

Agriculture and Natural Resources

2010-2014 Plan of Work

150 Iowa Pork Industry Center

Statement of Issues:

We need to take action now in planning the growth and evolution of the pork industry in Iowa to meet the long-term needs of the pork production industry and our rural economies, while being considerate of the environmental and social concerns shared by all residents of Iowa. As we look to the future, the primary use for Iowa farmland still will be to grow crops such as corn and soybeans. These crops will need even more fertilization as yields will continue to be pushed higher. The primary products used for fertilizers have been petroleum-based. The cost of these petroleum-based fertilizers will most likely rise, which will then drive the value of swine manure as a crop nutrient even higher. The synergies between crop production and pork production are unique and it is logical to consider this avenue to enhance our rural economies by capitalizing on these opportunities. Another challenge for the pork industry in Iowa is the reduced profit margin on its product. As a result, pork producers must become more business-oriented, utilizing technology to keep costs down while maintaining product quality and market share.

Objectives:

- Environmental, economic and social sustainability of the pork industry in Iowa.
- Rural economic development for Iowa.
- Development of the next generation of the pork industry in Iowa.

Outputs:

- Have 10,000 swine premises registered in the national animal ID program.
- Expose 500 pork producers to pen gestation systems and their management.
- Educate Iowa producers on the value of transport and aerosol transmission of disease pathogens.
- Have 60% of pork producers use manure testing information to manage their manure.
- Inform the industry building new production facilities in the state on the advantages of “low density” systems.
- Work with scientific and industry efforts to delineate the causation of odor from swine facilities.
- Install SowTracker swine reproductive management software system on 25 herds in Iowa as a “pilot” project.
- Cooperate with more than 100 Iowa sow farms in their efforts to extend sow longevity.
- Create a benchmarking program of post-weaning performance from more than 25 Iowa swine farms, and cooperate on a national basis with appropriate organizations.
- Work with more than 500 Iowa swine farms in their manure management programs.
- Develop QMS protocols for areas of major scrutiny that pork producers will be faced with in the future.
- Work with 100 producers on siting questions, business plans, and production practices for the construction of new swine facilities in rural areas of Iowa.
- Cooperate with DNR in interpreting the rules and regulations pertaining to confinement animal units in rural Iowa.
- Work with five AI studs in rural Iowa on their business plans, genetic systems and bio-security issues.
- Coordinate the Iowa State Fair Market and Derby swine shows, and county fair derby and market swine shows in Iowa with more than 500 youth participating annually.
- Work with the Iowa State University Animal Science Department staff in their Roundup program for student recruitment.
- Cooperate with appropriate state staff and ISU Extension field staff to offer three pork related workshops during the annual Iowa State 4-H Youth Conference.
- Have 10 students complete the Swine Fellows program annually at ISU.

- Work with the IPPA and its Youth Ambassador Program with at least five youth completing the program each year.
- Scan more than 2,000 pigs at 30 county fairs around Iowa each year.
- Judge youth swine shows at more than 25 youth events annually.
- Work with 50 crop producers to broaden their agricultural enterprise to include or expand swine production facilities in order to bring another family member into the business.
- PQA+ program to train 100 advisors and assist 200 producers with their site assessments, and train 1,500 youth through Iowa's FSQA program.

Outcome Indicators:

151 – National animal ID program: Short/Medium-term results are seen in the number of premises registered in the national animal ID program (cumulative). Long-term impact is seen when a response to a crisis occurs.

152 – Group pen sow gestation systems: Short/Medium-term results are seen in the number of producers who seek and obtain information about alternative sow gestation systems compared to the traditional “stall” system. Long-term results will be seen in the ability to transition these sow housing systems to ones that are acceptable to both our retail customers and the production segment of the industry.

153 – Sustainable environmental management: Short/Medium-term results are seen in the number of pork producers learning how to use environmentally friendly swine management production practices. Long-term results will be seen in the effectiveness of the program for optimal production with minimal negative events.

154 – Business management strategies: Short-term results will be seen in the increasing demand for educational events relating to this topic. Medium-term results will be seen in the increasing demand for software and other tools relating to swine business management. Long-term results will be seen in the increasing number of pork production farms with accurate cost of production records, and their ability to use this information to enhance business flexibility and profit.

155 – Quality management systems: Short-term results are seen in the number of advisors trained in PQA+ and the number of youth trained in FSQA. Medium-term results are seen in the number of producers that complete the site assessment phase of the PQA+ program. Long-term results are measured by the response to the program by the retail segment of the pork industry.

156 – Youth and societal understanding and communication: Short/Medium-term results will be seen in the number of youth participating in the Iowa State Fair swine programs annually, and the number of events targeting youth and consumer audiences. Long-term results are seen in the viability of the pork industry over time and through acceptance by the community.

157 – Pork and crop farm synergies: Short-term results will be seen in the receptiveness of producers, county administrators and other interested parties in the concept of integrated crop/livestock enterprises, and the number of pork producers learning how to use manure testing information to manage swine manure application. Medium-term results will be seen in the number of crop producers who broaden their agricultural enterprise to include swine production facilities. Long-term results will be seen as these enterprises bring another family member into the business, and the effectiveness of a manure management program for optimal crop production with minimal negative effects.

158 – Production systems and practices: Short/Medium-term results will be seen in the number of pork producers who attempt to learn more about alternative production systems and practices. Long-term results are seen in the long term competitiveness of our pork industry.

159 – Animal health improvement: Short-term results are seen in the demand for information by our clients. Medium-term results will be seen in our ability to provide improved animal health protocols or procedures. Long-term results will be seen in our ability to respond to the future challenges this area will encounter.

Target Audiences:

Independent farms
Corporate farms
Attribute based farms
Peer support groups
Youth and next generation
Commodity groups
Veterinarians
Community colleges
General population
Policy makers
Allied industries

Outputs:

National Animal ID Program: IPIC Associate Director serves on the national steering team for NAIS.(National Animal Identification System) Producers are targeted for sign-up at this program at the Iowa Pork Congress, and in IPIC/IPPA regional meetings around the state. As of April, 2009, Iowa has 25,187 of an estimated 47,273 premises registered with the NAIS (this is across species)

Group Pen Sow Gestation Systems: ISUE Swine Field Specialists are trained in this area at in-service training, and include this as a part of their farm visits, regional educational efforts, and PQA+ site assessments.

Sustainable environmental management: IPIC works closely with Iowa Manure Management Action Group (IMMAG) in development and implementation of standards and protocols for producer education in this area, particularly with the Field Specialist programs of work.

Cost of production records: We have completed a National Research Initiative research program working with niche market farms to assist them in accurately knowing their cost of production, and have held multiple educational events to disseminate the results of this project. Swine reproductive management software is being developed to assist both niche market producers (Sow Group Tracker) and commodity producers (Sow Tracker) in monitoring herd inventories and reproductive performance. The IPIC has offered software to assist all producers in monitoring post-weaning performance of pigs for the past years (Group Tracker). A new software package, Pig Profit Tracker has been developed. This software is designed to assist the producer in considering the component cost of production for their specific farm, and allow the producer to examine alternative performance levels, risk management strategies, and marketing strategies, and their impact on profit. Also, each Swine Field Specialist works with individual producers wanting to use the Swine Business Record software package to estimate annual costs and returns from pork production.

Quality (Environmental) Management Systems: The efforts sponsored by the “Smithfield Agreement” with the state of Iowa and coordinated through the IPIC has focused in part on working with swine producers to better understand what an EMS consists of and how it can be of benefit to them. QMS strategies for responding to current areas of scrutiny have been developed and are being field tested. A major swine harvest company recently announced that every swine producer selling hogs to their facilities must be PQA+ and TQA trained, and each site where the pigs originate must be PQA+ site-assessed. IPIC faculty have trained many advisors to assist in meeting this requirement, and ISUE area swine field specialists will be active in all phases of activities meeting this need.

Youth and societal understanding and communication: The efforts of IPIC personnel in county and state fair swine activities continue to be strong. Further efforts are aimed at youth considering college after high school, with many of these efforts in cooperation with the Animal Science department, College of Agriculture and Life Sciences, and College of Veterinary Medicine faculty and staff.

Pork and crop farm synergies: IPIC personnel have held meetings for county boards of supervisors and boards of health to educate them as to the potential benefits of animal agriculture. These events are coordinated by ISUE Field Specialists and programs are presented by faculty from the departments of Animal Science, Economics and Agriculture and Biosystems Engineering. IPIC works with producer organizations such as IPPA and Iowa Farm Bureau, as well as the Beginning Farmer Center at ISU, in developing programs on the potential for young farmers to enter agriculture via integrated crop and swine production.

Production systems and practices: To improve their profit through using state of the art production systems and practices, producers are offered educational opportunities through regional conferences, Iowa Pork Congress, PorkBridge, SowBridge, convention and trade show displays, and one on one client discussions.

Animal health improvement: Faculty from the College of Veterinary Medicine are very active in developing and communicating information for producers to improve the animal health of their farms. This information comes to the producer directly through regional conferences, statewide educational meetings, educational teleconference series such as PorkBridge and SowBridge, and via educational opportunities for swine veterinary practitioners in the annual Iowa Swine Disease Practitioners Conference.

Brief description of the target audiences.

Independent farms: these are farms that are owned by the individual operators and not by investor owned companies, although they may be incorporated for business reasons

Corporate farms: these are farms that are owned by investor owned companies

Attribute based farms: these are farms that are marketing a product based on a particular attribute that has appeal to a consumer segment and has a potential higher return

Peer support groups: these are groups of producers with common interests and concerns as it applies to pork production

Youth and next generation: these are our potential clients and include high school, college and young people newly entering the workforce

Commodity groups: these are the organizations that represent the pork producers of Iowa, such as Iowa Pork Producers Association, Iowa Farm Bureau Federation, National Pork Board, National Pork Producers Council, and National Swine Registry

Veterinarians: these are the animal health practitioners who serve the pork industry through on-farm service, through commodity groups or other organizations

Community colleges: these educational institutions are our partners in training potential swine farm personnel as well as consumers of pork

General population: as consumers of pork, this is a very important group

Policy makers: because the pork industry does not operate without impact from the policy makers of Iowa and the nation, we must communicate and cooperate with this client group

Allied industry: the production segment of the pork industry relies on allied industry to provide goods, services and information that allow the producers to meet their goals. Allied industry includes providers such as feed manufacturers, equipment suppliers, animal health product suppliers, software providers, consultants, and genetic suppliers

1. Enter the actual number of persons (contacts) to be reached through direct and indirect contact methods.

| | Direct Contacts Adults | Indirect Contacts Adults | Direct Contacts Youth | Indirect Contacts Youth |
|------|------------------------|--------------------------|-----------------------|-------------------------|
| Year | Target | Target | Target | Target |
| Plan | 8000 | 16000 | 3000 | 3000 |

2008 12000 24000 2000 2000

2. Number of patents (Standard Research Output)

Patents Received

Year Target

Plan 0

2008 0

If Patents received, Please list them here:

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

| | Extension | Research | Total |
|------|-----------|----------|-------|
| Plan | 25 | 35 | 60 |
| 2008 | 27 | 38 | 65 |

1. Output Target

State Generated Output Indicators

| | | |
|--|--------|--------|
| State defined output measure: | | |
| Measure... Number of research studies completed. | | |
| <input checked="" type="checkbox"/> Not Reporting on this Output Measure | | |
| Year | Target | Actual |
| 2008 | 12 | |

| | | |
|--|--------|--------|
| Measure... Number of porcine respiratory and reproductive syndrome (PRRS) epidemiologic studies. | | |
| <input checked="" type="checkbox"/> Not Reporting on this Output Measure | | |
| Year | Target | Actual |
| 2008 | 3 | |

| | | |
|--|--------|--------|
| Measure... Number of producer surveys related to porcine respiratory and reproductive syndrome (PRRS) management and impact. | | |
| <input checked="" type="checkbox"/> Not Reporting on this Output Measure | | |
| Year | Target | Actual |
| 2008 | 3 | |

Add Unintended or Previously Unknown Output Measure

| | | |
|---|--------|--------|
| Measure... | | |
| <input type="checkbox"/> Not Reporting on this Output Measure | | |
| Year | Target | Actual |
| 2008 | | |

State defined outcomes:

1. Outcome Target

| Outcome Measures |
|---|
| 154 – Cost of production records |
| Measure: Number of niche market farms with accurate cost of production records. |

| | | |
|---|---|--------|
| <input type="checkbox"/> Not Reporting on this Outcome Measure | | |
| 2. Outcome Type | | |
| X Change in Knowledge Outcome Measure | | |
| <input checked="" type="checkbox"/> Change in Action Outcome Measure | | |
| <input type="checkbox"/> Change in Condition Outcome Measure | | |
| Enter by Quantitative and/or Qualitative Method Below as appropriate | | |
| Quantitative Outcome | | |
| Year | Quantitative Target (if appropriate) | Actual |
| 2008 | 40 | 49 |
| Qualitative Outcome or Impact Statement | | |
| Issue (Who cares and Why) | | |
| <p>Small farmers face challenges in being profitable. One way small farmers try to be profitable is to produce niche hogs for specialty markets. Examples are certified organic and antibiotic-free hogs. But raising these hogs is challenging, in part because of the lack of needed technical and research support. This project addressed this lack of support by examining niche pork production systems, including herd health issues, and by developing and delivering outreach to niche pork farmers and professionals working with these farmers.</p> <p>What has been done:</p> <p>The project used a comprehensive record-keeping program to obtain usable records from 49 niche pork farms. In order to get the niche market producers to participate, multiple contacts between ISUE personnel and the producers were required. This involved individual meetings with the producers to discuss the project and its benefits to the producers, contacts to get the initial data, followed by contacts to be sure the data was being interpreted correctly, and follow-up contacts to explain the results and discuss the application of the results by the producers.</p> <p>Results: (10 To 12 Lines Max)</p> <p>Information from the results was used to develop educational materials and deliver outreach programming. Materials include a Niche Pork Production Handbook, research reports in the Iowa State University 2008 Animal Industry Report, and articles in various other publications. Presentations were given at various venues including the Iowa Pork Congress, the Swine Disease Practitioners Conferences, and the Boundary Waters Veterinary Conference. In addition, 12 farmer-to-farmer meetings were held where results were presented and key topics were discussed. More than 500 people participated in these presentations and training sessions. The information from this project was incorporated into Pork Production and Farm Business Analysis course offerings at Iowa State University.</p> | | |

| Outcome Measures | |
|--|--|
| 155: Quality (Environmental) management systems | |
| Measure: Number of swine farms to participate in EMS training sessions (cumulative). | |
| <hr/> | |
| X Not Reporting on this Outcome Measure | |
| 2. Outcome Type | |
| <input type="checkbox"/> Change in Knowledge Outcome Measure | |
| <input type="checkbox"/> Change in Action Outcome Measure | |
| <input type="checkbox"/> Change in Condition Outcome Measure | |
| Enter by Quantitative and/or Qualitative Method Below as appropriate | |
| Quantitative Outcome | |

| Year | Quantitative Target (if appropriate) | Actual |
|---|---|--------|
| 2008 | 600 | |
| <p>Qualitative Outcome or Impact Statement Issue (Who cares and Why): Swine producers are undergoing increased scrutiny from external partners in a number of areas. Concerns about the environment, animal well-being and food safety are major areas of interest to consumers, retailers, and processors as well as producers of pork. Increasingly pork producers are being asked to document their performance in these areas, in many cases with third party verification of the results. A "Quality Management Systems" approach has been found to be most effective in meeting the producer's needs in these areas, as well as having other benefits such as increased market access, lower cost of production, and enhanced employee management capabilities.</p> <p>What has been done: The IPIC has identified QMS as a priority program for the next period of time. Working with funding from the Smithfield-State of Iowa settlement, a part-time coordinator was hired to manage this program. Areas of QMS activities include environmental management systems, premise ID, national animal identification system, PQA+ certification of producers, ISO9000/14000 certification and other process verification based programs.</p> <p>Results: A pilot group of 12 farms is participating in an Environmental Management System initiation program. One major program is the PQA+ program coordinated by the National Pork Board. This requires that producers successfully complete an educational program aimed at ensuring the highest food safety and animal well-being results from their farms. The IPIC has four persons who have become certified PQA+ trainers. Their job is to train PQA+ advisors, who will then certify producers in this industry-based program. To date, the IPIC has conducted nearly 20 meetings resulting in more than 250 certified PQA+ advisors. As producers are required to become PQA+ certified, it will be the job of these advisors to conduct either group or individual training for producers. To date, three of the major processors in Iowa now require that all suppliers be PQA+ certified within the next three years or sooner. ISUE and IPIC have the largest and most active program in this area in the nation. People trained in PQA+ by IPIC include veterinarians, educators, and producers directly.</p> | | |

| Outcome Measures | | |
|---|---|--------|
| 156 – Youth and societal understanding and communication: | | |
| Measure: Number of youth participating in the Iowa State Fair swine programs (annually), and the number of events targeting youth and consumer audiences. | | |
| X Not Reporting on this Outcome Measure | | |
| 2. Outcome Type | | |
| <input checked="" type="checkbox"/> Change in Knowledge Outcome Measure <input type="checkbox"/> Change in Action Outcome Measure <input type="checkbox"/> Change in Condition Outcome Measure | | |
| Enter by Quantitative and/or Qualitative Method Below as appropriate | | |
| Quantitative Outcome | | |
| Year | Quantitative Target (if appropriate) | Actual |
| 2008 | 500 | |
| <p>Qualitative Outcome or Impact Statement Issue (Who cares and Why): Today's young people need to know how important livestock and crop production is to the world and learn how they can have an active role in maintaining our state's agricultural leadership. In order to be successful in agricultural production, youth must be well educated. We use a variety of methods to provide to youth accurate,</p> | | |

timely and unbiased information in the areas of swine production and consumer information. In addition to personally useful information, we also encourage consideration of post-secondary enrollment at Iowa State University in animal science and human science fields.

What has been done:

IPIC and ISUE staff coordinate the Iowa State Fair 4-H Derby swine show and work with the premier swine exhibitor scholarship program; we coordinate with the ISU Animal Science Department staff in their recruitment effort during the annual 4-H Roundup program; we coordinate and present three pork-related workshops during the annual Iowa State 4-H Youth Conference; we encourage enrollment in the ISU Swine Fellows program; we work with IPPA in its Youth Ambassador Program and in arranging youth activities at the Iowa Pork Congress; and we offer ultrasound scanning services to Iowa county fair swine shows.

Results:

More than 300 youth exhibited in the State Fair youth swine show; 85 youth participated in Roundup; more than 50 youth and adult State 4-H conference attendees participated in the workshops; 12 ISU students are part of the Swine Fellows program; the Pork Youth Ambassador program has been restructured, yet nearly 100 youth participated in special activities including the scavenger hunt at Iowa Pork Congress; and more than 2,400 head of market hogs and 377 derby hogs were scanned for county fair shows in 37 Iowa counties.

Outcome Measures

157 – Pork and crop farm synergies

Measure: Number of crop producers who broaden their agricultural enterprise to include swine production facilities in order to bring another family member into the business (annually), and the number of pork producers learning how to use manure testing information to manage swine manure application.

X Not Reporting on this Outcome Measure

2. Outcome Type

- Change in Knowledge Outcome Measure
- Change in Action Outcome Measure**
- Change in Condition Outcome Measure

Enter by Quantitative and/or Qualitative Method Below as appropriate

Quantitative Outcome

| Year | Quantitative Target (if appropriate) | Actual |
|------|---|--------|
| 2008 | 25 | |

Qualitative Outcome or Impact Statement

Issue (Who cares and Why):

It is important to develop and maintain a “sustainable” agriculture industry in Iowa. Sustainability has various components such as economic viability, social acceptance and environmental impact. The best way to accomplish all three areas of sustainability is to integrate the crop and livestock industries of Iowa. Livestock are the primary users of Iowa grown crops. Livestock produce highly valuable nutrients that are needed by the crop producers to fertilize the land and produce the high levels of product needed for economic viability. And the inclusion of livestock production (such as a swine finisher) in the business plan of a crop farmer adds diversity to the operation, and provides a mechanism for a young beginning farmer to enter agriculture. In addition, these swine production enterprises add to the tax base of our rural communities and create jobs where the proceeds stay in the community.

What has been done:

A cash flow model has been developed for use by crop farmers, and others who might be considering expansion of their business to include finishing of swine. Targeted publications outlining the possibilities of diversifying farms to increase income and manage risk have been developed. Also, ISUE Swine Field Specialists have coordinated meetings with county boards of supervisors and county boards of health to expose them to this important topic of

“Animal Agriculture” and the benefits of integrated crop and livestock production. A grant was obtained from the National Pork Board targeted at the local economic impact of pork production operations on the local economies. ISUE ANR Swine Field Specialists are participating in this project.

Results:

Displays outlining the possible advantages of these systems were put up and staffed at the Iowa Farm Bureau Federation annual meeting, Farm Progress Show, the Iowa Pork Congress and many regional and local events. The IPIC has worked very closely with the Coalition to Support Iowa’s Farmers in articulating this concept, and in assisting producers in evaluating potential sites for swine barns that would have the least probability of odor or negative impacts on neighbors. A spreadsheet has been developed that enables a pork producer to input specific information concerning their operation and estimate the economic impact on the local economy.

Outcome Measures

151 – National Animal ID program

Measure: Number of premises registered in the national animal ID program (cumulative).

Not Reporting on this Outcome Measure

2. Outcome Type

- Change in Knowledge Outcome Measure
- x **Change in Action Outcome Measure**
- Change in Condition Outcome Measure

Enter by Quantitative and/or Qualitative Method Below as appropriate

Quantitative Outcome

| Year | Quantitative Target (if appropriate) | Actual |
|------|---|--------|
| 2008 | 4500 | 24,743 |

Qualitative Outcome or Impact Statement

Issue (Who cares and Why):

A national animal identification system is necessary to help protect American animal agriculture from disease threats. The ability to find potentially sick or exposed animals early in a disease outbreak is essential to controlling the outbreak quickly. The NAIS would allow for rapid trace back of animals in the event of an outbreak, helping to limit the outbreak and minimize the impact on markets. The NAIS may benefit producers in other areas as well, including providing additional marketing opportunities. The NAIS also helps uphold the reputation of Iowa and the United States as having healthy animals, and it will promote continued confidence in American agricultural and animal products.

What has been done:

Producers and other landowners were encouraged to register their premises during the Iowa Pork Congress at a dedicated online computer in the IPIC/ISU display. Representatives from IDALS were at the display much of the time to provide assistance and answer questions. Also, producers were referred to the IDALS display at the same trade show for additional information. ISUE swine field specialists affiliated with livestock production have registered their own premises, and based on their experience, promote the program and its simple registration process to attendees at educational programs throughout the year.

Results:

Our target goal of 2,500 registered premises in Iowa was easily reached, because we still are in the early phases of the program. In fact, according to the latest numbers available from the USDA-APHIS Web site on the NAIS program, more than 44 percent of all premises in Iowa have been registered as of 1-22-09: 24,743 of an estimated 47,273 premises. This puts Iowa in 5th place nationally for number of premises registered and 13th place in percentage of estimated premises registered.

| Outcome Measures | | |
|--|---|--------|
| 152 – Group pen sow gestation systems | | |
| Measure: Number of pork producers exposed to large pen gestation systems and their management (cumulative). | | |
| X Not Reporting on this Outcome Measure | | |
| 2. Outcome Type | | |
| <input type="checkbox"/> Change in Knowledge Outcome Measure <input checked="" type="checkbox"/> Change in Action Outcome Measure <input type="checkbox"/> Change in Condition Outcome Measure | | |
| Enter by Quantitative and/or Qualitative Method Below as appropriate | | |
| Quantitative Outcome | | |
| Year | Quantitative Target (if appropriate) | Actual |
| 2008 | 250 | |
| Qualitative Outcome or Impact Statement Issue (Who cares and Why): The pork industry is under attack from activist groups with an agenda against animal agriculture. One way they have attacked the animal industries is the method of penning females during reproduction. The traditional method of housing sows in environmentally controlled individual crates has been a target of criticism and legislative action (to ban such pens). As a result, pork producers need to be aware of alternative group sow housing systems and their strength and weaknesses. | | |
| What has been done: The ISUE Swine Field Specialists held one of their semi-annual in-service training events in North Carolina. Because the nation's largest pork producer has committed to use group sow housing and has been a leader in developing these housing systems, the field specialists (and accompanying faculty) had the chance to learn about these systems and evaluate how they might be used in Iowa. Each field specialist developed a PowerPoint presentation targeted towards group sow housing that was used for multiple audiences. In addition, this was a topic presented to producers at our regional Advanced Reproductive Management Conferences. | | |
| Results: More than 5,000 of our pork producers and allied industry have been exposed directly to the concepts of group sow housing, and the strengths and limitations of these facilities at commodity conferences such as Iowa Pork Congress. ISUE-sponsored Reproductive Management Conferences were attended by 200 in the past year. | | |

| Outcome Measures | | |
|---|--|--|
| 153 – Sustainable Environmental Management | | |
| Measure: Short/Medium-term results are seen in the number of pork producers learning how to use environmentally friendly swine management production practices. | | |
| X Not Reporting on this Outcome Measure | | |
| 2. Outcome Type | | |
| <input type="checkbox"/> Change in Knowledge Outcome Measure <input checked="" type="checkbox"/> Change in Action Outcome Measure <input type="checkbox"/> Change in Condition Outcome Measure | | |

| | | |
|--|---|--------|
| Enter by Quantitative and/or Qualitative Method Below as appropriate | | |
| Quantitative Outcome | | |
| Year | Quantitative Target (if appropriate) | Actual |
| 2008 | 35 | |
| <p>Qualitative Outcome or Impact Statement</p> <p>Issue (Who cares and Why): Livestock nutrients are a valuable resource to farmers, supplying essential nutrients required for crop growth. However, it also is no secret that too much manure or manure improperly handled or land-applied can also be a detriment to soil and water quality. The agriculture community recognizes the need to provide information on regulations, best management practices, and neighbor relations to Iowa's farmers.</p> <p>What has been done: ISUE field specialists with livestock and agricultural engineering specialties plan and present manure management certification meetings annually, and offer specialized manure management plan educational meetings and sessions on as-needed and as-requested bases in their respective geographical areas.</p> <p>Results: IPIC and ISUE field specialists will plan content for delivery of the annual confinement site manure application certification program to 70 county ISU Extension offices. IPIC works closely with IMMAG in development and implementation of standards and protocols for producer education in this area, particularly with the Field Specialist programs of work. Each year a higher percentage of pork producers test their manure for nutrient composition prior to land application. The reasons for this include the increasing value of manure dictates that less is wasted; pork producers are most always good stewards of the land, and over-application could harm water quality; and most producers realize that any over-application casts the industry in an unfavorable light. The Manure Applicator Certification (MAC) program is especially important in making sure that manure is tested prior to land application. As more of the acres of Iowa cropland are fertilized with animal nutrients, and more pork producers either qualify for the MAC.</p> | | |

| | | |
|--|---|--------|
| Outcome Measures | | |
| 159 – Animal health improvement | | |
| Measure: Number of producers who adopt improved animal health protocols or procedures | | |
| X Not Reporting on this Outcome Measure | | |
| 2. Outcome Type | | |
| <input type="checkbox"/> Change in Knowledge Outcome Measure <input checked="" type="checkbox"/> Change in Action Outcome Measure <input type="checkbox"/> Change in Condition Outcome Measure | | |
| Enter by Quantitative and/or Qualitative Method Below as appropriate | | |
| Quantitative Outcome | | |
| Year | Quantitative Target (if appropriate) | Actual |
| 2008 | 35 | |
| <p>Qualitative Outcome or Impact Statement</p> <p>Issue (Who cares and Why): An essential part of efficient production of profitable pork is maintaining a healthy herd. With the increasing oversight over food safety and the tightening profit margins, it is imperative for pork producers to adopt optimal animal health programs and procedures for their herds. Information on these improved animal health protocols and procedures must come from unbiased sources of information who work with the most advanced discovery</p> | | |

teams.

What has been done:

Iowa State University has greatly re-invested in programs involving Food Supply Veterinarians and the Veterinary Diagnostic and Production Animal Medicine unit. These programs are designed to integrate a variety of disciplines to effectively address the needs of producers and consumers, and provide veterinary students with needed skills, knowledge and problems solving ability to serve the needs of the pork industry of Iowa. These areas of discovery, education and technology transfer are essential needs of our clients in Iowa.

Results:

The capabilities of the Veterinary Diagnostic Lab at ISU have been greatly enhanced over the past years. Major investments in facilities, faculty and staff have increased the capability to serve our clients. Ongoing programs, such as the Iowa Swine Disease Conference, continue to be the model for other universities across the nation. Furthermore, the cooperative activities between the College of Veterinary Medicine and the College of Agriculture and Life Sciences have been greatly enhanced recently. Cooperative efforts in areas such as PQA+ education, sow lifetime productive lifetime, animal well-being and care, and computerized data management systems have recently evolved and are having a tremendous impact on pork production in Iowa, the nation, and the world.

Outcome Measures

158 – Production systems and practices

Measure: Number of pork producers who adopt more competitive production systems and practices

X Not Reporting on this Outcome Measure

2. Outcome Type

- Change in Knowledge Outcome Measure
- Change in Action Outcome Measure**
- Change in Condition Outcome Measure

Enter by Quantitative and/or Qualitative Method Below as appropriate

Quantitative Outcome

| Year | Quantitative Target (if appropriate) | Actual |
|------|---|--------|
| 2008 | 35 | |

Qualitative Outcome or Impact Statement

Issue (Who cares and Why):

Pork production, like all other agriculture enterprises, requires an ever increasing level of efficiency and product quality to survive and prosper. To accomplish this, pork producers must continually improve their production systems and practices to meet these goals. As a Land Grant University, ISU has a broad mission which includes discovery of new technology, assisting our clients' adoption of these technologies, and educating our students and industry clients in why these new ideas might help them and how to implement them

What has been done:

Iowa State University has more than 50 Ph.D. or DVM scientists working to assist the pork industry of Iowa. In addition, we have access to technology developed at other locations which may be of service to the pork producers of Iowa. We also have the largest and most effective information delivery system in the nation. A coordinated effort between ISU administration, faculty and staff targeting the pork industry of Iowa is ongoing and extremely successful.

Results:

Only pork producers who adopt more competitive production systems and practices can survive and prosper over the long term. The IPIC has had direct contact with more than 40,000 participants in the pork industry over the past year. Major activities (in terms of client contacts) include the Iowa Pork Congress, the World Pork Expo,

Farm Progress Show, Iowa Farm Bureau Federation annual convention, regional conferences and one on one interactions with clients. Another avenue of impact is through the IPIC website and the PORKLine. Programs of particular success has been the development of materials for assessment of sow condition (more than 5,000 distributed worldwide), guides to replacement gilt selection (more than 6,000 distributed worldwide), and Sow Longevity Spreadsheets (distributed to producers across Iowa and to 42 foreign countries worldwide, and available in three languages with plans to add at least two more languages).

External factors which affected outcomes. (Check all that apply)

| | |
|---|---|
| | Natural Disasters (drought, weather extremes, etc.) |
| | Economy |
| | Appropriations changes |
| X | Public Policy changes |
| X | Government Regulations |
| X | Competing Public priorities |
| | Competing Programmatic Challenges |
| | Populations changes (immigration, new cultural groupings, etc.) |
| | Other: |

Brief explanation of external factors which affected the outcomes.

External factors that influence the outcomes of our programs have centered on the public policy and governmental regulation areas, with other competing public priorities also having an impact. As the State and Federal legislative bodies implement policy and regulations that impact our pork industry, this then has a great impact on our programmatic activities and their impact. Examples for the current time include MCOOL, National Animal ID System, and the requirement of PQA+ site status of their vendors by the pork processors. These external factors will drive many of our programs for the upcoming year, however, they also will offer us the opportunity to engage new clients and have a positive impact of a larger number of clients than in previous years.

Evaluation studies Completed. (Check all that apply)

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Comparison between locales where the program operates and sites without program intervention
- Other _____

What are your Evaluation Results?

Much of the pre-event/educational opportunity evaluations are done on an individual, in-person basis, as specified by the original NRI grant. These results are compared with the post-event results in the next paragraph. These comparisons also are used to estimate numbers of producers and different types of operations that were not in this program, but also might benefit from similar experiences, software and other resources developed through the original grant project.

Presentations on herd health events and related management problems were given to more than 400 niche pork producers using face-to-face and online methods. At least three months after these educational events, follow-up surveys were distributed to approximately half of these attendees (200), and 40 of these were returned for a 20 percent response rate. Specific behavioral changes were addressed in these surveys and measured by respondent completion. Of the 40 producers who returned surveys, 75% (30) said they were now adjusting feeders more often in attempts to reduce feed wastage. Fifty percent (20) said they cleaned waterers more often to provide more clean fresh water to their pigs. Forty-three percent (17) reported making adjustments to their nutrition programs to help lower the cost of gain on their animals, and nearly one-third (12) had implemented a change in pig flow to batch-farrow sows when possible, leading to a narrower weaning age range within groups. Perhaps most importantly, nearly 40% decided to start keeping financial and other production records in their operations. As project team members continue to follow these initial participants, more positive changes in behavior are expected.

As a result of past work with niche pork producers, a need for software to help provide costs and other information was realized. Sow Group Tracker was developed by field staff with assistance from campus staff and faculty. This software is being field-tested with a variety of operations (herd size, geographic location, existing use of similar software, etc.) Early results and responses are helping staff and faculty fine-tune the program, and are offering cooperators the opportunities to look at the economic potential for bettering their financial position.

Key Items of the Evaluation(s) for CSREES Attention.

Twenty percent of solicited survey respondents in an NRI grant project of niche pork producers returned completed surveys. These surveys were sent at least three months after an educational event to allow time for participants to decide whether to adopt behaviors learned during the event. More than 400 participants attended educational events in two different ways: producer meetings (in person) and via an Internet-provided venue, and roughly half were surveyed.