

# Swine HEALTH REPORT

A National Institute for Animal Agriculture Publication

Fall 2004

## Inside This Issue...

**PAGE 2**  
ID Implementation Continues

**PAGE 4**  
Improving Emerging Disease Surveillance in the Pork Industry

**PAGE 6**  
PRRS from 30,000 Feet

**PAGE 9**  
USDA, ATA Release Biosecurity Guides for Transporters

**PAGE 10**  
NIAA Opinion Survey

**PAGE 11-12**  
Take the Readership Survey!

## NAIS Input from Industry Still Viable Through New Structure

The U.S. Department of Agriculture has established a National Animal Identification System (NAIS) subcommittee under the Secretary's Advisory Committee for Foreign Animal and Poultry Diseases (SACFAPD) to provide stakeholder review and input.

The subcommittee has been charged with providing recommendations to the SACFAPD for consideration on the following matters related to NAIS:

- The scope, thoroughness, and appropriateness of NAIS development and implementation;
- Specific input on how the system should be implemented within various segments of the industry; and
- The development of Uniform Methods and Rules (UM&R) for NAIS, which will provide guidance for stakeholders and will ensure common standards that will enable effective state, federal and industry cooperation.

The NAIS subcommittee has 13 members and is led by three "tri-chairs": John Adams of the National Milk Producers Federation, Jim Niewold, a swine producer from Illinois, both members of the SACFAPD and Dr. Robert Fourdraine, CEO of the Wisconsin Livestock Identification Consortium and vice-chair of the National Institute for Animal Agriculture's (NIAA) Animal Identification and Information Systems Committee. Most of the

members of the subcommittee served on the U.S. Animal Identification Plan (USAIP) Steering Committee that provided oversight in the development of the framework for which NAIS is largely based.

It is anticipated that the subcommittee will meet two to four times annually, participate in conference calls more frequently with staff from USDA's Animal and Plant Health Inspection Service (APHIS), and report semi-annually to the FAPD advisory committee.

The subcommittee will obtain input from different segments of industry and may establish working groups as needed. The USAIP Species/Segments Working Groups and three issue-based working groups on communications, information technology and standards will now provide input to the subcommittee. In addition, the subcommittee will draw on expertise from NIAA and the U.S. Animal Health Association, two organizations that have helped pioneer the establishment of a national system for animal identification.

It is expected that NAIS will lay the foundation for a comprehensive system for animal identification in the United States, which will be a first step towards enhancing animal health officials' ability to safeguard the health of U.S. livestock, and to protect and enhance international trade. ●

National Institute for Animal Agriculture  
1910 Lyda Avenue  
Bowling Green, KY 42104

Swine Health Report

Non-Profit Organization  
U.S. POSTAGE  
PAID  
Permit No. 82  
Bowling Green, KY  
42104

# ID Implementation Continues; Progress Visible

The U.S. Department of Agriculture continues to move forward with the implementation of a national animal identification system. Recent months have brought forth progress for the program.

## Additional \$1.5 Million Allocated to States for NAIS

USDA has announced that an additional \$1.5 million is available for the National Animal Identification System (NAIS) cooperative agreements with states.

"These funds have been set aside to support premises registration activities," said Agriculture Secretary Ann Veneman. "A national animal identification system will help locate premises where animals are born, managed, marketed or exhibited. States that applied for funding in July and were not selected at that time are now eligible for a portion of the \$1.5 million if they meet specified requirements."

The \$11.64 million set aside earlier this year for cooperative agreements with state and tribal governments was dispersed among 29 agreements. A total of 43 applications were received by USDA for that funding. Now, the additional \$1.5 million provides another 13 applicants with an opportunity to resubmit plans for a minimum of \$100,000.

USDA states that the NAIS continues to be a priority. The President requested \$33 million in the FY 2005 budget to continue supporting NAIS implementation and a portion of these funds would be used for additional cooperative agreements with states and tribes. They will continue to register premises and also phase in animal identification systems at a state or regional level.

States identified in this second funding effort include: Alabama, Arkansas, Delaware and Maryland, Georgia, Iowa, Michigan, Nevada, North Carolina, New York, Tennessee, Virginia, Wisconsin and Washington state.

## Legislation Proposed for Data Confidentiality

In a presentation to the U.S. Animal Health Association's (USAHA) Livestock Identification Committee in October, Dr. John Clifford announced that USDA has sent draft legislation to Capitol Hill addressing confidentiality of data involved with the National Animal ID System. The legislation would provide an amendment to the Animal Health Protection Act to fit the needs of NAIS. Disclosure of information will be highly limited, yet still allow animal health officials



*Dr. John Clifford*

to trace back disease within 48 hours, the goal of NAIS. Further details on the draft legislation have not been released, nor has Congress' timeline as to when the legislation will be introduced.

## USAHA ID Committee Offers Two Resolutions

The U.S. Animal Health Association has long played an important part in the development of animal identification, and this year proved no different. USAHA's Committee on Livestock Identification sent forth two resolutions out of the late-October meeting in Greensboro, N.C. The first resolution calls for industry, state and federal cooperation on the development of an appropriate



## Swine Health Report

**Fall 2004**

*Publisher*

National Institute for  
Animal Agriculture  
Glenn N. Slack, President & CEO  
Benjamin Richey, Editor

*Swine Health Report* provides the latest information on issues pertinent to swine health initiatives, strategies, research and regulatory action. It is a communications initiative of the NIAA Swine Health Committee and is produced in cooperation with USDA-APHIS. Reprinting is encouraged.

For a free subscription, send your name and mailing address to NIAA at:  
1910 Lyda Avenue

Bowling Green, KY 42104-5809  
ph.: 270-782-9798 fax: 270-782-0188  
e-mail: [NIAA@animalagriculture.org](mailto:NIAA@animalagriculture.org)  
Web site: [www.animalagriculture.org](http://www.animalagriculture.org)

Read about USDA's Cooperative Agreements on the Internet at [http://www.aphis.usda.gov/lpa/issues/nais/nais\\_project-summaries.html](http://www.aphis.usda.gov/lpa/issues/nais/nais_project-summaries.html)



Inspection. The full resolutions are as follows:

#### USAHA Resolution #2

"In order to expedite the development of a data management system to meet all stakeholders' needs and expectations, the United States Animal Health Association (USAHA) urges the National Animal Identification System (NAIS) Subcommittee of the Secretary of Agriculture's Advisory Committee on Foreign Animal and Poultry Diseases to request the United States Department of Agriculture to facilitate the cooperative development of an appropriate animal traceability database system through the joint leadership of the species and segment working groups, issue-based working groups, and state animal health officials."

animal traceability database. The second resolution recommends that all states begin use of electronic Interstate Certificates of Veterinary

#### USAHA Resolution #28

"The United States Animal Health Association recommends that the United States Department of Agriculture, Animal and Plant Health Inspection Service, Veterinary Services should commit to bring all 50 states onto electronic Interstate Certificates of Veterinary Inspection (ICVI) and provide the necessary support within the next 18-24 months. In addition, ICVI should be referenced through the *Code of Federal Regulations*."

#### Interim Rule Announced for Alternatives in ID Numbering System

The U.S. Department of Agriculture, APHIS says it is going to recognize additional numbering systems for the identification of animals. The systems will apply to interstate commerce and cooperative disease control and eradication programs for animals. Additionally, APHIS will authorize the use of a national numbering system to identify premises where animals are managed or held. The new numbering systems come as another step in the establishment of the NAIS, which is being imple-

mented on a voluntary basis.

The move points NAIS in a direction that would create a standardized numbering system, which is widely supported by industry and government. Currently, many producers use separate identification numbers or methods for official animal health programs, interstate commerce purposes and industry programs such as breed registries. An animal or group of animals would be identified with the same official number under multiple programs, instead of being identified with a different number under each program. The data associated with each program could still be maintained separately, however.

Accordingly, APHIS is amending the regulations to recognize for official use the 15-character animal identification number, 13-character group/lot identification number and 7-character premises identification number. The new official animal numbering system will allow producers to transition into the use of a one-number, one-animal system if they wish to do so.

This interim rule does not

See **ID** | page 8

#### Seeking more information on the National Animal Identification System?

Resources are now available on NAIS. USDA has produced two booklets on NAIS, one which focuses on premises identification and the other is an overview of the system. The brochures can be found on the Internet at [www.usda.gov/NAIS](http://www.usda.gov/NAIS).

Additionally, the Western Extension Marketing Committee has developed a series of fact sheets, with support from the Western Center for Risk Management Education and the Livestock Marketing Information Center. The fact sheets are available on the Internet at <http://www.lmic.info/memberspublic/animalID/AnimalID.htm>.



# Improving Emerging Disease Surveillance in the Pork Industry

Emerging diseases pose a constant threat to the pork industry, whether new or re-emerging. The emergence of these pathogens can have adverse effects on economics, trade, herd health and even public health. The ability to provide rapid response for disease outbreak is vital to the promulgation of pork production.

*"The key to recognizing new or emerging infectious diseases is surveillance. Surveillance and rapid response to identified disease threats are at the core of preventative medicine."*

- FROM EMERGING INFECTIONS, INSTITUTE OF MEDICINE 1992.

Emerging diseases require different management strategies when compared with foreign animal diseases (FAD)(See Table 1). Though foreign animal diseases tend to be higher profile, any emerging disease can have a devastating effect. Looking at the continued progression of Porcine Reproductive and Respiratory Syndrome (PRRS), it's clear that coordinated efforts are necessary to allow industry to deal with and control a disease. PRRS, first referred to as "Mystery Swine Disease" in the 1980's, has been estimated to cost producers \$600 million.

The Swine Futures Project, established as a coordination of industry and government to address how APHIS' Veterinary Services (VS) could partner with industry to better serve the pork industry, provides a blue print for the swine

industry to establish an effective surveillance system. This multi-year project identified the following strategies in order to provide pork producers with a level of confidence regarding swine health issues.

- Exclude foreign animal diseases.
- Identify emerging animal health concerns.
- Certify disease status for herds, States, and regions and certify production processes.
- Provide surveillance information on key animal health indicators.
- Use epidemiology to address animal health concerns.
- Maintain expertise to control or eradicate specific diseases.

Dr. Mark Engle, former director of swine health for the National Pork Board, presented the importance of a valid surveillance program at the recent meeting of the U.S. Animal Health Association (USAHA). Engle's presentation highlighted the collection, analysis and dissemination of health data in order to provide necessary informa-

tion for those that can respond appropriately.

Engle exemplifies how an effective surveillance and response system can work through a human health issue that hit in 2002, SARS (Severe Acute Respiratory Syndrome). When the epidemic began in China and spread to other parts of the world, the World Health Organization (WHO) began an expedited process for understanding this novel disease through virtual networks. Intensive epidemiological, clinical, and diagnostic research and communication ensued, allowing a free flow of information worldwide to address the disease, and eventually to gain control of it. WHO's coordination on this issue is something that is not currently present in animal agriculture, but should be according to Engle, particularly in the U.S.

"SARS clearly demonstrated the value of global alerts to increase awareness," says Engle. "Increased

See *Emerging* | page 5

**Table 1. Management Differences: Foreign Animal Disease and Emerging Animal Disease**

	FAD	EAD
<b>Prevention</b>	Import policies and port inspections	No prevention measures
<b>Preparedness</b>	Surveillance for reportable disease conditions	Surveillance of susceptible populations
<b>Response</b>	- Rapid, high profile - Management driven	- Deliberate, low profile - Science driven
<b>Recovery</b>	Eradicate and rebuild	Research, diagnosis, epidemiology, control

## Emerging | Surveillance for Emerging Diseases

(continued from page 4)

awareness is directly correlated to increased identification of suspect cases."

Initial steps have been taken for establishing networks within the U.S. swine industry, through cooperation of the National Pork Board, American Association of Swine Veterinarians and APHIS, VS. Called Swine Health Advisory Committees, the infrastructure includes producers, private practitioners, state and feder-



**Dr. Mark Engle**

al veterinarians, diagnosticians, epidemiologists and others involved in production and research. The committees would provide a network, beginning at a local level and feeding into state and national levels to allow for a sharing of surveillance information for emerging animal health issues. In addition, VS' Center for Emerging Issues developed an Emerging Animal Health Issues System document in 2001 which describes the roles and responsibilities of VS. Finally, VS recently established the National Surveillance Unit (NSU), which resides within the National Center

for Animal Health Surveillance. The NSU has identified the surveillance for emerging diseases as a priority for the National Animal Health Surveillance System.

With all the issues that today's pork producers deal with, emerging diseases continue to garner attention. The ability to protect the U.S. swine herd is invaluable from economic, animal health and consumer confidence angles. Industry plans to continue to partner with VS to move forward with surveillance and response mechanisms to assure this for producers. ●

## USAHA Resolutions Highlight Surveillance

The 108th annual meeting of the U.S. Animal Health Association again brought forth new direction on many key issues for the pork industry. The meeting took place Oct. 21-28 in Greensboro, N.C.

Some key resolutions produced from the October meeting include:

- Request of \$85 million to fully fund the National Animal Health Laboratory Network, as well as \$30 million per year for ongoing support.
- Request of USDA and its services to reprioritize funding that supports the Collaboration in Animal Health Food Safety and Epidemiology, in all commodities.
- Request that USDA provide funding for long-range research, program support and field studies, specifically:

1. Provide continuing support for conducting population studies that support the develop-



efficacy.

3. Conduct further field trials and studies of swine brucellosis and pseudorabies infection in feral swine and the methods of their transmission to domestic swine.

- Support for continued funding of the Food Animal Residue Avoidance databank, along with full funding of the National Antimicrobial Resistance Monitoring System.
- A call for development of a defined mechanism to detect, investigate, evaluate and respond

ment of disease risk management strategies.

2. Pursue the goal of developing Brucella strain VTRS-1 for use as a dual vaccine and conduct field trials to demonstrate its

to emerging diseases in swine.

- Request of USDA to protect confidentiality of scientific data to foster collaborative research efforts through industry, USDA agencies and academia.
- Recommendation that Veterinary Services bring all 50 states onto electronic Interstate Certificates of Veterinary Inspection (ICVI) through necessary support over the next 18-24 months.
- Urge that the USDA facilitate the cooperative development of an appropriate animal traceability database system through the joint leadership of the species and segment working groups, issue-based working groups, and state animal health officials.

For more information on the resolutions, go to [www.usaha.org](http://www.usaha.org). ●

# PRRS from 30,000 Feet: Can Second Generation Vaccines Lead to Eradication?

*DL Hank Harris, DVM, Ph.D, Iowa State University*

*Modified from a manuscript published in the proceedings of the American Association of Swine Veterinarians, March 6-9, 2004, Des Moines, Iowa, with permission.*



**Dr. Hank Harris**

There is little doubt that the pork industry is making excellent progress in the control and elimination of Porcine Reproductive Respiratory Syndrome virus (PRRSV) in individual herds and production systems. The first serologic evidence of PRRSV was discovered in an Iowa herd in 1985<sup>1</sup>. Comparing the progress of controlling other RNA viruses such as swine influenza virus (SIV) to that of PRRSV, it is obvious that tremendous advances have been made for PRRSV control in a very short time period<sup>2</sup>. SIV was first described in 1930 and yet today, we still struggle to reduce its economic impact. At the present time in the U.S., PRRSV infections are much more economically devastating as compared to illness either due to SIV or any other porcine infectious agent<sup>3</sup>.

## Why are PRRSV infections likely the most economically significant swine disease in this and the last decade?

Recent estimates by the National Pork Board indicate that PRRS results in a \$600 million annual loss to the swine industry<sup>4</sup>. Roger Main of Murphy-Brown estimates a \$7.07 per slaughter pig additional cost to finish a PRRSV positive, compared to a PRRSV negative pig<sup>5</sup>. These additional costs per pig are comparable to estimates made for other

diseases at times of emergence or re-emergence prior to the development of easily implemented control, elimination, or eradication programs. For example, both Pseudorabies (PRV) and swine dysentery at one point caused similar production losses at least on a per pig basis. RNA viruses such as PRRSV and SIV infect a higher proportion of herds than when diseases such as PRV, swine dysentery and transmissible gastroenteritis were at their highest prevalence levels.

## The downside of PRRSV control through vaccination.

In general, RNA viruses per se are extremely difficult to control in any host. Acquired Immune Deficiency Syndrome (AIDS) is caused by an RNA retrovirus, Human Immunodeficiency Virus (HIV). Both PRRSV and SIV are non-retro RNA viruses. No vaccine has been developed for HIV and vaccines for PRRSV and SIV are either only marginally effective or must be continually modified. This reflects the nature of RNA viruses based on the current level of scientific knowledge.

## What about second generation vaccines for PRRS?

Several research laboratories world wide are searching for new PRRSV vaccines while some scientists have given up on the idea<sup>6</sup>. My own view is that new improved vaccines are feasible and are necessary in order to mount a successful national eradication scheme for PRRS. The development of highly

efficacious prevention (or therapy) based on immunologic mechanisms may depend on future discoveries based on either molecular characterizations of infectious clones of the PRRSV or unique applications of neutralizing antibodies as suggested by Osorio<sup>7</sup>. Specifically, applied research is needed which leads to new subunit killed vaccines capable of inducing high levels of protective antibodies<sup>8</sup>.

## The origin of PRRSV.

The PRRSV is hypothesized to have evolved from the Lactate dehydrogenase-elevating virus (LDV) of mice<sup>9,10</sup>. LDVs were discovered in laboratory mice from transplantable tumors in the 1960's<sup>11</sup>. Plagemann suggests that the LDVs of laboratory mice must have been introduced from wild house mice populations at some unknown prior time<sup>12</sup>. Millions of dollars and uncountable scientific person years have been spent in the study of LDV persistent infections in mice. Even after these extensive studies, no immunologic method of control has been discovered. In fact, the virus is so closely associated with its mouse host, the only evidence of the lifelong persistent infection by LDV is the elevation of lactate dehydrogenase enzyme<sup>11</sup>. One has to wonder if the relatively less prevalent cases caused by PRRSV in small, one-site farrow-to-finish farms as compared to more prevalence of the disease seen in large corporate systems<sup>13</sup> are somehow a similar situation as found in mice persistently infected with LDV.

### If PRRSV originated from mice infected with LDV, what is the possible role of mice as a reservoir for PRRSV?

The wind, flies and mosquitoes appear to be popular targets blamed for the horizontal introduction of PRRSV into farms. Are these excuses for poor implementation of biosecurity measures, particularly transport, cull animal removal and feed preparation? There is no question that the outbreaks which I investigated in the 1970s and 1980s related to swine dysentery, TGE and PRV were primarily associated with a lack of biosecurity measures.

I do wonder if our PRRSV scientists have looked diligently enough at rodents as a possible reservoir. Could the LDV infected mouse be a source of the PRRSV in new outbreaks? Molecular genetic analysis counters this view<sup>14</sup> but it may be worth considering.

### Does multi-site production help or hinder PRRSV control/elimination?

In multi-site systems or SEW/Isowean projects, PRRSV can be consistently eliminated from weaned pigs<sup>15</sup> and does not set-up a life-long persistent infection. These facts are now accepted by most veterinarians and producers<sup>16-18</sup>. In fact, entire breeding stock production pyramids are being maintained free of PRRSV, a process facilitated by multi-site production, and is the first step (supply of PRRSV negative replacement genetics) for eventual eradication of any disease<sup>19,20</sup>.

Unfortunately, most of the multi-site systems built in the early to mid 1990s, the facilities and large systems were not ideally designed or constructed to facilitate both the elimination and/or the prevention of re-introduction of PRRSV. Thus, the larger producers who virtually all use multi-site not only are the major source of slaughter pigs in the

U.S.<sup>13</sup> but they are also the major pig reservoir of the PRRSV.

In the future, large corporate producers must sacrifice least cost production, alter pig flow to maintain negative PRRSV status and redesign existing facilities to eliminate PRRSV from their production systems. Producer frustration is evident; however, many successful eradication projects that have been completed in the last few years can direct industry toward the proper approach and strategies to follow.

### What about a national eradication scheme for PRRSV?

The current situation can be summarized as follows: 1) PRRSV infects herds readily; 2) the source of the virus is often difficult to determine; 3) PRRSV can be successfully eliminated from herds without total depopulation; and 4) it is difficult to maintain herds free of PRRSV, especially in swine dense areas.

### So, why not eradicate the virus from all pig farms?

Both the hog cholera (HC) and PRV disease eradication programs conducted in the U.S. were initiated and driven by producers with the aid of the National Institute of Animal Agriculture. Feeder pig dealers and Neil Black simply demanded that veterinarians stop vaccination with live HC vaccine. For PRV, it was the small purebred breeder who tripped the trigger towards eradication. In each instance, researchers and swine veterinarians were instrumental in implementation of the programs. The development of an extremely sensitive and accurate diagnostic test by Bill Mengeling was the scientific key for HC. In the case of PRV, the suggestion by Ken Platt of a compatible diagnostic test/vaccine was vital and provided the direction for scientific inquiry and discovery. However, producer stimulation,

interest and tenaciousness were key to a successful outcome.

If PRRS is to be eradicated, I predict it will be the producer and the National Institute of Animal Agriculture that will be instrumental in putting the plan in place. A coordinated effort including researchers, government regulators, and practicing veterinarians will also be vital as suggested recently by Scott Dee<sup>21</sup>.

### What individual or group will come forward and become the driving force behind PRRSV eradication?

The recent funding for PRRSV research by the USDA and the NPB<sup>4</sup> is commendable and should lead to more organized collaborative approach for both discovery and dissemination of PRRS information.

But as was the case for HC and PRV, I suggest it is the producer who must step up to the plate and become accountable. This is a great opportunity for veterinarians associated with corporate production to take the lead to reduce/eliminate PRRSV from infected farms. They are going to need a lot of support from all of us especially if a national eradication program is implemented.

### Acknowledgements

*Harris thanks the following individuals for their suggestions, comments, and discussion regarding the preparation of this manuscript: Butch Baker, Bill Christianson, Isabel Harris, Steve Henry, Bob Glock, and Monserrat Torremorel. ●*

*Editor's Note: Please see Page 8 for a listing of works cited in this article.*



## ID | Interim Rule for Numbering System Announced (continued from page 3)

change the requirements defining which animals must be officially identified, nor does it require that producers use the new numbering systems. The rule merely ensures that the new numbering systems are recognized as official, allowing those who want to use such systems to do so.

The rule also provides an amendment to prohibit the removal of official identification devices, including those recognized as official on livestock imported from other countries.

This interim rule was pub-

lished in the Nov. 8 Federal Register and became effective upon publication. APHIS documents published in the Federal Register and related information, including the names of organizations and individuals who have commented on APHIS dockets, are available on the Internet at <http://www.aphis.usda.gov/ppd/rad/webrepor.html>. Consideration will be given to comments received on or before Jan. 7, 2005. ●

## ISU Develops Salmonella Phage

A phage invented and recently patented by food safety researchers at Iowa State University is the first to control the spread of Salmonella in swine and to prevent the bacterium from developing into a vehicle of foodborne illness.

"The pen isn't the only place pigs get Salmonella," said Hank Harris, an animal science researcher at ISU. "They've got Salmonella when they come in from the farm. It turns out that vaccine and probiotics have not been very successful in reducing Salmonella in lairage immediately before slaughter. So we're using pigs in an acute infection model to evaluate bacteriophage."

Harris' work to find effective ways to use bacteriophage in pigs has warranted further study in a collaborative Food Safety Consortium project later this year. Harris will team with Billy Hargis, who directs the University of Arkansas Poultry Health Research Laboratory, to explore ways to maximize production of bacteriophage and to deter-

mine its effectiveness against various types of Salmonella.

Harris' ISU team invented the Felix 0-1 phage to reduce Salmonella in livestock, which can be injected into the swine until about three hours before slaughter and still be effective in controlling Salmonella. The three-hour mark is significant because pigs are at risk of infection prior to that time of being held in close quarters with other pigs.

"Intervention with Felix 0-1 phage treatment following exposure to Salmonella and prior to harvest is effective in reducing the amount of Salmonella in an animal," Harris said.

The new emphasis on bacteriophages has led to projects such as development of the Felix 0-1 phage. "Our research now is to see if we can make this a practical thing to do and if there is a company that would be interested in marketing phage as a product," Harris said. ●

Source: Food Safety Consortium

## PRRS from 30,000 Feet: Can Second Generation Vaccines Lead to Eradication?

### Works Cited

1. H. Hill et al., *American Association of Swine Practitioners News* 47, (1992).
2. J. Zimmerman and K.-J. Yoon, *PRRS Compendium* (National Pork Board, Des Moines, ed. 2nd, 2003), pp. 1-294.
3. J. Holck and D. Polson, in *PRRS Compendium*, J. Zimmerman and K.-J. Yoon, Eds. (National Pork Board, Des Moines, 2003), chap. 2.
4. E. Neumann, *11th Annual Swine Disease Conference For Swine Practitioners* 182-187 (2003).
5. R. G. Main, *11th Annual Swine Disease Conference For Swine Practitioners* 172-173 (2003).
6. S. Dee, *Proceedings Allen D Leman Swine Conference* 31, 22-25 (2004).
7. F. A. Osorio et al., *Virology* 302, 9-20 (2002).
8. J. Robbins, R. Schneerson, S. Szu, *The Journal of Infectious Diseases* 171, 1387-1398 (1995).
9. S. Dea, C. A. Gagnon, H. Mardassi, B. Pirzadeh, D. Rogan, *Arch Virol* 145, 659-688 (2000).
10. P. G. W. Plagemann, *Emerging Infectious Diseases* 9, 903-908 (2003).
11. P. G. W. Plagemann and V. Moennig, *Advances in Virus Research* 41, 99-192 (1992).
12. P. G. W. Plagemann, Z. Chen, K. Li, *Current Topics in Virology* 1, 27-43 (1999).
13. Anonymous, *Part II: Reference of Swine Health and Management in the United States, 2000, 2001*, pp. 1-66.
14. M. P. Murtaugh, M. R. Elam, L. T. Kakach, *Arch Virol* 140, 1451-1460 (1995).
15. M. L. Gramer, W. T. Christianson, D. L. H. Harris, *1998 Allen D.Leman Swine Conference College of Vet Med, U of MN*, 190-193 (1998).
16. S. C. Henry, *National Institute of Animal Agriculture* (2002).
17. S. Henry, *National Institute for Animal Agriculture* (2002).
18. R. B. Baker, *2003 Allen D.Leman Swine Conference* 90-94 (2003).
19. Torremorell, M. and Baker, R. *Eradication of PRRS virus by changing the pig flow and the introduction of negative replacements into positive sow farms. The proceeding of Allen D.Leman Swine Conference.* 59-62. 2000.
20. M. Torremorell, C. Moore, W. T. Christianson, *Journal of Swine Health & Production* 10, 153-160 (2002).
21. E. Fenouillet, J. C. Gluckman, E. Bahraoui, *Journal of Virology* 64, 2841-2848 (1990).

## USDA, ATA Release Biosecurity Guidelines for Transporters

The U.S. Department of Agriculture (USDA) has announced the release of voluntary security guidance for over-the-road transporters of agricultural and food commodities to bolster national security and safeguard public health. The guidance was developed in partnership with the Agricultural and Food Transporters Conference (AFTC) of the American Trucking Association (ATA).

The *Guide for Security Practices in Transporting Agricultural and Food Commodities* is designed to enhance security measures practiced by the nation's approximately 27,000 commercial transporters of agricultural and food-related products across the nation each year. Although issued by USDA, the recommendations apply to agricultural commodities and food products of

all types, whether regulated by USDA or the Food and Drug Administration (FDA).

"These guidelines are practical, flexible and proactive," said Agriculture Deputy Secretary Jim Moseley.

Fletcher Hall, executive director of ATA's Agricultural and Food Conference, said the fact that the voluntary guidelines were a partnership between the private sector and government is significant.

In February 2003, the White House Office of Homeland Security identified food and agriculture as one of 11 critical infrastructures in the U.S. that terrorists may seek to target. Agricultural and food commodities in transport are thought to be significant target for terrorists.

The guidelines provide a basic blueprint for planning for and

implementing risk-based security management practices to ensure the continued safety and security of these products, the people who transport them and the communications systems that enable their movement.

The guidelines emphasize a four-part approach of awareness of potential terrorist behavior and emergency response plans, recognition of terrorist activity in progress, communication of potential threats within companies and to proper authorities, and action to be taken if and when these situations occur.

The document is available on the Internet at [www.usda.gov/homelandsecurity/aftcsecurguidfinal19.pdf](http://www.usda.gov/homelandsecurity/aftcsecurguidfinal19.pdf). Additionally, the ATA/AFTC website offers information for acquiring the guide at [www.truckline.com/cc/conferences/atc](http://www.truckline.com/cc/conferences/atc). ●

## ARS Finds Different Natural Immunity in Cloned Pigs

Studies by scientists with the U.S. Department of Agriculture (USDA) and the University of Missouri indicate that the natural immune system of young cloned pigs does not appear to fight diseases as effectively as the immune system of non-cloned pigs.

Animal physiologist Jeff Carroll of USDA's Agricultural Research Service (ARS) collaborated with University of Missouri-Columbia scientists Bart Carter, Randall Prather and Scott Korte on the study. The pigs were cloned at the University of Missouri by Prather and his colleagues. ARS is USDA's



chief scientific research agency. At the time of the study, Carroll worked at ARS' Animal Physiology Research Unit in Columbia, but he is now based at the agency's Livestock Issues Research Unit in Lubbock, Texas.

In their experiments, the scientists gave a naturally occurring toxin called lipopolysaccharide to seven young, cloned pigs and 11 genetically similar, non-cloned pigs. Although the non-cloned pigs' immune response was adequate, the cloned pigs' immune system did not produce sufficient quantities of natural proteins called

cytokines, which fight infections. Animals must have an adequate cytokine response to survive infections.

Cloned pigs, as well as cloned cows, have been known to have a higher-than-normal number of deaths around the time of birth. Many die from bacterial infections. As newborns, both the cloned and non-cloned pigs received some disease protection through their consumption of colostrum, a natural substance passed to a newborn pig via its mother's milk. The colostrum helps protect the young animal until its own immune system begins to function.

The cloned pigs are being used only for research purposes, and are not part of the food supply. ●

## NIAA Opinion Survey: Confidentiality, Data Housing Give Way to Funding, Producer Participation as NAIS' Major Concerns

Who's going to pay? How much is it going to cost me? Common questions frequently pondered by producers and other stakeholders when contemplating the new National Animal Identification System (NAIS) being implemented by USDA and state animal health agencies.

According to a recent survey by the National Institute for Animal Agriculture (NIAA), 20.5 percent of respondents indicated funding as their biggest concern for implementation of NAIS. Producer participation followed, chosen the biggest concern by 16.7 percent of respondents, trailed by data confidentiality with 15.2 percent, and data collection and housing with 10.6 percent.

One aspect of the program that has been a contentious issue for many is whether the program will be voluntary or mandatory. However, only 4.6 percent of respondents listed this as their biggest concern.

"The implementation of NAIS is clearly an important issue for multiple sectors of animal agriculture," said NIAA Chairman of the Board Dr. Rick Sibbel. "NIAA continues to provide an important role regarding industry input. This survey gives us a better pulse on our membership's sentiments, ultimately allowing NIAA to address ID issues across the country and continue building consensus for NAIS."

The 25-question opinion survey was mailed electronically to 502 individuals nationally with NIAA members comprising the pool. One hundred thirty-two

(132) responses were received for a 26.3 percent response rate. The survey was conducted Oct. 14-19.

When asked specifically about support for a voluntary or a mandatory program, only 10 percent of respondents (9.9%) said they support a voluntary program. In contrast, 79 percent of respondents feel the program should either be mandatory now or upon a set date in the future (Twenty-five percent (25%) said they support a mandatory program. The most popular choice, made by 53.8 percent of respondents, was "voluntary during developmental stages, but with a decided date for making the program mandatory.")

Other findings include:

- Consensus on who holds the database has not been achieved: 27.3 percent of respondents support a centralized database operated by USDA; 13.6 percent support a centralized database that is privatized; 28.0 percent support a decentralized database system operated by state animal health agencies; and 15.9 percent support a decentralized database system that is privatized.
- More than three-fourths of respondents feel that more federal dollars are needed for FY'05 than the \$33 million request by USDA.
- Forty-three percent of respondents do not feel that necessary information and education is being delivered to stakeholders in a timely fashion to help further NAIS.
- Three-fourths of respondents feel somewhat or very prepared to participate in NAIS; only six percent feel unprepared.

- Forty-seven percent (47%) agree that concerns have been heard and are being or will be addressed. Twenty-five percent (25%) disagree.

- Over half of respondents feel progress is moving at an average rate or better, while one-third of respondents feel the rate of progress is below average or poor.

Complete survey results can be viewed at [www.animalagriculture.org/survey/NAIS.htm](http://www.animalagriculture.org/survey/NAIS.htm). ●

### Bush Taps Johanns for Ag Secretary

President Bush announced the nomination of Nebraska Governor Mike Johanns to serve as the next Secretary of Agriculture. Johanns will succeed Ann Veneman in the position for the President's second term.

"He's been a leader on drought relief in Nebraska and throughout the Midwest," said President Bush. "He's a strong proponent of alternative energy sources, such as ethanol and biodiesel. He's traveled the world to promote American farm exports."

Johanns is a native Iowan, growing up on a dairy farm. He graduated from Osage (Iowa) Community High School, St. Mary's College in Winona, Minnesota, and earned his law degree from Creighton University in Omaha. Johanns served as mayor of Lincoln, Neb., prior to being elected governor of the state in 1998.

Johanns' appointment is pending Senate approval.

## Take the Readership Survey: Your thoughts on Swine Health Report

Swine Health Report is an important means of communication to key stakeholders throughout the swine industry.

In order to ensure that Swine Health Report best serves your needs, we are providing you with an opportunity to give us your input. The Readership Survey, which can be found on page 12 of

this issue, is a brief 15-question survey that will allow us to better understand what you look for in a publication.

Simply fill it out and detach this portion, fold the page in thirds and place a stamp as indicated.

We hope that you'll take a few minutes to complete the survey

and return it. Your input is greatly appreciated.

### *Take the Survey Online!*

Or, if you prefer, the survey can be completed online. Simply go to [www.animalagriculture.org/survey/swinehealth.htm](http://www.animalagriculture.org/survey/swinehealth.htm) to submit your thoughts electronically.

*fold here*

Swine —————  
————— HEALTH REPORT

Swine —————  
————— HEALTH REPORT

*fold here*

Place  
Postage  
Here

National Institute for Animal Agriculture  
Swine Health Report  
1910 Lyda Ave  
Bowling Green, KY 42104

# SWINE HEALTH REPORT

# Readership Survey 2004

**1. Which of the following best describes your professional affiliation?**

- Producer
- Producer/Farm/Commodity Association Executive
- State Agriculture or Animal Health Official/Employee
- Federal Agriculture or Animal Health Official/Employee
- Practicing Veterinarian or Veterinary Association Executive
- Academician/Extension/Researcher/Diagnostician
- Allied Industry Stakeholder
- Media/Communications
- Other (please list) \_\_\_\_\_

**2. In which Time Zone are you located?**

- Eastern
- Central
- Mountain
- Pacific

**3. What is your primary source of agriculture information? (choose one)**

- Trade Publication (Newspaper, Magazine)
- Industry Newsletters
- Email/Internet
- Television/Radio
- Personal Contact
- Other (please list) \_\_\_\_\_

**4. Rate the usefulness of this quarterly publication to you.**

- 1 poor
- 2 fair
- 3 average
- 4 good
- 5 excellent

**5. How much of Swine Health Report do you typically read?**

- None
- Very little
- Some
- Most
- All

**6. The timeliness of information is:**

- New and timely
- Outdated
- Not new, but still informative

**7. The depth of information in Swine Health Report is:**

- too basic
- about right
- too technical

**8. In the Swine Health Report, I would like to see:**

- More news items
- More in-depth analysis of key issues
- Better balance of news and in-depth information
- No changes at all

**9. I find the Layout/Design to be:**

- Attractive, easy to read
- Attractive, but hard to read
- Plain, but easy to read
- Plain, hard to read

**10. Layout suggestions, (choose all that apply):**

- More pictures/graphics
- More text/information
- Change Color/improve general appearance
- Other (please list) \_\_\_\_\_

**11. How would you prefer to receive Swine Health Report?**

- Through mail, as I currently do
- Through email in an electronic format

**12. Please prioritize the following areas, based upon your interests, to be covered in Swine Health Report: (rank 1-7)**

- \_\_\_ News, information and progress updates on federal disease eradication and emerging disease activity
- \_\_\_ State and national activities addressing the increasing prevalence of economically significant diseases
- \_\_\_ Highlights on health/biosecurity strategies and other industry initiatives
- \_\_\_ News and information on topics pertaining to animal health emergency management and international trade
- \_\_\_ Findings from NAHMS and other research/scientific studies
- \_\_\_ Features on advancements in animal ID and other emerging topics
- \_\_\_ Other (please list) \_\_\_\_\_

**13. The length of articles is:**

- too long
- about right
- too short

**14. Would you prefer a magazine-style publication that would include information from multiple species, rather than species specific?**

- Yes
- No

**15. Other comments that would make Swine Health Report more useful to you:**

---

---

---

---

---

---

---

---

---

---