

NATIONAL PORK BOARD

Request for Proposals – Spring Call 2015

DEADLINE: Tuesday, May 19th – 5:00 pm CST

The National Pork Board is soliciting research proposals dealing with:

PORK SAFETY – Pre-Harvest SWINE HEALTH – PRRS

Please read carefully the individual solicitation descriptions for project proposals. If you have questions related directly to the description of a specific solicitation, contact the staff member listed in charge of the program area. For questions on the submission process, contact Bev Everitt at beveritt@pork.org or 515/223-2750.

STAFF MEMBERS:

PORK SAFETY	Steve Larsen	slarsen@pork.org	515/223-2754
SWINE HEALTH – General	Lisa Becton	lbecton@pork.org	515/223-2791

To be considered for committee review, **all proposals must be submitted via the website by 5:00 p.m. CST on Tuesday, May 19th.** See www.pork.org for links. Proposals will be reviewed by both technical advisors and pork producers prior to the committee selection meetings. Final funding is subject to approval by the National Pork Board and USDA.

NOTES:

Proposal selection will occur in July 2015.

Notification of grant awards will be done in late August 2015.

Project funding will begin October 1, 2015.

Requests for second-year funding must be resubmitted.

PORK SAFETY – PreHarvest

The Pork Safety, Quality and Human Nutrition Committee is requesting proposals **in the following area only**. Specific research topics are listed below, not in priority order. All proposals submitted **must** address at least one of the specific research topics of interest described below. **Novel approaches and concepts to the research topics are encouraged.**

There is no exact funding limit for submitted proposals, but the budget request should be appropriate and justified for the work that is being proposed. Researchers are encouraged to find matching funds or in-kind contributions to the project. Multi-disciplinary proposals are encouraged.

Proposals must be submitted in the designated format to be considered. Projects may cover multiple-year efforts. For multi-year projects, project expected deliverables and budgets should be broken down by year. Proposals will be reviewed by panels for scientific soundness and for industry priority. Proposals may be returned to the investigator with suggested/requested revisions prior to making a final funding decision. Funding for accepted projects will follow final approval by the National Pork Board. Further enquiries regarding this solicitation can be directed to Dr. Steve Larsen by email: slarsen@pork.org or by phone: 515/223-2754.

Researchers should expect to hear back from the Committee by the end of August. Proposals are solicited in the following area only. Proposals submitted that do not relate to this area will not be evaluated, scored or considered for funding. The topics below are NOT listed in priority order:

PORK SAFETY

What is the national sero-prevalence estimate of *Toxoplasma gondii* in market hogs and sows?

- 1) The pork industry has recently developed a new strategic plan. The new strategic plan has an objective to decrease the sero-prevalence of *Toxoplasma gondii* (*T. gondii*) in market hogs and sows. To achieve this objective, a national prevalence estimate is needed. Therefore, the Committee is requesting research proposals in this area. Below is a list of topics for researchers to consider when developing a proposal:
 - a. Sampling scheme
 - i. Sample type
 - ii. Where are the samples going to be taken (on-farm, at the slaughter facility, etc.) and why
 - iii. Define the population that will be represented in the project and why
 - b. Testing methodology
 - i. Describe the testing methodology
 - ii. Describe the performance of the test
 - c. Seasonality
 - i. Will sampling occur over multiple seasons or just one
 - d. Production types
 - i. Will there be different/multiple production methods sampled

SWINE HEALTH – PRRS

The National Pork Board recently established a Strategic Plan for 2015 – 2020. As part of that Strategic Plan, specific goals were determined to be the main focus for the National Pork Board: Build Consumer Trust; Drive sustainable Production; and Grow Consumer Demand. The goal, “Drive Sustainable Production” is of high priority to and can be directly impacted by the Swine Health Committee. Therefore, as part of the efforts to address this goal, three key targets will be the basis for the PRRS call for proposals for 2015-2020. These targets are:

1. By 2020, the National Pork Board will develop, with key stakeholders, the identification and diagnostic tools, surveillance and mitigation strategies for the potential elimination of the top domestic swine diseases.
2. By 2020, the National pork Board will deploy tools and programs to decrease the annual economic impact of PRRS by 20 percent, as adjusted for inflation and measured against the 2012 PRRS economic impact baseline study.
3. By 2020, the National Pork Board will build the capacity to detect and prepare for foreign, non-regulatory swine production diseases, to rapidly respond to non-regulatory and regulatory foreign animal diseases and to facilitate pork Producer business continuity.

While a great deal has been learned about the virus, producers and veterinarians continue to be challenged in the identification of both predictable and consistent tools that are successful for the management of PRRS including the elimination of the virus from herds, farms, or regions. The National Pork Board remains engaged in PRRSV area control and elimination efforts through research and education focus that support and continue to develop tools and strategies to better manage the virus.

The National Pork Board Swine Health Committee is requesting proposals on issues that directly address the goals of the 2015 Strategic Plan. Specific research areas for the PRRS virus are listed below. All proposals submitted **must** address at least one of the specific research subtopics of interest described below. Funding opportunities for proposals are outlined as follows:

- a) Short-term (12 month) proposals
- b) Long-term (12-24 months)

Newly submitted multi-year proposals should provide a clear overall vision and objectives for the entire project with a detailed plan of work and budget outline for each of the proposed years.

For projects seeking **second-year funding of a previously funded project**, the proposal must include a discussion of progress and accomplishments realized from the research efforts to date toward success of the overall research effort. This may be accomplished by including copies of interim or final reports from previously funded research efforts as appendices to the proposal submitted.

Investigators are encouraged to leverage their PRRS research efforts by including additional swine viral pathogens in the experimental design if the experiment can accommodate it and it is appropriate to do so.

Proposals **must** be submitted in the required format provided with the RFP in order to be considered. Proposals that do not directly address the listed priorities will NOT be considered for funding. All eligible proposals will be reviewed by a panel of peers for scientific soundness and validity. Final funding decisions will be made by

the National Pork Board Swine Health Committee. Further enquiries regarding this solicitation can be directed to Lisa Becton by email lbecton@pork.org or by phone: 515-223-2791.

2015 PRRS Research Priorities:

The focus for the 2015 call for PRRS proposals is based off of the 2015-2020 National Pork Board Strategic Plan. The NPB requests that all submitted projects directly address the following key goals:

1. To develop, with key stakeholders, the identification and diagnostic tools, surveillance and mitigation strategies for the potential elimination of the top domestic swine diseases.
2. To deploy tools and programs to decrease the annual economic impact of PRRS by 20 percent, as adjusted for inflation and measured against the 2012 PRRS economic impact baseline study.

To help producers reach these goals, PRRS research priorities were developed with the understanding that managing and eventually eliminating PRRSV may require incremental and regional strategies which utilize currently available and/or new technologies with the goal of consistently achieving negative weaned pigs. Three areas of research will be the focus of the 2015 PRRS call for proposals. In addition, proposals that investigate the biology and ecology of PRRSV, persistence and transmission of the virus, and how this knowledge can be applied towards sustainable production of high-health swine may be considered.

1. PRRSv Immunology and Virology:

In order to reduce the impact of PRRS by 20% it is important to understand some key questions such as, why does herd immunity fail and what are the properties of a new virus introduction that can cause such a failure?

Targeted priorities to address the virus and immune response are listed below:

- Given that 3 USDA licensed modified-live PRRS vaccines are currently available to North American producers, determine whether sequential or rotational use of vaccines will provide cross-protective/heterotypic immunity against field viruses.
- Identify PRRSV genomic determinants of virulence and/or protective immunity.
- Identify mechanisms by which PRRSV modulates the immune response.
- Understand the immune-biology of a second and/or multiple subsequent PRRS infections in animals.

2. PRRSv Epidemiology:

Gaining an understanding of how the virus is transmitted within and between farms is critical to be able to control and eliminate the virus. Determining how the virus is maintained within a herd can help in this process.

Targeted priorities to address epidemiology of transmission are listed below:

- Develop a practical system for inactivating airborne PRRSV in commercial farm settings.
- Determine whether neonates from PRRSV-immune dams are more resistant to infection and whether maternal immunity affects the course of PRRSV infection in neonates; i.e. viremia, excretion of virus, clinical signs, productivity, etc.

3. PRRS Surveillance:

The development of effective surveillance strategies supports the goal of reducing the impact of PRRS by 20% as well as support in the future elimination of the virus. New tools and strategies are needed in order to effectively reach this goal.

Targeted priorities to address surveillance are listed below:

- Design and develop companion diagnostic tests that can differentiate infected from vaccinated animals (DIVA) for existing vaccines.
- Improve the efficiency and accuracy of herd-level testing and surveillance methods. Proposals can address issues including: on-farm sampling methods, sample handling/processing, determination of persistent status, and/or test development.

4. Novel concept for PRRS control/management:

Improved control and eventual elimination of PRRSV will involve the use of traditional and potentially new disease elimination protocols that will take into account unique properties and pathogenesis of this virus. Proposals for this section will need to emphasize how they contribute to the control and elimination of this virus.

The National Pork Board will consider novel ideas outside those listed above, with the caveat that such proposals will require strong preliminary data in support of the hypothesis.