

Results of the recent survey of the membership of the AASP for outbreaks of sow abortion and mortality

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In the last quarter of 1996, outbreaks of abortion storms with sow mortality in several southeastern Iowa swine herds have received national and international attention. These herds were featured in articles published in the *Des Moines Register* and elsewhere, were discussed by producers and veterinarians on the Internet, and were investigated by a USDA-APHIS team of veterinary specialists during the week of December 16, 1996. Concern over the outbreaks led the National Pork Producers Council (NPPC) to organize a special conference at NPPC headquarters on January 3, 1997. This meeting brought together swine producers, swine practitioners, researchers, and regulatory personnel to discuss the possible causes of the outbreaks and to consider steps to be taken in response to the perceived threat. Four possibilities were suggested to explain the clinical outbreaks:

- They were caused by a previously unrecognized infectious agent; or
- They were caused by infection with a more virulent form of porcine reproductive and respiratory syndrome virus (PRRSV); or
- They were caused by infection with PRRSV in combination with another, as yet unidentified, infectious or noninfectious agent; or
- Although severe, the outbreaks were compatible with previous reports describing the severity and duration of PRRS.

Which, if any, of the four possibilities is correct remains to be proven. However, the general consensus at the meeting was that the strongest evidence implied a primary role for PRRSV.

Because of the urgency which accompanied the reports of clinical losses in these herds, a survey of the American Association of Swine Practitioners (AASP) was quickly organized to draw upon the collective experience of the membership. The survey was a cooperative effort carried out by AASP members at the University of Nebraska-Lincoln, South Dakota State University, and Iowa State University. The objective of the survey was to bring to light as much information as possible, as quickly as possible, regarding the number and location of outbreaks in North America that seemed compatible with those reported in southeastern Iowa.

The survey questionnaire was formatted as a self-addressed, postage-paid postcard to maximize response and minimize turnaround time.

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This article is available on the AASP Web site at:

<http://www.aasp.org/shap/issues/v5n2/index.html>

Figure 1

1. In the last 15 months, have you made on-farm calls to herds that fit the clinical definition SAMS? YES ___ NO ___

ESPECIALLY IF YOU HAVE NOT SEEN SAMS HERDS ...
Please complete and return the survey!! Negative observations are important!!

2. In total, how many herds have you seen with SAMS? _____

3. Excluding feeder pig finishers, how many herds are in your practice base? _____

4. State or states in which these herds reside (please list states): _____

Are you willing to provide additional information on SAMS herds? For example, history, clinical effects, diagnostic results, etc. If so, please provide the following:

Your name _____
 Route or street address _____
 City _____
 State and Zip _____
 Telephone _____
 FAX number (optional) _____
 E-mail address (optional) _____

Please complete and return this survey immediately.
Thank you!

Postcard questionnaire (shown 50% actual size)

Table 1

Summary data: Number of respondents reporting herds meeting the case definition

Location	"No"	"Yes"	Total
United States	297 (84%)	55 (16%)	352
Canada	23 (85%)	4 (15%)	27
Total	320 (84%)	59 (16%)	379

Questions were kept to a minimum for the same reason (Figure 1). An accompanying letter explained that the purpose of the survey was to define the scope of sow abortion and mortality outbreaks in the United States and Canada using the following case definition:

- acute onset
- clinical signs occur over a 2- to 4-week period
- high mortality (>5%) in sows and boars
- high rate of abortions (>10%)
 - abortions occur in all parities
 - abortions occur in all stages of gestation

Surveys were sent to 1267 AASP members in the United States and Canada and responses were received from 379 (29.9%). The survey was confidential and no attempt was made to identify participants who did not supply their identity and/or address. However, using postmarks on the returned postcards as a proxy for location, responses were received from 28 states and seven Canadian provinces. The responses are tabulated in Tables 1, 2, and 3. A total of 59 (15.6%) respondents

Table 2

Count of respondents reporting herds meeting the case definition using postmark as a proxy for location

Location (postmark)*	No	Yes	Total
Arkansas	1	0	1
California	2	0	2
Colorado	4	1	5
Florida	1	0	1
Georgia	2	1	3
Hawaii	1	0	1
Illinois	42	6	48
Indiana	34	3	37
Iowa	88	21	109
Kansas	16	1	17
Kentucky	3	0	3
Louisiana	1	0	1
Maryland	2	0	2
Michigan	6	1	7
Minnesota	22	11	33
Mississippi	1	0	1
Missouri	16	5	21
Nebraska	18	1	19
North Carolina	6	2	8
North Dakota	2	0	2
Ohio	5	0	5
Oklahoma	2	0	2
Pennsylvania	4	1	5
South Dakota	9	0	9
Tennessee	0	1	1
Texas	1	0	1
Virginia	2	0	2
Wisconsin	6	0	6
Canada	23	4	27
Total	320	59	379

* Indicates postmark on postcard survey, not specific location of respondents.

Table 3

Number of herds meeting the case definition as reported by respondents

Location (postmark)*	Number of herds
Colorado	1
Georgia	6
Illinois	14
Indiana	5
Iowa	66
Kansas	(not reported)
Michigan	3
Minnesota	17
Missouri	11
Nebraska	1
North Carolina	2
Pennsylvania	2
Tennessee	2
Canada	8
Total	138

* Indicates postmark on postcard survey, not specific location of respondents.

reported the presence of 138 herds in 13 states and Canada which fit the case definition. In contrast, a survey of the AASP membership for "mystery swine disease" herds in 1990 reported 1611 herds in the United States and 187 in Canada (Zimmerman, 1991). The survey results indicate that clinical cases matching the case definition are widespread but not common in North American swine herds at this time. Epidemiological studies and research investigations currently in progress at a number of academic institutions and government agencies will provide more definitive information in the near future.

References

Zimmerman JJ. 1991. A survey of the American Association of Swine Practitioners for the presence of Mystery Swine Disease herds. Proc Ann Mtg LCI, Minneapolis, Minnesota: 121-128.

