

## FUNDED RESEARCH - 2007

Category	Project Title	ID#	Investigator	Organization
Animal Science	North American Swine Energy System, 2nd Year	07-011	Pettigrew, James E.	University of Illinois
Animal Science	Development of a Soy Allergenicity Model in Swine - YEAR 2 (06-085)	07-240	Barfield, Tracy	SmithBucklin Corporation
Animal Welfare	Retrofit an Optimized Gestation Stall System Based on Sow Well-being: A pilot study	07-026	Salak-Johnson, Janeen L.	University of Illinois
Animal Welfare	Assessment of lameness, pain and culling risk in sows	07-039	Deen, John	Regents of the University of Minnesota
Animal Welfare	Evaluation of the relationship between hoof abnormalities and breeding herd female longevity and well-being when housed in gestation and farrowing stalls.	07-051	Johnson, Anna	Iowa State University
Animal Welfare	Gestating sows' preference for open, closed and animal-controlled stall designs	07-082	Pajor, Edmond	Purdue University
Animal Welfare	The effect of alleyway width on sow behavior and welfare in a free-access gestation stall housing system	07-083	Pajor, Edmond	Purdue University
Animal Welfare	Impact of group size and diet on behavior and physiology of sows	07-105	Salak-Johnson, Janeen L.	University of Illinois
Animal Welfare	Understanding and reducing aggression using pre-exposure, when sows are mixed in a grouped gestation system	07-128	Marchant Forde, Jeremy	USDA, ARS, Midwest Area
Animal Welfare	Sow Housing Conversion Survey	07-239	Arnott, Charlie	CMA Consulting
Environment/Odor	Development of an Air Quality Self Assessment Tool (AQSAT) for swine producers	07-013	Powers, Wendy	Michigan State University
Environment/Odor	Enhancing the Value of Swine Manure and Nutrient Availability with Application Timing and Cover Crops	07-031	Randall, Gyles W.	Regents of the University of Minnesota
Environment/Odor	Phosphorus Recovery from Concentrated Wastewater with a Continuous-Flow Struvite Crystallizer	07-032	Westerman, Philip	North Carolina State University
Environment/Odor	Alternative Biofilter Media Testing	07-034	Janni, Kevin	Regents of the University of Minnesota
Environment/Odor	Air Quality/Emission and Energy Usage Impacts of No Pit fans in a Wean to Finish Deep Pit Pig Facility	07-042	Jacobson, Larry D.	Regents of the University of Minnesota
Environment/Odor	Field and Wind Tunnel Evaluation of Vegetative Buffers for Particulate Trapping and Odor Reduction Near Swine Production Facilities	07-048	Sauer, Thomas J.	USDA, ARS, Midwest Area
Environment/Odor	Simultaneous treatment of swine odor and airborne pathogens by UV light	07-091	Koziel, Jacek	Iowa State University
Environment/Odor	White Paper: Utilization of Manure Nutrients for Soybean Crop Production	07-098	Burns, Robert T.	Iowa State University
Environment/Odor	Demonstrating Innovative Use of Precision Farming Technologies to Optimize Manure Nutrient Utilization and Reduce Environmental Concerns	07-106	Wolkowski, Richard	University of Wisconsin-Madison
Environment/Odor	Implementing Mass Nutrient Balance Procedures on Swine Production Facilities	07-133	Koelsch, Rick	University of Nebraska-Lincoln
Environment/Odor	Mass balance of nutrients for the finishing phase as affected by dietary manipulation	07-134	Carter, Scott	Oklahoma State University
Environment/Odor	Impact of Liquid Swine Manure Application on Soybean Yield and Surface and Ground Water Quality	07-135	Kanwar, Ramesh S.	Iowa State University
Environment/Public Health	Tetracycline concentrations and circulation of tet genes in swine feeding operations and adjacent environments	07-027	Barkovskii, Andrei	Georgia College & State University

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Environment/Public Health	Epidemiology, Toxino- and Geno-typing of Clostridium difficile in swine at farm, slaughter and retail.	07-044	Gebreyes, Wondwossen A.	Ohio State University
Environment/Public Health	A Quantitative Risk Assessment for Salmonella spp in Pork Meat	07-079	Hartnett, Emma	Risk Sciences International, Inc.
Environment/Public Health	Development and Testing of a Hydrogen Sulfide Detection System for Use in Swine Housing	07-086	Burns, Robert T.	Iowa State University
Human Health & Safety	Training NC Pork Producers and Extension Agents in Occupational Safety	07-225	See, Miles Todd	North Carolina State University
Human Health & Safety	Pork Industry Health and Safety Training - Seminars and Online Courses	07-226	Donham, Kelley	University of Iowa
Nutritional Efficiency	Energy and amino acid digestibility of corn distillers syrup by products in growing pigs	07-143	Shurson, Gerald	Regents of the University of Minnesota
Nutritional Efficiency	Influence of Rapid Introduction and Removal of Dietary DDGS on Pig Performance and Carcass Characteristics	07-144	Shurson, Gerald	Regents of the University of Minnesota
Nutritional Efficiency	Influence of dietary DDGS and glycerol on pork loin and bacon quality.	07-148	Houser, Terry	Kansas State University
Nutritional Efficiency	Utilizing Glycerol in Swine Diets: I. Feed Manufacturing Considerations and II. Nutritional Strategies to Reduce Dietary Costs	07-151	McKinney, Leland	Kansas State University
Nutritional Efficiency	Assessment of Distillers Dried Grains with Solubles (DDGS) from Ethanol Production on Performance and Carcass Quality of Growing-Finishing Swine	07-152	Cromwell, Gary L.	University of Kentucky
Nutritional Efficiency	Identification of biological factors responsible for differences in feed efficiency between selection lines for residual feed intake	07-161	Dekkers, Jack C.M.	Iowa State University
Nutritional Efficiency	Evaluation of crude glycerol in swine	07-165	Kerr, Brian	USDA, ARS, Midwest Area
Nutritional Efficiency	Evaluation of Choice White Grease and Beef Tallow to Improve Pork Quality when Pigs are fed Distillers Dried Grains	07-167	Richert, Brian T.	Purdue University
Nutritional Efficiency	Digestibility of dietary fiber from distillers co-products fed to growing pigs	07-170	Stein, Hans H.	University of Illinois
Nutritional Efficiency	Net energy of three sources of distillers dried grains with solubles fed to growing pigs	07-172	Stein, Hans H.	University of Illinois
Nutritional Efficiency	Critical review of literature on feeding bio-fuels co-products to pigs	07-173	Stein, Hans H.	University of Illinois
Pork Quality	Pork Quality Benchmark Project-Year 2	07-005	Moeller, Steven J.	Ohio State University
Pork Safety/Post-Harvest	Efficacy of Ultrasonic Technology to Reduce Pathogens Associated with Fresh and Ready-to-Eat Pork Products	07-195	Cutter, Catherine N.	Pennsylvania State University
Pork Safety/Post-Harvest	Methicillin Resistant Staphylococcus aureus in pigs, pork products and swine veterinarians	07-196	Davies, Peter	Regents of the University of Minnesota
Pork Safety/Post-Harvest	Impact of organic acids and sanitizers on Salmonella serovars with and without SGI1-mediated multi-antibiotics resistance	07-200	Harrison, Mark A.	University of Georgia
Pork Safety/Pre-Harvest	Does pre-slaughter transportation and lairage affect Salmonella enterica shedding prevalence and levels in market pigs?	07-025	Rostagno, Marcos	USDA, ARS, Midwest Area
Pork Safety/Pre-Harvest	Enumeration of Salmonella throughout the Pork Harvesting Process	07-050	Guerini, Michael	USDA-ARS, Northern Plains Area

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Pork Safety/Pre-Harvest	Identifying genes associated with Salmonella shedding to increase pork safety through improved genetic resistance	07-062	Tuggle, Chris	Iowa State University
Pork Safety/Pre-Harvest	Survival of North American Genotypes of Trichinella in Frozen Pork	07-088	Hill, Dolores	USDA, ARS, Beltsville Area
Pork Safety/Pre-Harvest	Efficacy of novel food antimicrobial combinations for control of Listeria monocytogenes for preservation of ready-to-eat (RTE) products	07-186	Taylor, Thomas	Texas A&M University
Pork Safety/Pre-Harvest	CAMPYLOBACTER COLONIZATION DYNAMICS IN PIGS	07-202	Rajashekara, Gireesh	Ohio State University
Pork Safety/Pre-Harvest	Survey of Injection Methodologies and Carcass Defects in Pork Production	07-219	Daniels, C. Scanlon	Circle H Animal Health, LLC
Pork Safety/Pre-Harvest	Pharmacokinetics and tissue residues of procaine penicillin G in finishing swine after administration of 33,000 IU/kg intramuscularly and by needle-free injection in the neck.	07-234	Apley, Michael	Kansas State University
Pork Safety/Pre-Harvest	Pharmacokinetics and tissue residues of procaine penicillin G in sows after administration of 33,000 IU/kg intramuscularly and by needle-free injection - PART A LIVE ANIMAL WORK	07-235	Karriker, Locke	Iowa State University
Pork Safety/Pre-Harvest	Literature Review of Health Effects Testing Related to Livestock Production	07-237	Fitzpatrick, Melanie	SmithBucklin Corporation
Pork Safety/Pre-Harvest	Development and Implementation of a Workplace Safety Reporting Database for the Pork Production Industry	07-238	Lassiter, Andrea L.	Organizational Effectiveness Research Group
Swine Health	Development of a non-antibiotic selection vector for developing a live vaccine against ETEC associated porcine post-weaning diarrhea (PWD)	07-006	Zhang, Weiping	South Dakota State University
Swine Health	Development of a live attenuated vaccine against swine influenza by reverse genetics	07-019	Zhou, Yan	University of Saskatchewan
Swine Health	The effect of cross-fostering on the transfer of cellular and humoral maternal immunity to Mycoplasma hyopneumoniae.	07-023	Molitor, Thomas W.	Regents of the University of Minnesota
Swine Health	Genome sequencing of Haemophilus parasuis for improved swine health	07-038	Phillips, Gregory	Iowa State University
Swine Health	Application of an Epidemiologic Survey Tool for Lawsonia intracellularis	07-053	Gebhart, Connie C.	Regents of the University of Minnesota
Swine Health	Improving Swine Health: Enhancing Humoral and Cell-Mediated Immunity Using Novel Polymer Adjuvants	07-070	Wannemuehler, Michael	Iowa State University
Swine Health	Prevalence of slaughter house condemnation due to Erysipelothrix sp. and further characterization of isolates associated with these cases	07-072	Opriessnig, Tanja	Iowa State University
Swine Health	Is humoral immunity defective in PCV-2 infected piglets?	07-201	Butler, John E.	University of Iowa
Swine Health	PCVAD Induced Immune Dysfunction	07-208	Hesse, Richard	Kansas State University
Swine Health	Head-to-head comparison of the level of protection and duration of immunity induced by different commercial and an autogenous PCV2 vaccine	07-210	Opriessnig, Tanja	Iowa State University

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Swine Health	Determination of the amount of PCV2 needed for intrauterine transmission and assessment of effect of PCV2 exposure (natural and vaccine) prior to insemination	07-211	Opriessnig, Tanja	Iowa State University
Swine Health	Transmission of PCV2: Comparison of shedding patterns between PCV2a and PCV2b, evaluation of routes of transmission (fecal, oral, nasal, mechanical) and understanding the roles of spray-dried plasma and transport vehicles.	07-212	Opriessnig, Tanja	Iowa State University
Swine Health	Comparison of the efficacy of sow vaccination versus piglet vaccination for PCV2 and evaluation of the impact of revaccination with a homologous PCV2 vaccine	07-217	Baker, Rodney (Butch)	Iowa State University
Swine Health	Molecular Epidemiology of Porcine Circovirus in the US Swine Herd	07-221	Murtaugh, Michael P.	Regents of the University of Minnesota
Swine Health	Development of new risk assessments and enhancements to the web application for the Production Animal Disease Risk Assessment Program	07-236	Holtkamp, Derald	Iowa State University
Swine Health - PRRS	Understanding the role of the regulatory immune response in PRRSV persistence	07-103	LeRoith, Tanya	Virginia Polytechnic Institute and State University
Swine Health - PRRS	Identification of interferon antagonists of PRRSV viral structural proteins	07-108	Faaberg, Kay S.	USDA, ARS, Midwest Area
Swine Health - PRRS	Assessing the use of biofilters as a means to reduce the excretion of PRRS virus into the environment	07-109	Dee, Scott A.	Regents of the University of Minnesota
Swine Health - PRRS	Use of a production region model to evaluate biosecurity protocol efficacy for reducing the risk of PRRSV and Mycoplasma hyopneumoniae spread between farms.	07-110	Dee, Scott A.	Regents of the University of Minnesota
Swine Health - PRRS	Elimination of Porcine Reproductive and Respiratory Syndrome Virus (PRRSV) from semen: 'On Farm' Mechanical and Antiviral Methods	07-111	Christopher-Hennings, Jane	South Dakota State University
Swine Health - PRRS	Induction of cross-protective immunity without exposure to live PRRSV	07-112	Enjuanes, Luis	Centro Nacional de Biotecnologia (CNB), CSIC
Swine Health - PRRS	Inactivation of PRRSV using ultraviolet light	07-119	Zimmerman, Jeffrey	Iowa State University
Swine Health - PRRS	Implementation of a PRRSV Strain Database(Renewal of NPB project #06-127)	07-125	Faaberg, Kay S.	USDA, ARS, Midwest Area
Swine Health - PRRS	Diagnostic Characteristics of Oral Fluid for Detection of PRRS	07-129	Murtaugh, Michael P.	Regents of the University of Minnesota
Swine Health - PRRS	Identification of protective epitopes toward developing a vaccine providing broad cross-protection against various PRRS viruses	07-130	Kim, Won-Il	Iowa State University
Swine Health - PRRS	Estimating the infectious dose for transmission of PRRS virus by aerosol exposure	07-131	Zimmerman, Jeffrey	Iowa State University
Swine Health - PRRS	Rathional Design of a New Generation of PRRSV Differential (Marker) Vaccines (Renewal 06-177)	07-232	Osorio, F. A.	University of Nebraska-Lincoln
Swine Health - PRRS	PRRS Host Genetics Consortium: A proposal to develop a consortium to study the role of host genetics and resistance to PRRSV	07-233	Rowland, Raymond R.	Kansas State University
<b>STATE FUNDED</b>				
Swine Health	Role of F4/F18 negative E. coli in post-weaning diarrhea and edema disease	07-015	Cornick, Nancy	Iowa State University

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Swine Health	'Enhanced virulence and treatment of multiple antibiotic resistant Salmonella choleraesuis in swine'	07-076	Carlson, Steve	Iowa State University
Swine Health	International collaboration to investigate the sensitivity and specificity of Mycoplasma hyopneumoniae PCR assays	07-094	Thacker, Eileen	Iowa State University
Swine Health	Effects of high and low virulent PCV2 on activated PBMC populations	07-138	Thacker, Eileen	Iowa State University
Animal Science	Selection lines to enhance genetic selection for feed efficiency	07-139	Dekkers, Jack C.M.	Iowa State University
Environment/Odor	Evaluation of the Effectiveness of the ISU Community Assessment Model in the Siting of Swine Production Units	07-231	Harmon, Jay	Iowa State University
Swine Health	Epidemiological investigation of the role of retroviremia in endemic diseases of swine.	07-065	Baker, Rodney (Butch)	Iowa State University