June 2009 during a media conference. The redesign included the addition of a horizontal drop-down menu to organize the growing list of pages within the site, as well as a re-designed homepage that contains pork industry news headlines and market and weather information important to producers.

Other changes made to the site were improvements with the modes of contact for users. The new Password Reminder e-mail now provides users with their log-in name and password so that they can continue accessing information more easily. In addition, the "Contact Us" form for PIG Feedback now requires a preferred method of response so that any feedback submitted to PIG can be addressed with a prompt reply. A new domain area was also added to PIG: Niche Production. This domain was added to meet the needs of producers with very specific production types and is being led by David Newman at North Dakota State University. Pork Production How-To's have now been added to the PIG Library. These documents are short, step-by-step guides to common pork production practices and procedures. The Domain Editors have been working hard to produce effective How-To's for the PIG Library, and there are currently 41 of these new documents available on PIG.

In addition to David Newman with Niche Production, we have also added three other new Domain Editors to PIG. Yuzhi Li with the University of Minnesota is the new Animal Behavior and Welfare leader; the Pork Safety domain is now being led by Margaret Hardin with Texas A&M University; and Stephen Pohl, South Dakota State University, has taken the role of Domain Editor for the Facilities and Equipment area.

Registrations for PIG have been steadily increasing in the past year. Currently, PIG has over 4000 registered users, nearly 1500 of which were registered in the last year. By marketing to producers at state pork association events and promoting PIG in our newsletter, we have been able to reach a large audience of producers. In addition, our marketing push and the promotion of the re-designed website at the World Pork Expo helped boost the use of PIG.

PIG Domain Editors met twice this year to discuss PIG and work together to determine where the site could be improved and how they could help to do this. The Domain Editors have contributed much to the success of PIG, and will continue to do so as they meet again in October and April of the upcoming year. We will continue to promote PIG and strive to reach more producers with our information and resources.

## PIG Domain Editors

### Lead Editor

Dr. Todd See  
*North Carolina State University*

### Production and Management Systems

Dr. Mark Whitney  
*University of Minnesota*

### Business Management

Mr. Gary Thome  
*Riverland Community College*

### Human Resources

Dr. Michael Swan  
*Washington State University*

### Swine Health

Dr. Morgan Morrow  
*North Carolina State University*

### Animal Behavior and Welfare Issues

Dr. Yuzhi Li  
*University of Minnesota - Morris*

### Breeding and Genetics

Dr. Tom Baas  
*Iowa State University*

### Swine Nutrition

Dr. Brian Richert  
*Purdue University*

### Reproduction

Dr. Rob Knox  
*University of Illinois*

### Facilities and Equipment

Dr. Stephen Pohl  
*South Dakota State University*

### Environmental Stewardship

Dr. Alan Sutton  
*Purdue University*

### Marketing

Open

### Pork Quality

Dr. Steve Moeller  
*The Ohio State University*

### Pork Safety

Dr. Margaret Hardin  
*Texas A&M University*

### Youth Projects

Dr. Jodi Sterle  
*Texas A&M University*

### Statistics

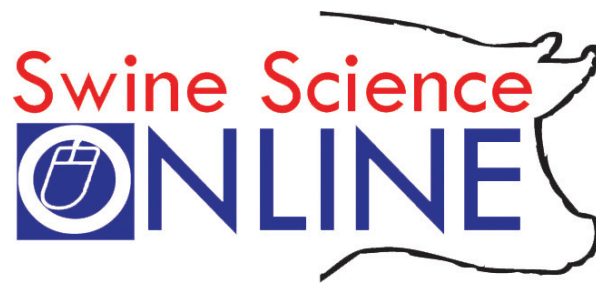
Dr. Palmer Holden  
*Iowa State University*

### Worker Health and Safety

Dr. Kerry Leedom-Larson  
*National Pork Board*

### Niche Production

Dr. David Newman  
*North Dakota State University*



## Swine Science Online

### *Statement of Purpose*

*The Swine Science Online program is targeted toward students who are earning a 4-year degree, with a secondary audience of individuals currently working in the pork industry and looking to further their education. The online-based program makes swine specific courses more available to students by providing them the opportunity to take swine science courses that are not offered at their own university. The program will target students seeking to work in pork production units, as well as those who will seek employment in allied industry. The courses that make up this university program will focus as much on theory as they do on real world application. The goal of the Swine Science Online program is to teach students the problem solving and analytical skills that will be needed in the pork industry today and in the future.*

Swine Science Online continues to move forward to a full launch of the program in September 2010. Over the past year, curriculum leaders have continued to work on various courses and are in the process of beta-testing those courses with students from across the country. The beta-testing of these courses is an important step in the development process, as the program is able to determine if the courses are meeting students' needs and desired outcomes.

Currently, seven universities (Iowa State University, University of Nebraska-Lincoln, University of Missouri-Columbia, North Carolina State University, North Carolina A&T, South Dakota State University, and Virginia Tech) are in the process of approving the Swine Science Online curriculum to be a part of offerings to their students. These institutions are all a part of the Ag\*IDEA program, and students who are not a part of the university offering a course will have the option to enroll at one of these universities.

Students will be able to earn a certificate/minor if their university offers them that choice. They will also have the opportunity to earn a Swine Science Online certificate that will be administered by the USPCE. At the annual steering committee meeting, members created objectives for the Swine Science Online certificate.

Upon being awarded a Swine Science Online Certificate, recipients will be able to:

- Integrate disciplines and concepts in order to facilitate problem solving creating a more efficient production system
- Combine scientific principles and management skills involved in pork production for an efficient and sustainable operation
- Recognize available career opportunities within the pork industry.
- Apply personnel, facility, fiscal and livestock resource management involved in swine production
- Perform basic swine husbandry skills
- Understand the impact of societal and industry issues on production management systems
- Explain the pork chain structure and trends including production, packing, and integration

## **Steering Committee**

### **Academic Deans**

Dr. Nancy Irlbeck  
*Colorado State University*

Dr. Don Boggs  
*Kansas State University*

Dr. Ken Esbenshade  
*North Carolina State University*

### **Animal Science Department Heads**

Dr. Maynard Hogberg  
*Iowa State University*

Dr. Alan Grant  
*Purdue University*

Dr. Ralph Noble  
*North Carolina A&T*

Dr. David Buchanan  
*North Dakota State University*

### **Animal Science Faculty**

Dr. Jodi Sterle  
*Texas A&M University*

Dr. Tom Baas  
*Iowa State University*

Dr. Todd See  
*North Carolina State University*

### **Producers**

Mary Langhorst  
*Wakefield Pork*

### **USPCE Staff**

Dr. David Meisinger  
*Executive Director*

Claire Masker  
*Program Coordinator*

## **Curriculum Leaders**

### **Basic Swine Science**

Dr. Tom Baas, *Iowa State University*

### **Swine Feed Mill Management**

Dr. Charles Stark, *North Carolina State University*

### **Marketing & Risk Management in the Pork Industry**

Dr. Kelly Zering, *North Carolina State University*

### **Pork Product Quality & Safety**

Dr. Dana Hanson, *North Carolina State University*

### **Farrowing Management**

Dr. Duane Reese, *University of Nebraska-Lincoln*

### **Global Swine Industry**

Dr. Sang Oh, *North Carolina A&T*

### **Swine Nursery and Finishing Management**

Dr. Ken Kephart, *Penn State University*

### **Swine Environment Management**

### **Swine Manure and Nutrient Management**

Dr. Jay Harmon, *Iowa State University*

### **Swine Breeding and Gestation Management**

Dr. Billy Flowers, *North Carolina State University*

### **Swine Business Management and Record Analysis**

Dr. Jim Kliebenstein, *Iowa State University*

### **Swine Health and Biosecurity**

Dr. Locke Karriker, *Iowa State University*

### **Swine Internship**

Dr. Cindy Wood, *Virginia Tech*



# National Swine Nutrition Guide

## National Swine Nutrition Guide

The purpose of the National Swine Nutrition Guide is to enhance the understanding of practical swine nutrition, feeding principles, and related management guidelines. A committee of the U.S. Pork Center of Excellence has been working on developing the National Swine Nutrition Guide for over two years. The result will be a nearly 300 page book containing 33 Factsheets having to do with all aspects of swine nutrition, including nutrient recommendations, sample diets and the various factors affecting swine nutrition. The steering committee has spent a lot of time poring over each nutrient recommendation for every stage of production, determining how different feedstuffs meet these needs. A Diet Formulation and Evaluation Software tool will also be available with the guide. The latter is a very user friendly program that producers or advisers can use to do least cost ration formulation or to conduct nutrient analysis or cost simulations of planned diets.

A generous grant from the United Soybean Board has provided the means to conduct an extensive outreach and educational effort for the National Swine Nutrition Guide. Educational Training Sessions are planned to begin early in 2010 to provide training on the use of the guide and software. These training sessions will focus on the use and application of the guide and will also include an overview of the guide and demonstration of the computer software. The guide and software will be available at the time of these sessions. The regional Education Training Sessions have been scheduled for the following cities:

Indianapolis, IN – January 2010  
Moses Lake, WA – February 5, 2010  
Kansas City, MO – February 17, 2010  
North Carolina – February 2010  
Sioux City, IA – March 5, 2010  
Owatonna, MN – March 11, 2010

The National Swine Nutrition Guide Factsheets will be available electronically on the Pork Information Gateway ([www.porkgateway.com](http://www.porkgateway.com)) and in print from the U.S. Pork Center of Excellence, State Extension Services, and in the Pork Industry Handbook. The software will also be available from the U.S. Pork Center of Excellence.



## Steering Committee

Dr. Scott Carter  
*Oklahoma State University*

Dr. Duane Reese (Chair)  
*University of Nebraska*

Dr. Robert Thaler  
*South Dakota State University*

Dr. Joel DeRouchey  
*Kansas State University*

Dr. Brian Richert  
*Purdue University*

Dr. Eric van Heugten  
*North Carolina State University*

Dr. David Meisinger  
*U.S. Pork Center of Excellence*

Dr. Marcia Shannon  
*University of Missouri*

Dr. Mark Whitney  
*University of Minnesota*

Dr. John Patience  
*Iowa State University*

Dr. Hans Stein  
*University of Illinois*

Ms. Charlotte Kirk Baer (ex officio)  
*USDA/CSREES*

## Software Programmer

Garland Dahlke  
*Iowa State University*

## National Swine Nutrition Guide Factsheets

- Preface and Survey/Acknowledgements
- Factors Affecting Nutrient Recommendations
- Understanding Nutrient Recommendations
- Energy Sources
- Protein and Amino Acids Sources
- Vitamins and Trace Minerals
- Macro-Minerals
- Water Recommendations and Systems
- Nutrient Recommendation Tables
- Nutrient Recommendations and Feeding Management for:
  - Nursery Swine
  - Grow-Finish Swine
  - Replacement Gilts & Boars
  - Gestating Swine
  - Lactating Swine
  - Breeding Boar
  - Cull Sow
- Example Diets for Swine
- Diet and Health Interactions in Swine
- Feed Additives for Swine:
  - Enzymes and Phytase
  - Conjugated Linoleic Acid
  - Paylean
- Feed & Ingredient Sampling and Analysis
- Utilization of Weather-Stressed Feedstuffs
- Purchasing of High Quality Ingredients
- Composition of Feed Ingredients
- Swine Feed Processing and Manufacturing
- Methods of Supplying Nutrients to Swine
- Feeding Systems for Swine
- Feeding for Niche Swine Production
- Nutritional Effects on Nutrient Excretion
- Nutritional Effects on Air Quality
- Nutritional Effects on Pork Quality
- Conversion Factors
- Index for the National Swine Nutrition Guide

## Professional Swine Manager/Technician Certification Program

### Statement of Purpose

*The Professional Swine Manager/Technician Certification program is targeted toward current pork production employees, with a secondary audience of current community or technical college students who wish to enter a pork production unit after graduation. This program focuses on technical skills and will be rooted in synchronous distance education with hands-on learning provided by on-farm experience. The major objective of this program is to connect practical farm knowledge and hands-on application with the knowledge acquired in the classroom. The goal of the Professional Swine Manager/Technician Certification program is to provide educational opportunities to current and potential farm technicians and managers.*

The U.S. Pork Center of Excellence and National Pork Board have received a Secondary/Post-secondary Education Challenge Grant to develop swine science curriculum at the community college level. With the help of several community college administrators and instructors, as well as input from industry specialists, the development of the “Professional Swine Manager/Technician Certification Program” is well underway. The program will allow for individuals—either community college students or current swine production employees—to take courses through their local community college in order to become a Certified Professional Swine Manager, or choose a specific area of production to become a Certified Breeding Herd Technician, a Certified Farrowing Herd Technician, or a Certified Grow-Finishing Herd Technician. The curriculum committee for the project is currently working on developing the courses required for certification, and they are also working on a plan to make these available via distance education. Included in the curriculum will be required on-farm work experience, as well as courses in Swine Production, Employee Management, and Swine Health and Biosecurity. Along with these courses, elective courses will be offered in Nutrient Management, Analyzing Production Records, Facility Management, Breeding Management, Farrowing Management, and Finishing Management. A certification test is also being developed to go along with the courses. Individuals wanting to become certified through this program can either enroll in the Professional Swine Manager Certification Program Courses offered through the community colleges, or they can take the certification test having previous or current employment in the swine industry. The USPCE and National Pork Board will continue to work with community colleges to develop this program, and hope to launch the program in the near future.

## Sow Lifetime Productivity Guide

Sow lifetime productivity is a major concern with most commercial swine breeding herds. The objective of this guide is to provide producers with the most up-to-date scientific information in an educational tool that pork producers can use within their breeding herds. The Sow Lifetime Productivity Management Guide is broken into the following five units:

- Managing Replacement Gilts
- Managing Parity 1 – Parity 2 Sows
- Managing the Mature Sow (Parity 3+)
- Housing options for the breeding herd
- Euthanasia and disposal options for the breeding herd

Currently, the final touches are being completed on the Managing Replacement Gilts unit. Maintaining the gilt pool represents a large investment for any pork producer; females that stay in the breeding herd longer will allow pork producers to possibly be more profitable.

Following the completion of the Managing Replacement Gilts unit, development work will continue on the P1-P2, mature sow, housing options for the breeding herd, and euthanasia and disposal options for the breeding herd.

## USPCE Future Plans

In order to sustain its existence, the U.S. Pork Center of Excellence needs to add to its funding sources. While grants are a valuable source of support, funding for administrative support is usually not provided to any great extent with these grant opportunities. That is why it is especially critical at this time to realize the appropriations envisioned by those who drafted the 2008 Farm Bill and to obtain that level of funding either by the Secretary of Agriculture or through congressionally directed funding.

We will endeavor to be more relevant to the swine research community. The priorities that we listed in the joint environmental book done with the National Pork Board and the priorities that surfaced at the “Addressing Grand Challenges through Science” workshop were a good start to bringing about some coordination in this arena. However, there is a lot more we should and can do. One area not receiving much attention by the industry is in the area of pork quality. Canada is currently conducting a feasibility study to investigate the possibility of a national initiative on the quality of the product. This is an area which might command some attention in the U.S. as well.

Education and training opportunities for U.S. pork producers, as well as others in the industry, are much needed. The Swine Science Online program and the Professional Swine Manager/Technician training efforts are good starts in this area. An initiative with the secondary education is another focus that merits some attention. A grant for this opportunity has been submitted and we are awaiting the outcome.

In the next year, we also plan to initiate a new marketing effort for the Pork Information Gateway. A plan will be developed by the PIG Domain Editors that will help identify the most efficient ways to reach producers and inform them about the wealth of information available to them on PIG. Following the major redesign of PIG this year, we feel that focusing our efforts on marketing the website will be most beneficial in the upcoming year.

At the U.S. Pork Center of Excellence we have always attempted to conduct full scale communications with our funding partners through visits, correspondence and a very successful Deans’ Policy Council. This communication will be continued. Updates of USPCE programs will be coupled with discussions on what we can and should be doing better to meet the needs of our support base.

This has been an interesting journey in establishing the U.S. Pork Center of Excellence and trying to figure out how to be most relevant to pork producers and to the pork production industry. We have accomplished a lot but there is still a lot more to be done. With the help of our partners, we will continue to remain focused on our vision.

# USPCE Partners

## Government Sectors



## National Pork Organizations



## State Pork Associations



Land Grant Universities



The University of Georgia



EXTENSION



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