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Emerging diseases: Why this is important to our industry

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“What we anticipate seldom occurs; what we least expect generally happens.”

~ Disreali

According to the Swine Futures Project (page 114), an emerging disease issue is defined as:

Any sudden, negative economic impact related to the appearance of a disease which could have a direct impact upon productivity, present a real or perceived risk to public health, or present a real or perceived risk to a foreign country which imports from the United States.

EAI's are broadly defined and include not only emerging animal diseases (EADs), but also noninfectious disease issues such as toxins and issues resulting from the perception of a disease or toxin-related problem. The rapid detection and response to EAI's is critical to livestock industries, as is a planned sustained response that involves thorough investigation and research. EAI's have the potential to spread rapidly through our industries, threatening the livelihood of producers and limiting access to increasingly important export markets.

Only one word is necessary to express why management of EAI's is so important: PRRS. PRRS, once itself an emerging disease, is a perfect example the significant economic impact new pathogens can wreak.

The Swine Futures Project (SFP), completed in July 1999, details numerous deficiencies in current responses to potential EAI's. Key findings from that report cite the lack of a central coordinating body to gather, review and distill EAI intelligence information; the lack of a mechanism for determining whether an EAI is occurring; and the absence of an algorithm that can be followed in order to develop a consensus on the response needed (SFP, page 116).

Perhaps we as an industry are still under prepared due to the fact that identifying EAI's requires a different mindset than we generally employ. Firstly, it is our tendency to “learn from past events” through specifics, when, instead general knowledge of the whole system is more useful for finding EAI's. Interaction with our industry's outliers, both geographical and cultural, is a necessary addition to our activities. Secondly, a far-reaching, system of syndromic surveillance must serve in addition to the nar-

row but technically advanced system of our excellent diagnostic laboratories and specialized practitioners. Thirdly, budgeting for something we cannot predict and do not yet understand is difficult.

Once an EAI is found, an assessment needs to be made on how to respond. For EAI's, the Swine Futures Project (SFP) identified that “there is no clear leader to make the call that an EAI is occurring, much less how the EAI should be managed.” Additionally, the SFP identified that a decision making group is needed to review possible EAI's and make the determination if action is needed. Given that there are significant implications for taking action, the SFP recommended that such determinations be made by a group of stakeholders rather than an individual or agency.

A group of stakeholders tasked with managing EAI's would require special characteristics. A core number of members must have past or ongoing experience with the pork industry, thereby meeting the requirement of general system knowledge. The team must also be a diverse group in order to cover the both the industry as well as government and academia. The team would also need to be visible enough to provide a “go to” for the fringes of our industry. There are large numbers of nontraditional operations that are not serviced by swine experts. An outreach effort armed with syndromic descriptors of potential EAI's would also improve breadth.

Should the emerging issue be zoonotic in nature, good relationships with public health agencies and protocols for communication must be established up front. As a rule, the team would need to have a good communication system in place, both to receive and screen incoming inquiries as well as to report progress of investigations. A standard operating procedure for receiving an inquiry and screening reports would need to be established. Most likely, veterinarians and diagnosticians would be the first contact, but it must not be unexpected that a producer or extension agent may report a concern.

The team would need support to “make the call” that a new disease or issue had emerged and to generate a response to it. As one practitioner mentioned, “imagine if we were wrong.” Any potential liability issues would need to be addressed up front.

A response to an EAI might be a call for further research into diagnosis, testing, pathology and transmission. Or, perhaps the response might be to stamp it out immediately. An analysis of the impact of the emerging issue would pre-cede such a response. Different agencies and stakeholder groups may be required depending on the nature of the response plan.

Lastly and most critically, the team would require a budget and time for addressing inquiries, directing research and communicating outward to stakeholders.

Early information will need to be communicated in a “safe-room” until released so as not to adversely affect trade relations or perception of food safety or public health. The team may need to put in place confidentiality agreements with some institutions ahead of time in order to respect potential patents. Information collected by the group would need to remain confidential in order to encourage reporting of unusual events by producers.

In summary, as an industry, we are not well prepared for surprises, but awareness is growing. A resolution on the USAHA books from the Transmissible Diseases of Swine Committee called the Emerging Swine Disease Response Mechanism was put forth on October 26, 2004.

Therefore, be it resolved that USAHA calls on USDA, through the efforts of the National Center for Animal Health Surveillance and the Center for Emerging Issues, to work with industry and state animal health officials to develop a defined mechanism to detect, investigate, evaluate, and respond to emerging diseases in swine and provide the necessary resources to support these activities.

Our industry has many questions that still need to be answered, including the following:

- 1 Should the pork industry set up an advisory group?
- 2 Who should set up the advisory group?
- 3 What should the charter say?
- 4 Who should fund it and how?
- 5 How much money would it need?
- 6 Should it be volunteer or on-call staffed?
- 7 Who should be on the advisory group?

