Dear expert,

The University of Minnesota’s Center for Animal Health and Food Safety is working on projects to support business continuity in the event of a foreign animal disease (FAD) outbreak affecting the US pork industry. To analyze the trade-offs faced in effectively managing a FAD response, we are seeking broad pork industry input to identify 1) pork supply chain movements with the highest risk of Foot and Mouth Disease (FMD) spread to other susceptible livestock; 2) pork supply chain movements most critical to business continuity in the US pork industry.

You have been identified as an active industry participant who could help inform our study. If you agree to respond, after providing some basic information on your role in the industry, we ask you to please consider movements associated with pork production regarding risk of disease spread and impact on business. Before you begin taking this survey think about:

- What an FMD diagnosis in the United States would mean for your business. More specifically:

1. What movements would you expect to be the most likely to spread disease from one swine facility to another.
2. What movements are most critical to the continuation of your business and the welfare of your animals.

Assume that all movements will be conducted according to your standard biosecurity protocols.

**Confidentiality**

The records of this study will be kept private. In any reports published or data shared, we will not include any information that will make it possible to identify respondents. Research records will be stored securely and study data will be encrypted according to current University policy for protection of confidentiality.

**Voluntary Nature of the Study**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota or with other cooperating institutions within this project. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**Statement of Consent**

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

**Demographic Data**

1. **What sector of the swine industry do you most identify yourself with? Please select one.**
   1. Swine producer
   2. Harvest (pork processing and/or packing)
      1. Please specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Allied industry (e.g. veterinarian, academia, government, feed company, pharmaceutical company, etc.)
      1. Please specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Retail and/or distribution
      * 1. Please specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Following text is for the social sciences staff helping with the survey and will not actually be displayed in the survey text)

**Skip logic: If answer is 1a, then answer all questions in demographic portion of the survey**

**If answer is 1b, then go to question 2 and then they are finished with the demographic portion of the survey.**

**If answer is 1c, then go to directly question 6**

**If answer is 1d, then they are finished with the demographic portion of survey.**

1. **How many pigs do you typically care for per day?**
   * 1. <100 iv. 2500-4999
     2. 100-999 v. 5000-9999
     3. 1000-2499 vi. 10,000 or more
2. **How many pigs do you typically have on the site(s) under your ownership or management? Please select one of the following:**
   * 1. <100 iv. 2500-4999
     2. 100-999 v. 5000-9999
     3. 1000-2499 vi. 10,000 or more
3. **Are you a contract producer?**

Yes

No

Other (please comment): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Which best describes this pig operation?**
   * 1. Farrow-to-finish
     2. Wean-to-finish
     3. Breeding/Farrowing
     4. Nursery
     5. Finishing
     6. Boar Stud
     7. Gilt Developer Unit
     8. Other \_\_\_\_\_\_\_\_\_\_
2. **How many production sites do you currently own and/or manage?**

**Please select one of the following:**

* + 1. 1
    2. 2-5
    3. 6-10
    4. >10

1. **Do you currently own and/or manage production or processing in:** 
   1. **Multiple States**
   2. **Single State**

**Please check/select all the region(s) where you currently own or manage production or processing sites:**

□ Midwest (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin)

□ Northern Plains (Colorado, Montana, Nebraska, North Dakota, South Dakota, Wyoming)

□ Northeast (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia)

□ Southeast (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia)

□ Southern Plains (Kansas, Oklahoma, Texas)

□ Pacific Northwest (Idaho, Oregon, Washington)

□ Southwest (Arizona, California, New Mexico, Nevada, Utah)

1. **How often (e.g. daily, weekly, monthly, every 6 months, etc.) do you move pigs off of a production site to another production site or to harvest.**

**Please select one of the following:**

* + 1. 3 or more times per week iv. Every 2 months
    2. Twice weekly v. Every 3-6 months
    3. Weekly vi. Less than every 6 months

vi. Every 2 to 4 weeks

1. **Do you have established biosecurity protocols for live animal site(s) or site visits?** Please choose one. Yes No Don’t Know

**DISEASE RISK: Please rate the following pork production chain movements for the likelihood of disease spread using the scale provided below. Assume that all movements that occur are in accordance with your company’s current biosecurity requirements and protocols if they exist.**

|  |  |
| --- | --- |
| **Likelihood that the movement would result in disease spread:** | Likelihood |
| Very likely to occur) | 4 |
| Some probability | 3 |
| Unlikely to occur | 2 |
| Disease spread is insignificant | 1 |

|  |  |
| --- | --- |
| **Type of movement** | **Likelihood of Disease Spread** |
| **Production equipment and feed** | |
| Movement of feed onto production sites |  |
| Movement of supplies onto production sites |  |
| Movement of shared equipment onto production sites |  |
| Movement of contracted or shared livestock trucks onto production sites |  |
| Movement of dedicated livestock trucks among company production sites |  |
| **Production genetics** | |
| Movement of replacement gilts and boars into production system isolation |  |
| Movement of replacement gilts and boars onto production site |  |
| Movement of semen into a production system (breeding herd) |  |
| **Production general** | |
| Movement of weaned pigs to offsite nursery, wean to finish, or finishing (single source) |  |
| Movement of weaned pigs to offsite nursery, wean to finish, or finishing (multiple sources) |  |
| Movement of replacement gilts into a sow unit |  |
| Movement of feeder pigs to finishing (e.g. from nursery to finishing) |  |
| Movement of finishing pigs direct to slaughter |  |
| Movement of cull sows and boars direct to slaughter |  |
| Movement of off size and cull pigs, sows and boars to sale barn/buying station |  |
| Movement of off size and cull pigs, sows and boars from sale barn/buying station to slaughter |  |
| Movement of feeder pigs from sale barn to production site |  |
| Movement of dead stock to offsite disposal (landfill, rendering, etc.) |  |
| Movement of manure to field application offsite |  |
| **Harvest and processing** | |
| Movement of fresh carcasses to offsite processing |  |
| Movement of raw inedibles (byproducts) from harvest site to further processing |  |
| Movement of rendered inedibles from harvest site to further processing |  |
| Movement of finished products to distributing |  |
| Movement of fresh products to point of service |  |
| Movement of ready to eat products to point of service |  |
| **Personnel** | |
| Movement of employees onto, off and/or between production site(s) |  |
| Movement of routine service providers (e.g. plumbers, electricians, etc.) onto, off and/or between sites |  |
| Movement of veterinarians onto, off and/or between sites |  |
| Movement of vaccination crews into, off and/or between sites. |  |
| Movement of commercial crews onto, off and/or between sites (e.g. manure haulers, feed trucks) |  |

**IMPACT ON BUSINESS: In the event of a Foot and Mouth Disease (FMD) outbreak in the US, restrictions may be enforced on particular movements within the pork supply chain. The goal of this exercise is to determine which movements within the industry are most critical to the continuation of business. This will help emergency response teams to prioritize efforts so that movements most vital to the industry are interrupted as little as possible.**

**For each movement, use the slider to indicate the amount of time at which the restriction of that particular movement would cause significant negative consequences to your business (e.g. high likelihood of bankruptcy, negative impact on animal welfare, disruption of movement of people onto or off site, etc. ).**

**Assume for each sc you are expecting t**

**Times to use are:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **< 48 h** | **>48 hours up to 7 days** | **> 7 days up to 21 days** | **> 21 days up to 60 days** | **> 60 days** |

|  |  |
| --- | --- |
| **Type of movement** | **Time until impact on business will lead to significant negative consequences** (if the movement is prohibited for this time period) |

|  |  |
| --- | --- |
|  |  |
| **Production equipment and feed** | |
| Movement of feed onto production sites |  |
| Movement of supplies onto production sites |  |
| Movement of shared equipment onto production sites |  |
| Movement of contracted or shared livestock trucks onto production sites |  |
| Movement of dedicated livestock trucks among company production sites |  |
| **Production genetics** | |
| Movement of replacement gilts and boars into production system isolation |  |
| Movement of replacement gilts and boars onto production site |  |
| Movement of semen into a production system (breeding herd) |  |
| **Production general** | |
| Movement of weaned pigs to offsite nursery, wean to finish, or finishing (single source) |  |
| Movement of weaned pigs to offsite nursery, wean to finish, or finishing (multiple sources) |  |
| Movement of replacement gilts into a sow unit |  |
| Movement of feeder pigs to finishing (e.g. from nursery to finishing) |  |
| Movement of finishing pigs direct to slaughter |  |
| Movement of cull sows and boars direct to slaughter |  |
| Movement of off size and cull pigs, sows and boars to sale barn/buying station |  |
| Movement of off size and cull pigs, sows and boars from sale barn/buying station to slaughter |  |
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| Movement of raw inedibles (byproducts) from harvest site to further processing |  |
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