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# National Animal Health Monitoring System (NAHMS)

**NAHMS Swine 2021 Small Enterprise Study  
Interviewer's Manual**

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## **Chapter 1 – General Information**

### **BACKGROUND**

The NAHMS Swine 2021 Small Enterprise Study is being conducted jointly by the National Agricultural Statistics Service (NASS) and the National Animal Health Monitoring System (NAHMS). NAHMS is an information gathering and disseminating organization within the Animal and Plant Health Inspection Service (APHIS), an agency of the U.S. Department of Agriculture.

The purpose of the NAHMS program is to collect and analyze animal health data to provide current and scientifically sound information on the health status of U.S. livestock and poultry. The information is intended to benefit both livestock producers (by facilitating efficient production and animal welfare), industry leaders (by creating a reference guide and referral for trade negotiations with other countries) and the general public (education). Special emphasis is placed on obtaining valid estimates of management practices, production measures, biosecurity practices, disease status and disease prevention measures used in the national herd.

The NAHMS program is not designed to detect, regulate and eradicate major epidemic diseases, but rather to obtain snapshots of the levels (e.g., prevalence) of different swine diseases. Overall herd health is often related to animal genetics, herd management practices, the environment in which the herd is located and exposure to infectious agents. The NAHMS program attempts to measure these factors and to report the findings to the livestock industry, as well as to the general public.

NAHMS was started in 1983. In the first few years after it was established, animal health and economic data were collected for various types of livestock through several State programs. Since 1989, surveys have been national in scope and have focused on hogs from farrowing to market, dairy cattle, cow-calf operations, cattle-on-feed operations, equids, catfish, poultry, goats and sheep. NASS State offices and NASS field enumerators were involved in most of these projects.

In 1990, NAHMS conducted its first swine study. The 2021 NAHMS Small Enterprise Study will be the third study of the smaller producer side of the swine industry. However, the two previous smaller producer studies (2007 and 2012) were confined to operations with less than 100 hogs while this study includes operations with up to 1,000 hogs.

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## **HOW NAHMS SWINE STUDY INFORMATION IS USED**

Information gathered in NAHMS studies is used to:

- Provide industry groups with information regarding their industry on a national level.
- Facilitate trade negotiations and exports by providing other countries with a summary of the structure and health status of the US industry.
- Identify information needs to promote funding for animal health research.
- Define health care areas that need more emphasis in veterinary education programs.
- Help scientists identify the most costly health problems.
- Help drug companies decide which new products to develop.
- Assist government policy makers in making more informed decisions affecting the swine industry.
- Benefit consumers by providing factual information on how swine are raised.

**Some of these points may be useful in persuading a reluctant owner/manager to participate in the survey.**

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## **PURPOSE OF THE NAHMS SWINE 2021 SMALL ENTERPRISE STUDY**

Smaller scale swine production is reported to be a growing sector of the U.S. swine industry due to its role as primary supplier of many niche market products. Niche markets include products that are advertised as coming from production systems that are “outdoor raised, pasture pork, organic, sustainable, local, etc.” This smaller producer study will establish whether or not trends in health and swine management estimates enumerated in previous smaller producer studies (2007, 2012) are continuing while providing greater insight into movement practices employed in this sector. Studying operations with less than 1,000 head will provide a comparison in movement and health practices with their larger counterparts ( $\geq 1,000$ ) which are being assessed simultaneously in the 2021 NAHMS Swine Large Enterprise Study.

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## **OBJECTIVES OF THE NAHMS SWINE 2021 SMALL ENTERPRISE STUDY**

- Describe current U.S. small scale production practices including general management practices, housing practices, productivity, disease prevention and mortality.
- Describe trends in small scale swine health and disease management practices.
- Describe trends in small scale swine production system movements, marketing and slaughter channels.
- Describe potential overlaps between small scale swine production system movements with those of larger total confinement/commercial operations.

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## **BENEFITS OF PARTICIPATION IN THE NAHMS SWINE 2021 SMALL ENTERPRISE STUDY**

The information collected will be useful to individual producers, the swine industry, animal health officials and veterinary groups.

## **Benefits to Individual Producers**

- Participating producers will receive links to reports and information sheets that will enable them to compare their operation - including management decisions and practices - with others in the swine industry.
- These publications will present study summary data on a national, regional and operation size basis for general management and production topics as well as specific health related issues.
- This study will provide a set of baseline national estimates for the amount of niche marketers and their practices when rearing swine.

## **Benefits to the Swine Industry**

Baseline characterization of the smaller segment of the swine industry, including:

- National estimates of disease prevalence based on clinical signs as well as management biosecurity tools, marketing channels and movements of swine by production phase. These estimates are valuable in trade negotiations and in combatting misinformation.
- National estimates of movement practices and feed management in growing pigs for disease planning.

## **Benefits to Veterinarians, Universities and Researchers**

For practitioners, universities, industries and media involved with the swine industry, descriptive reports summarizing all data will be available for comparative analysis and interpretation.

- Information collected will provide basic parameters for animal disease models, including those used to plan for outbreaks of foreign animal diseases.
- Veterinary Services (VS) personnel will have a better understanding of the spectrum and demographics of the swine industry in the event of an emergency response.
- The information collected will help to determine areas needing further research and education.
- Researchers will use the background information provided by this study on the swine industry to support grant applications while national estimates provide the basis for study design and sample selection.

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## **OVERVIEW OF NASS DATA COLLECTION**

NASS will randomly select 5,880 operations from 38 swine producing States. The 38 States were chosen because they account for 95.2 percent of operations with fewer than 1,000 hogs and 96.4 percent of the hogs on operations with fewer than 1,000 hogs in the U.S. Operations with fewer than 1,000 hogs account for approximately 2.8 percent of swine inventory in the U.S. but 84.4 percent of swine operations.

Selected operations will be sent information about the study, including a selection letter, launch sheet, an African Swine Fever fact sheet, the 2021 NAHMS Swine Small Enterprise Survey (SES), brief instructions for filling the SES out and a postage affixed return envelope. These operations will also be sent a unique code to access a web-based version of the SES and instructions to access and fill out that form. This will take place between June 15, 2021 and July 2, 2021. The SES is devoted to health, management, movement and productivity topics. These operations will be contacted to do a Caller Assisted Telephone Interview (CATI) interview if they do not return the SES either by mail or by web. This interview is covered in this manual.

CATI interviews will occur between July 6, 2021 and July 30, 2021. Up to seven calls will be made to administer the questionnaire. If no contact is made after seven attempts, the respondent will be coded as inaccessible. There will not be any attempt to convert refusals other than a clear explanation of the importance of their voluntary participation in the interview. If possible, the CATI responses will be recorded into a database and no hard copy record will be available. Edit/validation specifications will be prepared by APHIS and incorporated by NASS.

It will help promote the study when you make these contacts if you have a working knowledge of the materials sent ahead (e.g., the launch sheet) so you may give an accurate picture of what will be involved in completing the study. “Sales” points for the study include the following five areas:

1. The Swine 2021 study has been designed to collect information specifically requested by swine industry representatives, State, and Federal officials.
2. The output reports from this study are useful in trade negotiations.
3. A current snapshot of this swine industry segment in terms of health, management and movement is useful for State and Federal officials in disease response planning (e.g., African swine fever).
4. National estimates of modern commercial swine raising combat misinformation.
5. Understanding the marketing channels and movement in this segment of the industry will be useful in educating students and the public.

Participation in this study is voluntary. A respondent may choose to answer every SES question, skip certain questions or sections or end the interview at any time. NASS Regional Offices should be able to answer most terminology questions or provide assistance in determining things like the “spirit” of a particular question. That is, what is the question really after?

## Chapter 2 – Terms and Definitions

Phone enumerators should familiar with the terms and definitions listed below. To gain the most benefit from training, enumerators should review the definitions of these terms before attending the training session and ask any questions they may have then. **Note:** These terms are tailored to **this** questionnaire contents and the interview procedures. There are also NASS terms (e.g., Callback).

### **All In/All Out**

A management approach in which the animals are moved as a group, allowing a facility unit (pen, room or barn) to be completely empty for a time. All-In, All-Out management usually includes completely cleaning and disinfecting the facility unit before refilling it with animals. All-In, All-Out management can be done at almost any level: room, building or entire site.

### **Another producer site managed by this operation vs. Another producer site not managed by the operation.**

A selected site often has a standard replenishment “stream” or source for new pigs. For example, a selected site may grow nursery aged pigs and either gets newly weaned pigs from another site(s) owned by the operation (may be the same site) or another site(s) **not** owned by the parent operation. Different operations often have different biosecurity procedures and less stringent procedures can increase health risks to the selected site.

### **Antibiotic**

A substance that inhibits or kills microorganisms (e.g., bacteria).

### **Artificial Insemination**

The process by which a gilt or sow is inseminated via an instrument filled with boar semen.

### **Biosecurity**

The specific practices and procedures used by an operation to prevent entry of or limit the spread of, diseases/pathogens. Examples of biosecurity would be requiring visitors to shower or use a footbath before entering the hog production areas.

### **Boar/Young Male for Breeding**

Intact male pig used for breeding.

### **Bred**

A sow or gilt that has been inseminated.

### **Bred/Breeding**

All actions from mating to farrowing that culminate in a gilt or sow becoming pregnant and delivering a litter of piglets.

### **Breed specific pork**

Usually a premium product sold to fans of select swine breed meat (like the Duroc breed).

### **Breeding Herd**

All gilts, sows and boars actively used for breeding on a site. Entry to the breeding herd is usually after a period of holding or quarantine. In the case of females, this holding period may occur in a Gilt Development Unit.

### **Brucellosis**

A bacterial illness of swine caused by *Brucella suis*. *B. suis* that usually causes inflammation in the reproductive organs resulting in abortions, infertility and low milk production. It may also cause lameness. Swine brucellosis can be contracted by people. Swine in the U.S. are considered free from swine brucellosis. However, feral swine may have the disease.

**Buildings where swine are kept/Pig housing area**

The area where pigs live and move about, including the area where employees who have direct contact with the pigs walk (e.g., aisles). This area would start after any transitional entry place from outside where biosecurity methods are employed to keep disease out (e.g., showering).

**Buying station**

A place where direct marketing between a swine producer and a packing or rendering plant can occur.

**Callback**

A situation in which a respondent who has been contacted must, for any reason, be re-contacted. A callback may be needed to clarify a response from the original interview because of its relationship to other reported data, to fill out a questionnaire when the respondent doesn't fill out the mailed version or to talk with the person best able to provide the information requested.

**CNS (Central Nervous System) signs**

The CNS is the brain and spinal cord. Signs of diseases affecting the CNS can include walking in circles, walking in an uncoordinated manner and/or with a head tilt, pressing the head against the wall or seizures.

**Composting**

A method of decomposing plant remains and other once living materials (like pigs) to make an earthy, dark, crumbly substance that is excellent for enriching soil.

**Commercial market**

The market type most commonly used by producers and consumers alike. Pork products are found with company labels and no other premium claims.

**Confidentiality**

The assurance from NASS and the USDA to survey respondents that individual information collected on authorized USDA surveys will not be released to any person, organization or institution, including court subpoenas.

**Continuous flow**

A management approach where animals are moved in and out as needed, in contrast to All in/All out movement. At least one pen, room or building always contains some animals.

**Contractee**

A person who is responsible for producing a contractor's hogs for a fee or other financial consideration. This person may own the operation where the hogs are raised but not the hogs themselves.

**Contractor**

Person or firm offering a contract agreement to a producer (contractee) to raise the person's or firm's hogs. The contractor typically owns the hogs and might supply the feed, medicine and other such items, but does not take care of the animals.

**Cull (sows, gilts and boars) or "Culled Breeding Stock"**

The action of removing animals from the herd or slating them for removal for a reason usually related to poor performance (e.g., sows no longer suitable for breeding). Usually, these animals are sent to slaughter (or rendering) similar to market hogs or euthanized on or off the site.



**Custom exempt slaughter**

A slaughter destination that is exempt from continuous inspection by state and federal agencies. Criteria for this destination varies by statute but in general a custom exempt slaughter facility can only slaughter and process livestock for the exclusive use of the producers, their family and nonpaying guests. Packages must be labeled “NOT FOR SALE” and the meat cannot be sold, traded, bartered or given away.

**Deworming**

The practice of using medication (often given in feed) to inhibit the life cycle of internal worm parasites such as roundworms (*Ascaris suum*) <https://www.aasv.org/shap/issues/v17n6/v17n6p330.htm>.

**Estrous cycle**

This is a period of time in sexually mature females which starts with the growth of an ovarian follicle and ends with a “rest” before the next cycle. There are several phases in this cycle, perhaps the most notable being “estrus.” In pigs and other species, this is the time the female will accept sex with the male. Also called “heat.”

**Euthanasia**

The act or practice of killing sick or injured animals in a relatively painless way for reasons of mercy.

**Exhibition or Show pigs**

Pigs raised to compete in a show like the World Pork Expo.

**External parasites**

Parasites that reside on the outside of the body (on or within the skin). Symptoms include rubbing, scratching and various skin signs such as redness. Sarcoptic mange caused by *Sarcoptic scabiei var suis* is a well known external parasite of pigs (<http://www.thepigsite.com/articles/3955/external-parasites-of-pigs/>).

**Facility**

A structure and/or area where the animals are located or to which they have access.

**Farrow**

When a sow or gilt gives birth to a litter of piglets.

**Farrowing Phase**

Production phase in which sows and gilts give birth to piglets.

**Federal or State inspected slaughter**

A market destination where there is continuous inspection by State and Federal agencies. Most pork delivered through the commercial market is processed this way.

**Feeder Pigs**

Weaned pigs weighing approximately 40-60 pounds that are to be fed out for the slaughter market or sold as is.

**Feral Swine or Hogs**

Wild, free roaming swine. They can carry and transmit diseases to domestic swine and other animals, including humans.

**Gastrointestinal Disease**

Disease caused by pathogens or conditions that cause damage to processes of the esophagus, stomach, small intestine, large intestine, caecum or rectum. Signs of Gastrointestinal Disease commonly include diarrhea (scours).

**Gestation**

Time from conception to birth, typically about 114 days in pigs.

**Gestation phase**

A time period in a sow's or gilt's life when they are presumed pregnant but have not yet farrowed.

**Gilt**

A sexually mature female pig that has not yet produced a litter of piglets.

**Gilt Development Unit (GDU)**

A facility dedicated to replacement gilts destined for the breeding herd. The GDU prepares the gilt for entry into the breeding herd proper often by exposing her to pathogens endemic to the breeding herd (which may be on another site) via vaccination or other acclimations such as feedback. The GDU also often provides boar exposure and time to gain weight. Gilts may be kept there through weaning of first litter and rebreeding (<https://www.ipic.iastate.edu/SowBridge/SB0112GDU.pdf>).

**Grower/Finisher Aged Pigs**

The time between when a weaned pig weighs about 40–60 pounds (1-2 months of age) and when the pig is at market or slaughter weight (approximately 300 pounds or 5-6 months of age). Instead of going to market some of these pigs may be groomed to become replacements in the breeding herd.

**Grower/Finisher Facility**

A structure and/or area where grower/finisher aged pigs are located or to which they have access. This term (generally) refers to the physical location where grower/finisher aged pigs are kept in the grower/finisher phase.

**Grower/Finisher Phase**

Production phase (lasting 2-3 months) in which hogs are fed out from 40 to 60 pounds to final market weight for slaughter.

**Heritage breeds**

Historic pig breeds conserved for genetic diversity. These breeds were raised before more modern commercial agriculture began. Examples of these breeds include Old Spot, Tamworth, Hereford and Mangalitsa.

**Humanely raised**

Meat from livestock that has been certified by an outside authority that has visited the farm to make sure it follows certain animal husbandry practices. Humanely raised meat may come with a variety of labels such as Certified Humane and Animal Welfare Approved. There is no legal definition for the term “humanely raised.” (<https://certifiedhumane.org/how-we-work/frequently-asked-questions/>)

**Inaccessible**

A respondent who cannot be contacted, interviewed or enumerated during the survey period.

**Individual Hand-Mating Naturally**

The practice of selecting individual females to be bred physically with a specific boar. Both sow and boar are placed in the same pen and an employee might have to help with the physical aspects of mating.

**Internal parasites**

Parasites (generally not including viruses and bacteria) that reside inside the body (within organs or body spaces). Symptoms are specific to the parasite. When respondents speak of internal parasites in pigs they are often talking about worms like *Ascaris suum*.

### **Interstate Health Certificates**

A document certifying that the animals identified on the document satisfy the regulations pertaining to their intended movement. Rules governing interstate movement of livestock varies by State. Often a Certificate of Veterinary Inspection (CVI) is among the certificates needed to move animals across State borders.

### **Isolation or Quarantine**

A biosecurity procedure where a pig or group of pigs is held separately from other pigs for a period (such as 30 days) to permit evaluation of health and look for signs of disease.

### **Litter**

The product of a farrowing. A collection of newborn pigs born at one time to a sow.

### **Livestock market/Auction**

A market destination or channel for all production types of pigs where pigs are sold to other producers or slaughter plants. A commission is usually paid upon sale at this venue. An example would be a market where feeder pigs are bought in lots by producers who then raise them to full market age and size (approximately 300 pounds). <https://extension.psu.edu/swine-production>

### **Locally Grown (e.g., “In State”)**

A label given to “locally” reared pork that may denote its state of origin or other locality designation.

### **Lot With Hut or No Building**

An outside area that has little growing vegetation and might contain a hut. Also known as a dry lot. A hut is any portable housing, normally an A frame or three sided, small structure. However, if a portable structure is permanently installed, it is considered an open building with outside access.

### **Mating**

Natural or artificial insemination of a breeding female. Each time there is an insemination it is considered a separate mating. All the matings within one heat period are called a **service**. A form of natural mating is pen mating.

### **Mummy (ies)**

A dry, shriveled, stillborn pig, often black in color. Mummies are sometimes caused by an infection of the sow during gestation.

### **Natural pork**

A specialty or niche market type. The pork contains no artificial ingredients or added color and is only minimally processed (does not fundamentally alter the product). A product labeled “natural” must include a statement explaining the meaning of the term natural (e.g., "no artificial ingredients” or “minimally processed”).

### **Nursery Aged Pigs**

The time between weaning and about 40–60 pounds or 1-2 months of age.

### **Nursery Facility**

A structure and/or area where nursery aged pigs are located or to which they have access. This term (generally) refers to the physical location where nursery aged pigs are kept in the nursery phase.

### **Nursery Phase**

A production phase in which newly weaned pigs are managed, fed and housed until they go into a grower/finisher management phase. This phase usually lasts until the pig is about 50-60 pounds so for five to eight weeks after weaning.

## **Nursing pigs**

Piglets nursing on their mother

## **Open Building With Outside Access**

Any building for housing swine that is open on one or more sides and provides swine with access to an outside area (such as an uncovered pen). Open sides of the building might have a curtain.

## **Open Building With No Outside Access**

Any building for housing swine that is open on one or more sides, but swine are kept inside the building. Open sides of the building might have a curtain.

## **Operation**

The overall business and top level management unit for a swine rearing facility, which might contain one or more sites. For example, “EB and Son Hogs” might be the name of an operation encompassing all production phases of swine rearing (e.g., gestation, farrowing, nursery and grower/finisher) on one or more **sites** (geographic locations), each devoted to a different production phase or combination of phases. (See also “Site.”)

## **Organic**

A specialty market type that is certified by the US Department of Agriculture’s (USDA) organic standards. Key components of the requirements are that: animals must be raised organically on certified organic land, animals must be fed certified organic feed, animals receive no antibiotics or added growth hormones and animals must have outdoor access. Occasionally, organic designation needs to include other certifications.

## **Other site within this operation or within the operation that owns the swine vs. Other site outside this operation or outside the operation that owns the swine**

A selected site often has a standard destination “stream” for pigs that leave the farm. For example, a selected site may grow nursery aged pigs. The selected site may then move them to another site(s) to finish them (grower/finisher). This site may be either actually owned (land and buildings) by the parent operation. This site may also be one that the parent operation doesn’t physically own (a contractee site) but still retains ownership of the pigs once there. Both of these are **Other site within this operation or within the operation that owns the swine**. If neither are the case then the pigs are being moved to a **Other site outside this operation or outside the operation that owns the swine**. The **difference is that in the former case the parent operation has** a say in biosecurity procedures (they own the site or at least the pigs) and the latter does not (or less so). Therefore, there may be a difference in health risks to the pigs moved.

## **Out-of-Business**

A farm or ranch operator who no longer raises crops, livestock or poultry. He may own farmland that is being operated by someone else.

## **Out of Scope Operation**

University, extension, experimental and prison farms.

## **Parity**

The number of times a sow has farrowed in her lifetime. The parity for a gilt is zero.

## **Pasture With Hut or No Building**

An outside area that has growing vegetation and might contain a hut. A hut is any portable housing, normally an “A” frame or three sided, small structure. However, if a portable structure is permanently installed, it is considered an open building with outside access.

## **Pasture raised**

A specialty or niche market type. A significant portion of animals’ rations come from organically managed pasture and stored dried forages when this label is used.

**Pen Mating (w/multiple females and one or more boars)**

One or more boars are introduced to female pigs in a pen or other enclosure for natural breeding. The swine might be left together for different lengths of time. It might not be possible to tell how many matings actually occurred during the time the boars and sows were together.

**Pet Pigs**

Usually smaller or miniature breeds kept as pets. Examples include Potbellied, Juliana and Kune Kune pigs.

**(Target) Population**

A defined set of farms or operations to which a study pertains. The population elements must be defined in space and time as well as content. For example, the population to be surveyed might be described as all farms in the country with fewer than 1,000 hogs.

**Premises**

A site, including the land and swine buildings on it.

**Refusal**

A person representing a sample unit who refuses to provide sufficient information to complete the questionnaire or who will not give an interviewer permission to complete the questionnaire.

**Renderer (Rendering)**

A company that processes animals into food for other animals (e.g. cat food) or into basic products like lard.

**Replacement (animals)**

Usually a breeding animal brought in young (e.g., a gilt) to replace breeding animals lost to culling. This will maintain breeding herd size and production. However, a replacement can be any stage or type of pig. For example, if a producer does not have enough weaned pigs to fill their nursery facility they may bring weaned pigs in from somewhere else and call them “replacements.”

**Reproductive Problems**

Problems associated with gestation and farrowing. Examples include failure to conceive, inordinately high piglets born dead and abortions.

**Respiratory Disease**

Disease caused by pathogens or conditions that cause damage to processes of the nasal cavities, sinuses, trachea, bronchi or lungs. Signs of Respiratory Disease commonly include coughing or labored breathing.

**Scours**

An industry term for diarrhea in piglets. Many diseases or conditions can cause scours.

**Service**

One or more matings within a single estrous cycle.

**Sample**

The total number of sampling units selected from a sampling frame.

**Sampling Frame**

The list that identifies every sampling unit within the target population. The sampling units are the individual members of the target population whose characteristics are to be measured.

**Sampling Units**

Potential respondents to a survey selected to comprise a sample from the sampling frame. The sampling units are individual members of the target population whose characteristics are to be measured.

**Site (separate)**

One geographic location or address that functions to produce one or more production phases (e.g., breeding, nursery, grower/finish). A site can be a part of an operation or it can be the whole operation if the operation has only one site. (See also “Operation”).

**Sow**

A female pig that has produced one or more litters of piglets.

**Specialty market**

A blanket term for some of the marketing channels and labeling that result in a premium price and require select husbandry practices. Specialty markets include: Natural pork, Breed specific pork, Locally Grown, Pasture raised, Humanely raised, In State raised, Organic and Raised without Antibiotics.

**Specialty market breeds**

Heritage or less commonly marketed breeds such as Choctaw and Duroc pig breeds raised for specific gourmet markets.

**Stillborns**

Piglets born dead but usually fully developed and of normal color.

**Survey**

The collection of data pertaining to specific sample units. A sample is selected and information collected from individual sampling units using a survey. Data reported by the selected sampling units, when summarized, provides an indication of what the total would be if all the sample units within the sampling frame had reported.

**Survey Period**

The period during which survey data collection can occur.

**Swine**

Any type of pig regardless of production type. Swine could be for breeding or any age that is raised for market sale.

**Teaser Boar (heat check boar)**

A boar used to detect estrus/heat in a female but not mate with her. They may be vasectomized. The presence of the teaser boar will allow sight, sound, smell and touch to increase the number of females showing a standing response. It is important that these teaser boars be allowed to mount and breed occasionally.

**Total Confinement**

The practice of raising hogs in a totally enclosed area. Often but not always animals are totally confined inside a building that has mechanical ventilation.

**Unmated**

A breeding female that has not yet been inseminated either naturally (with a boar) or artificially. This term pertains to a female while in a current estrous cycle.

**Unmated Replacement Gilt**

A gilt that is slated to enter the breeding herd that has not yet been inseminated either naturally (with a boar) or artificially.

### **Veterinarian Client Patient Relationship (VCPR)**

A VCPR exists when your veterinarian knows your pigs well enough to be able to diagnose and treat any medical conditions they develop. The VCPR allows your veterinarian to take responsibility for making clinical judgments about pigs, accepting the responsibility for providing them with medical care, keeping a written record of your pigs' medical care, advising you about the benefits and risks of different treatment options and providing oversight of treatment, compliance (your follow through on their recommendations) and outcome. A VCPR is established when your veterinarian examines your animals in person and is maintained by regular veterinary visits as needed to monitor your animals' health  
<https://www.avma.org/public/PetCare/Pages/VCPR-FAQs.aspx>.

### **Weaned Pigs (Hogs)**

Piglets no longer nursing on their mother. This includes nursery and grower/finisher age pigs.

### **Weaning**

The process of transitioning baby pigs from mother's milk to solid food, which also implies removal from the mother.

### **Weaning Age**

The age at weaning which is approximately two to four weeks of age.

### **Wean-to-Finish Facility**

A structure and/or area where both nursery aged pigs and grower/finish aged pigs are located or to which they have access. The distinguishing factor here is that swine are kept in this facility throughout both the nursery phase and the grower/finisher phase, rather than there being separate nursery and grower/finisher facilities.

### **Wean-to-finish Phase**

Production phase in which newly weaned pigs are managed, fed and housed until they go to slaughter or are sold. It combines a nursery and a grower/finisher phase. The pigs are managed (e.g., fed) like nursery aged pigs from the time they come in until about two to four months of age, when they are subsequently treated like grower/finisher pigs. The pen or enclosure to which they are initially moved often was designed to hold older, larger pigs, so many of these newly weaned piglets can fit in the pen. As the pigs grow, some have to be moved out to a new pen or enclosure to prevent overcrowding. This second move is sometimes referred to as the "split."

## Chapter 3 – CATI Procedures

### THINGS TO DO PRIOR TO THE FIRST OPERATION CONTACT

Familiarize yourself with the NAHMS Swine 2021 Small Enterprise Study by reviewing the information you received in your training, the SES and this manual. This manual is designed to familiarize you with the SES and prepare you for the interview.

Things to have with you on your initial phone contact with the *operation contact*:

- This manual,
- NAHMS Swine 2021 Small Enterprise Study launch sheet, and
- A hard copy of the Small Enterprise Survey.

### WHO TO INTERVIEW

Interview the operator (*operation contact*) of the swine operation or their designate. If any of these people are too busy to be interviewed at the time you call, set up a phone appointment at his or her convenience. Be sure to keep the appointment. If an emergency prevents you from doing so, inform the *operation contact* beforehand and re-schedule the interview(s).

### CATI INTERVIEW(S) STEPS

First, formulate and practice an introduction that briefly explains the study and gains a respondent's cooperation. Say it in your own words so it is comfortable to share and be prepared to answer the respondent's questions about the details of the study. Up to seven calls will be made to administer the questionnaire.

#### 1. Operator Contact and interview.

- Using the launch sheet explain why you are calling if needed. Make an appointment to do the interview later if need be.
- A questionnaire was mailed to all operations. If the operator has it handy to follow along with it will help facilitate the interview.
- **Determine if this is an "Out of Business" Operation.** If so, conclude the interview.
- **Determine if this is an "Out of Scope" Operation.** If so, conclude the interview.
- Briefly explain what is involved in the SES (the Chapter 5 overview may help) interview in your own words. Something like the example below:

“The questionnaire begins by asking for your current operation inventory. If you have multiple sites we pick the closest one, ask site inventory questions and how different production phases are housed on the selected site. If you do breeding and farrowing on the site we ask about production values (e.g., how many were bred/farrowed) and health questions for all types of pigs on the site. We ask about the type of sources you use for replacements and where the animals go when they leave sites on your operation. Finally, we ask who gets to come on the site, how you dispose of dead pigs and to what degree you have encountered feral pigs.”

- Start the interview. Thank them at the end.

**Note:** An operation or site may be a **show pig business**. Show pigs are raised primarily for exhibition and are managed a bit differently than their commercial counterparts. In this case there is absolutely **no difference** in the way that the questionnaire is filled out. Show pig operations or sites can have breeding swine, piglets, nursery age pigs, grower/finisher age pigs and their own biosecurity, housing, and medication practices.



## Chapter 4 – General SES Instruction, Question and Response Formats

This chapter provides information about conventions used throughout the questionnaire, instructions, how to enter responses and examples of different types of questions used in the questionnaire. *It's our intention here to show most of the general formats you will encounter and only concentrate on specific questions as needed later in Chapter 5.*

Sometimes you will need to probe the respondent to get an adequate answer to a question. You should probe when the respondent can't answer the question, when the answer isn't enough to record, when you think the answer may be incorrect because it doesn't fit with other information already obtained, when the respondent answers in units that don't fit the response and when you think the respondent didn't understand the question.

### NOTE: Unknown Response/Decline to Answer

Always enter a response for every question unless you are instructed to do otherwise. **If the respondent declines to answer a question or does not know the answer, leave the response box blank and indicate “DK” (if the questionnaire provides no option for DK response) or “Declined” in Blaise.** When the data are analyzed later on, it is very important to know if the respondent declined to answer a question, did not know the answer or if the answer should have been zero, “no,” or “none.” **By providing a response for every part of every question, you will improve the quality of the data and the information published as the result of this study.**

**Also:** If the respondent doesn't know the answer to a question **give them time to let them ask someone who does.** You can call them back later if need be.

### GENERAL INSTRUCTION FORMATS

Throughout the questionnaire there are instructions to the respondent. These instructions are of four types.

- The **first** type is separate from questions and their responses. They often indicate a skip (**don't** read these aloud) or provide context for a series of questions coming up (**do** read these aloud).
- The **second** type is at the end of the question itself in parenthesis and guides the response and possibly a skip.
- The **third** type is within the question. What is in the parenthesis in a question requires word substitution when reading the question unless it is simply an example (“e.g.”).
- The **fourth** type is within the responses and response categories and instructs as to how to fill in the response category. It is not read aloud.

**INSTRUCTION EXAMPLE A:** This an example of the **fourth** type of instructions and indicates a major skip. These instructions should **not** be read aloud to the respondent.

1. Between **June 1, 2020** and **May 31, 2021**, were there any swine on this **operation**?  
0100      <sub>1</sub> YES – Continue    <sub>3</sub> NO – SKIP to **Section 11**.

**INSTRUCTION EXAMPLE B:** This is an example of the **first** type of instructions and provides context for questions coming up. These instructions indicated by “INSTRUCTIONS:” **should be** read aloud.

**INSTRUCTIONS:** All-in/all-out management means that every animal is removed from a room, building, or site, and the swine areas are cleaned (and usually disinfected) before any new animals arrive. If a facility (room, building, or site) is never completely empty of swine, the management approach is called continual flow.

**INSTRUCTION EXAMPLE C:** The question below is an example of the **second** type of instruction and provides response direction and a skip. The question is read to the responder, but the instruction in parentheses is an instruction to the enumerator.

2. Between <b>December 1, 2020</b> and <b>May 31, 2021</b> , how many sows and gilts were bred on the <b>selected site</b> ? (Enter <b>Zero</b> if None and SKIP to <b>Question 4.</b> )?.....	<b>Head</b>
	0502

**INSTRUCTION EXAMPLE D:** This question has three types of instructions. The **second** type is in parenthesis after the initial Question 7 (called the “stem” of the question) and tells the enumerator to make sure there is at least a zero in every cell of the column. This instruction is not read to the respondent.

There is an example of the **third** type of instruction within the stem which requires word substitution. Let’s say 6 sows or gilts died per Question 6a in Section 5. The stem of Question 7 could be read, “Of the 6 sows or gilts that died or were euthanized on the selected site, what percent were disposed of by Burial on this site?” You probably wouldn’t have to repeat the whole stem for each disposal method after that.

At the end is an example of the **fourth** type of instruction in brackets which instructs the enumerator to make sure that the total percent in the column equals 100 percent of the deaths reported earlier in Question 6a. This instruction is not read to the respondent.

7. Of the (Question 6a) sows or gilts that died on the <b>selected site</b> , what <b>percent</b> were disposed of by: (Enter <b>Zero</b> if None)	<b>Percent</b>	
		0516
a. Burial <b>ON</b> this site?.....		0517
b. Incineration <b>ON</b> this site?..... +		0518
c. Renderer pickup <b>ON</b> this site such as a “dead box” at the end of the driveway?..... +		0519
d. Renderer pickup <b>OUTSIDE</b> of this site?..... +		0520
e. Composting <b>ON</b> this site?..... +		0521
f. Composting <b>OUTSIDE</b> of this site?..... +		0522
g. Some other means? (Specify: <sup>0551</sup> _____) +		
<b>Total [Should equal 100%] =</b>		<b>100%</b>

**INSTRUCTION EXAMPLE E:** This example has one instruction of the **second** type (Enter Zero if None for each) and two sequential instructions of the **third** type. When a reference to a previous response category is enclosed in parentheses, you fill in the response entered in that previous item when you read the question. For example, if the response for item 4b was “35,” you should say “35” in place of the “(Item 4b)” when you read response category 4c. There is the same relation and reading format between 4c and 4d.

4. Between <b>December 1, 2020</b> and <b>May 31, 2021</b> : (Enter <b>Zero</b> if None for each)	<b>Head</b>	
		0509
a. How many sows and gilts farrowed, counting each time a sow farrowed separately?.....		0510
b. How many pigs were born, <b>including</b> stillborn pigs and mummies?.....		0511
c. How many of the (Question 4b) pigs were born alive?.....		0512
d. Of the (Question 4c) pigs born alive, how many have been or will be weaned?.....		

## GENERAL QUESTION FORMATS

**NOTE:** If the respondent does not know the answer to a question (e.g., what number of weaned pigs died between **December 1, 2020** and **May 31, 2021**) **give them time to let them ask someone who does** (e.g., the Nursery and Finishing manager). You can call them back later if need be.

**1. Yes/No Questions.** Many questions ask for a “Yes” or “No” response. **“Yes” is always indicated by code “1” and “No” by code “3.”** Sometimes in this questionnaire a “Not Applicable” (N/A) option will be indicated by code “2” and a “Don’t Know” (DK) by a “4.”

If a “N/A” or “DK” option is not offered and if the respondent answers with "Don't Know", “This question doesn’t apply to me” or declines to answer a specific question, indicate "DK", “N/A” or "refused" in Blaise, respectively.

**QUESTION EXAMPLE A:** This serves as an initial screening question to determine if you should continue the interview. If the answer to item 1 is “Yes,” then continue. If the operation did not have any pigs between June 1, 2020 and May 31, 2021 then fill out Section 11 and any Office Use information and end the interview.

1. Between **June 1, 2020** and **May 31, 2021**, were there any swine on this **operation**?

0100 <sub>1</sub> YES – Continue <sub>3</sub> NO – SKIP to **Section 11**.

**QUESTION EXAMPLE B:** This Yes/No/N/A question is from Section 9. The main question or "stem" of the question is attached to a question number (2) and the eight different endings to the question-the subparts-are identified with a lower-case letter (a, b, c, d, e, f, g and h).

Each subpart must be asked separately. Read the question stem (e.g., “Between June 1, 2020 and May 31, 2021, have any of the following practices been used at any time on the selected site?”) and the first subpart (e.g., “The first practice is vaccination.”) at least in the first reading. The next subpart can be paraphrased to some extent (e.g., “How about deworming?”) and so on.

**Also,** you will need to know what Brucellosis is from Chapter 2 if the respondent is unfamiliar with it.

2. Between **June 1, 2020** and **May 31, 2021**, have any of the following practices been used **at any time** on the **selected site**? (Check **Yes** or **No** or **DK** or **N/A** as applicable for all practices)

- |                                                                       |      |                                           |                                          |                                                                                    |
|-----------------------------------------------------------------------|------|-------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------|
| a. Vaccination.....                                                   | 0907 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK                                           |
| b. Deworming.....                                                     | 0908 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK                                           |
| c. Testing for PRV (other than to diagnosis an illness).....          | 0909 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK                                           |
| d. Testing for Brucellosis (other than to diagnosis an illness).....  | 0910 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK                                           |
| e. Antibiotics included in the <b>feed</b> fed to sows or gilts?..... | 0911 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK <input type="checkbox"/> <sub>2</sub> N/A |
| f. Antibiotics included in the <b>water</b> for sows or gilts?.....   | 0912 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK <input type="checkbox"/> <sub>2</sub> N/A |
| g. Antibiotics included in the <b>feed</b> fed to weaned pigs?.....   | 0913 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK <input type="checkbox"/> <sub>2</sub> N/A |
| h. Antibiotics included in the <b>water</b> for weaned pigs?.....     | 0914 | <input type="checkbox"/> <sub>1</sub> YES | <input type="checkbox"/> <sub>3</sub> NO | <input type="checkbox"/> <sub>4</sub> DK <input type="checkbox"/> <sub>2</sub> N/A |

**QUESTION EXAMPLE C:** This big set of Yes/No questions from Section 5 (there is one similar to it in Section 6 for weaned pigs) has separate sub questions for each of three categories (Sows & gilts, Boars and Nursing pigs).

**Note:** The beginning of Section 5 first asked if there was breeding or farrowing going on at the selected site. Consider the responses in Section 3, Question 1 but don't rule breeding or farrowing in or out based on that at the beginning of Section 5. For example, in Section 3, Question 1 if there were some Sows and Gilts in the breeding herd on June 1, 2020 then chances are they did some breeding or had pigs farrow between June 1, 2020 and May 31, 2021 and so the first ten questions of Section 5 would probably be answered.

Above Question 12 there is an instruction of the **first** variety and it is read to the respondent. Check "N/A" right away for all cells in a Question 12 column if the type of pig represented in that column was not present between December 1, 2020 and May 31, 2021.

Question 12 has seven different endings to the question-the subparts-and are again identified with a lower case letter (a, b, c, d, e, f and g). Read the Question 12 stem using the type 3 instruction format just discussed, followed by the ending subpart for each category (e.g., "Did any of the following problems cause sickness or death in any Sows and Gilts on the selected site between December 1, 2020 and May 31, 2021? The first is Respiratory Disease") The next categories can be paraphrased to some extent (e.g., "In that same time frame was Respiratory Disease known or suspected to have caused sickness or death in one or more of your Boars?"). Proceed through 12a-g that way.

**NOTE:** Questions 12 asks about type of breeding swine, not what **PRODUCTION PHASE** they were in like in Section 4 of the questionnaire. Consult the definitions in Chapter 2 if needed.

**INSTRUCTIONS:** For Question 12 check N/A (not applicable) in the applicable column for 12a-g if the selected site didn't have that type of pig between December 1, 2020 and May 31, 2021.

12. Did any of the following problems cause sickness or death in <b>any</b> (column heading) on the <b>selected site</b> between <b>December 1, 2020</b> and <b>May 31, 2021</b> ?			
	<b>Sows &amp; gilts</b>	<b>Boars</b>	<b>Nursing Pigs</b>
a. Respiratory Disease?.....	0527 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0534 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0541 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A
b. Gastrointestinal Disease?	0528 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0535 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0542 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A
c. Internal parasites?.....	0529 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0536 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0543 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A
d. External Parasites?.....	0530 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0537 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0544 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A
e. Reproductive Problems?..	0531 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0538 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	
f. Died, reason unknown?...	0532 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0539 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0545 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A
g. Other (Specify: <sup>0552</sup> _____)	0533 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0540 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A	0546 <input type="checkbox"/> 1 YES <input type="checkbox"/> 3 NO <input type="checkbox"/> 2 N/A

**2. Quantity Questions.** These are questions whose response is a number (a whole number most of the time but not always). *It is important in multipart Quantity questions (like below) to **always** answer each subpart (**unless** it is part of a skip) in some fashion. For example in Example D below, if there were no nursing pigs on June 1, 2021 enter “0” in the response cell for 6c. This is stated in the instruction after the “stem.”* Also, approximate values are acceptable for all quantity questions.

**QUESTION EXAMPLE D:** Here the quantity under consideration is **number of pigs or “Head.”** Indicate how many head of pigs were in each category (a-h) belonging to the operation on June 1, 2020. **Then** add the responses together for the response in 6i and check the total (i.e., total hogs on all sites in the State indicated in Section 1, Question 4) with the respondent. The question could be read as, “Of the total hogs and pigs on hand on June 1, 2020 in this state, how many are sows, open replacement gilts and bred gilts in the breeding herd? How many were open replacement gilts for breeding not yet in the breeding herd, such as those in a Gilt Development Unit?” and so on. **Note:** If the respondent is unsure of any of these terms (like what a Gilt Development Unit is), consult Chapter 2.

There is another question just like it in Section 3. In Section 3 it is for the **selected site** you and the **operation contact** picked in Section 2.

6. Of the total swine on hand <b>June 1, 2021</b> on <b>all sites</b> in Question 4, how many were: (Enter <b>Zero</b> if None)		<b>Head</b>
a. Sows, open (unmated) replacement gilts and bred gilts in the breeding herd?.....		0106
b. Open (unmated) replacement gilts for breeding <u>not yet in the breeding herd</u> , such as those in a Gilt Development Unit?.....	+	0107
c. Nursing pigs?.....	+	0108
d. Boars and young males for breeding, including teaser boars?.....	+	0109
e. Cull sows, gilts and boars?.....	+	0110
f. Weaned hogs under 60 pounds?.....	+	0111
g. Market hogs 60 pounds and over, <b>excluding cull sows, gilts and boars?</b> .....	+	0112
h. <b>Other</b> such as Show or Pet Pigs? (Specify: <sup>0150</sup> _____).....	+	0113
i. Then the total number of swine on all sites <b>in Question 4</b> is:.....	=	0114

**QUESTION EXAMPLE E:** This question in Section 10 is an exception to the general rule in quantity questions because it asks for a number with two decimal places rather than a whole number. The question asks for the distance in miles from the **selected site** to the nearest site with any swine **regardless of whether this operation owns the pigs on the nearest site or not.** Tell the respondent that this is a driving distance as opposed to as the crow flies.

1. To the nearest <b>quarter mile</b> , how many miles is it from the <b>selected site</b> to the nearest site with any swine? <b>INCLUDE</b> sites regardless of who owns the pigs.....	<b>Miles</b>
	1000    _ . _ _

**3. Code Category Questions.** With these questions, you choose one or more codes representing responses as the answer. Most of the questions on the SES are Yes/No, Quantity or Code questions. For questions answered with a code number, there are (in this questionnaire) two ways that the answer may be provided.

1. You check a box next to the code(s) that matches the respondent's answer, like in Examples F and G below.
2. You enter the number that goes with the respondent's answer in a response space (like a box or cell) from an accompanying list, like in Example H below.

For either type, when a question specifies to select ONE answer from a list, the respondent must choose only ONE answer from several possible choices that you offer the respondent.

**QUESTION EXAMPLE F:** Here are two examples of the first type of code category questions mentioned above from Section 5 of the questionnaire where we ask about the selected site. The selected site needed to have an active breeding program in the six month period (Question 1) and received swine to replenish the breeding herd from outside the operation during the same time frame (Question 8). You check one box in each question below. Both questions can be read verbatim.

9. Were the newly arriving <u>breeding females</u> (e.g., new gilts) <b>always, sometimes, or never</b> put through an isolation or quarantine process before being introduced to the breeding herd?.....	0524 <input type="checkbox"/> 1 Always <input type="checkbox"/> 2 Sometimes <input type="checkbox"/> 3 Never
10. Are <b>all, some, or none</b> of the newly arriving <u>breeding females</u> tested for disease before being introduced to the breeding herd?.....	0525 <input type="checkbox"/> 1 All <input type="checkbox"/> 2 Some <input type="checkbox"/> 3 None

**QUESTION EXAMPLE G:** This example from Section 1 is another of the first type of code category questions mentioned above, but requires that you check all boxes that apply as responses. There is another one like this in Section 5 (Question 3) as it pertains to breeding method(s) used for sows and gilts, but for that one you only check one box. If the producer's response does not apply to any of the four provided categories the answer may be noted in the survey comments.

8. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , what were the <b>purposes</b> for this operation owning swine? (Check <b>all</b> that apply below from left to right.)			
0119 <input type="checkbox"/> 1 Pleasure (e.g., a hobby)	0120 <input type="checkbox"/> 1 Income	0121 <input type="checkbox"/> 1 Education (e.g., 4H for kids)	0122 <input type="checkbox"/> 1 Home consumption

**QUESTION EXAMPLE H:** This example of the second type of code category questions from Section 4 requires that you fill in a code for each of two code spaces in 1a and 1b using List 1 and List 2, respectively located just above the question. Section 4 has four more question sets like this one for other production phases that may exist on the selected site. Sections 7 and 8 have a similar format.

Ask Question 1 first and then skip to Question 2 if a Gestation phase was not present on the selected site in the year time period. Question 1a could then be asked, “How is pig flow managed for the majority of animals in this phase at this site? The flow choices are (read List 1).” A similar approach could be used for Question 1b and List 2. Both lists allow for a type of flow or facility not listed. Often a respondent selects “Other” because there is a combination of flow or facility type in place for the majority of animals in a phase. Limit the respondent to one of the existing choices for the **majority** of pigs if you can. The concepts behind these phase types will likely require a visit to Chapter 2-preferably during your training.

**NOTE: Questions in Section 4 asks about PRODUCTION PHASE not type of pig like previously mentioned. Consult the definitions in Chapter 2 if needed.**

LIST 1 – Flow Management	LIST 2 - Facility
1 - Continual flow 2 - All swine removed, but swine areas not cleaned and disinfected 3 - All in, all out by room 4 - All in, all out by building 5 - All in, all out by site 6 - Other (Specify: <sup>0415</sup> _____)	1 - Total confinement with mechanical ventilation 2 - Open building with no outside access 3 - Open building with outside access 4 - Lot with hut or no building 5 - Pasture with hut or no building 6 - Other (Specify: <sup>0416</sup> _____)

**INSTRUCTIONS:** For the purposes of this study, all-in/all-out management means that every single animal is removed from a room, building, or site, and the pig areas are then cleaned and disinfected before any new animal arrive. If a facility (room, building, or site) is never completely empty of swine, the management approach is referred to as continual flow.

1. Did the **selected site** have a **Gestation phase** between **June 1, 2020** and **May 31, 2021**?

<sup>0400</sup> <sub>1</sub> YES – Continue    <sub>1</sub> NO – SKIP to **Question 2.**

a. How is <b>pig flow managed</b> for the <b>majority</b> of animals in this phase at this site? (Enter code from <u>List 1</u> ).....	<b>Code</b>
	0401
b. What type of <b>facility</b> is used for the <b>majority</b> of animals in this phase at this site? (Enter code from <u>List 2</u> ).....	0402

**4. Hybrid Questions and Oddballs.** This subsection deals with questions that don’t fit in the examples given previously and are in a style that rarely occurs in the SES.

**QUESTION EXAMPLE I:** This example from Section 7 is a code categorical similar to Question Example F, but the response format has changed. Only check one choice as to frequency of interstate health certificates accompanying pigs purchased from another state.

5. <b>If</b> the selected site gets swine from out of state, <b>how often</b> do the animals arrive with interstate health certificates?.....	0708	<b>Always</b>	<b>Sometimes</b>	<b>Never</b>	<b>Don’t get out of state swine</b>
		<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

**QUESTION EXAMPLE J:** Question 9 in Section 1 is a combination of a Yes/No with a categorical code response (with a rank of 1 to 4).

You could ask the question in the following way. “This next question lists information sources and asks how important they are to this operation. Do you find Pork industry publications, magazines or websites to be not important, somewhat, moderately or very important? How about Pork industry programs and/or meetings?” You could go down the list that way.

9. For the following information sources, how important are they to this operation?		Not Important	Somewhat Important	Moderately Important	Very Important
a. Pork industry publications, magazines or websites....	0123	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
b. Pork industry programs and/or meetings.....	0124	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
c. Local veterinarian (including their website).....	0125	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
d. Extension service (including website).....	0126	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
e. Another pig producer.....	0127	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
f. Feed or animal health product supplier other than a veterinarian.....	0128	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
g. Producer web discussion groups (e.g., Facebook)...	0129	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
h. Internet website.....	0130	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
i. Other (Specify: <sup>0152</sup> )	0131	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>

### 5. More on Other Specifies

- When completing questions that have an “Other” specify, ensure that the “Other” answer does not fit any of the provided categories.
- Always attempt to get a specify (write-in answer) to the Other.
- If a response possibly fits into another category, place it in that category and write a succinct note in the survey comments to explain the logic behind the placement.



## Chapter 5 –Questionnaire Overview and Questions of Note

This chapter provides an overview of the SES that you can use as a snapshot of the whole questionnaire for yourself and any respondents. The overview will hopefully give you a more holistic view of what is involved in this important data collection. After the overview, there are questions from the SES that deserve some explanation in case you haven't had a lot of experience with the swine industry.

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### SES SECTIONS OVERVIEW

This is an **operation** level questionnaire in Section 1. In Section 1 we ask for information covering **all geographic sites in a State** that are run under this operation. This includes sites where the operation owns the pigs, but not the land or buildings (contractees). In Section 2 the respondent is asked to randomly pick **one** site out of all the sites in the operation and answer questions in **the remainder of the SES sections for that site**.

The time frame involved in the SES are: June 1, 2020 (inventory questions in Sections 1 and 3), between December 1, 2020 and May 31, 2021 (inclusive of those beginning and end dates in Sections 5 and 6), between June 1, 2020 and May 31, 2021 (inclusive of those beginning and end dates in Sections 1, 4, 7, 8, 9 and 10) or there is no time frame. For example, in Section 9, many questions reflect a timeless (or current) site policy and in Section 10 there is a question on distance between sites which probably don't change with time.

### SECTION 1 – OPERATION CHARACTERISTICS

This section collects information on the number of sites that are part of the operation-both overall and within the State where the operation is headquartered. Within that State, there are two inventory information questions that are of a static (June 1, 2020) nature while many of the other questions refer to the period between June 1, 2020 and May 31, 2021. These questions ask reasons this operation raises pigs, information sources used by the operation to raise pigs and any special advertising the operation uses to market their product.

### SECTION 2 – OPERATION SITE SELECTION

If the operation raises pigs at more than one site, this section asks the respondent to **pick a site** within the operation. This can be the closest site where the operation either owns the site and the pigs OR just the pigs. Again, select from the sites in the operation's home State (Section 1, Question 4) **closest** to where the interview is taking place (from the perspective of the interviewee). This selected site will be the reference used to answer the rest of the questionnaire.

### SECTION 3 – SELECTED SITE INVENTORY

The sole purpose of this section is to itemize the number of pigs on the selected site by type of pig. The types of pigs to be itemized are identical to the ones listed for the operation in Section 1.

### SECTION 4 – SELECTED SITE PRODUCTION PHASES AND HOUSING

In this section we ask about housing and management practices present between **June 1, 2020** and **May 31, 2021** for five possible **production phases** present on the selected site.

For each of the potential five **production phases** present on the selected site we ask the “flow” of animals in the phase and the type of housing (the facility type set up). Flow is a surrogate measure for biosecurity where we determine whether there is a potential break in disease transmission based on the flow. For example, if there is continuous flow, new animals entering can pick up a pathogen going around from the animals that are already there. If animals are moved in and out as groups (such as by weekly litters) at the pen, room or building level and the area is cleaned before new ones come in, there is a break in disease transmission potential as older groups will not necessarily share the airspace with newer ones.

## **SECTION 5 – SELECTED SITE BREEDING PRODUCTION AND HEALTH**

This section shifts gears from **production phases** to **breeding production types** of pigs for the selected site. We also switch time periods in this section and the next section to between **December 1, 2020** and **May 31, 2021**. First, we determine whether this selected site had an active breeding program in that time period using the first two questions. If not, the respondent skips this section. We then ask about the breeding methods used, production of the breeding program (e.g., number of piglets born alive), breeding animal turnover, breeding herd replenishment policies and health problems in three breeding production types.

## **SECTION 6 – SELECTED SITE WEANED PIG HEALTH**

For the period between **December 1, 2020** and **May 31, 2021**, if the selected site raises weaned animals (e.g., weaned to market weight), then we ask about the mortality and health of these pigs for two **market age production types** and a third optional type (e.g., 4H pigs). If the selected site did not raise weaned pigs in that time period, the respondent skips this section.

## **SECTION 7 – SWINE MOVEMENT ON THE SELECTED SITE**

We also switch time frames again in this section and the next section to between **June 1, 2020** and **May 31, 2021**. This section asks the primary **source** type for Sows and Gilts, Boars, Newly Weaned pigs and Feeder pigs (approximately 40-60 pounds) that were temporarily or permanently brought on to the selected site. **Note:** If the selected site doesn't keep or raise one or more of the five pig types enter "0" in the initial question for a pig type and skip to the initial question for the next pig type.

## **SECTION 8 – SWINE MOVEMENT OFF THE SELECTED SITE**

This section asks the primary **market type destination** (e.g., Commercial slaughter, Organic) of pigs moved off the selected site between **June 1, 2020** and **May 31, 2021**. Market destination type is asked by production type of pigs and physical destination (where they actually go). **Note:** Similar to above. if the selected site doesn't market pigs through one or more of the five market types enter "0" in the initial question for a market type and skip to the initial question for the next market type.

## **SECTION 9 – GENERAL MANAGEMENT ON THE SELECTED SITE**

This section is a catchall of questions designed to assess biosecurity measures used on the selected site. Surrogate measures of site biosecurity included in this section are rodent control, medication/vaccines used and feed sources.

## **SECTION 10 – SELECTED SITE WILDLIFE AND NEARBY SITES**

This brief section continues with biosecurity type questions for the selected site, but it focuses upon the risk of disease introduction from other pig sites and wild animals.

## **SECTION 11 – CONCLUSION**

Section 11 provides the conclusion for the interview. Its purposes is to find out whether our marketing efforts for the study worked, to correct contact information and to indicate the date the SES was filled out.

## QUESTIONS OF NOTE

**Section 7, Questions 1-5:** The questions in Sections 7 and 8 are probably the most difficult in the questionnaire. In essence, we are asking about the business of the selected site in terms of number, type and sourcing of animals entering the selected site in the one-year period. Consider the scenario below and the way the questions are subsequently filled out based upon it.

The selected site received approximately 350 pigs over the course of the year period. **Twenty-five** were sows and gilts, 10 of which came from another site in the operation and 15 of which were purchased at an auction. **Therefore, since the latter number is larger, the primary source is option 3.** No boars came on to this site. Most of the weaned pigs this selected site grows out to market came from farrowing on the site, but there was some space that needed to be filled in the finishing barns so the selected site picked up **125 feeder pigs** from another site in the operation and **200 feeder pigs** from a source in another state (different pig owner). In general, pigs brought onto a site from any out of state source rarely come with an interstate health certificates.

LIST 1 – Source of Pig Type	
1 - Another producer site managed by this operation	4 - Buying station
2 - Another producer site <b>not</b> managed by the operation.	5 - Other (Specify: <sup>0709</sup> _____)
3 - Livestock Market/Auction	

  

	<b>Head</b>								
1. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many <b>Sows and gilts</b> were either temporarily or permanently brought on to the selected site? (Enter <b>Zero</b> if None and SKIP to Question 2).....	0700 <b>25</b>								
	<b>Code</b>								
a. What was the <b>primary</b> Source of these sows and gilts? (Enter code from List 1).....	0701 <b>3</b>								
	<b>Head</b>								
2. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many <b>Boars</b> were either temporarily or permanently brought on to the selected site? (Enter <b>Zero</b> if None and SKIP to Question 3).....	0702 <b>0</b>								
	<b>Code</b>								
a. What was the <b>primary</b> Source of these boars? (Enter code from List 1).....	0703								
	<b>Head</b>								
3. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many <b>Newly Weaned pigs</b> were either temporarily or permanently brought on to the selected site? (Enter <b>Zero</b> if None and SKIP to Question 4).....	0704 <b>0</b>								
	<b>Code</b>								
a. What was the <b>primary</b> Source of these newly weaned pigs? (Enter code from List 1).....	0705								
	<b>Head</b>								
4. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many <b>Feeder pigs</b> (40-60 pounds) were either temporarily or permanently brought on to the selected site? (Enter <b>Zero</b> if None and SKIP to Question 5).....	0706 <b>325</b>								
	<b>Code</b>								
a. What was the <b>primary</b> Source of these feeder pigs? (Enter code from List 1 above).....	0707 <b>2</b>								
0708	<b>Don't get out of state pigs</b>								
5. <b>If</b> the selected site gets swine from out of state, <b>how often</b> do the animals arrive with interstate health certificates?.....	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Always</th> <th style="width: 25%;">Sometimes</th> <th style="width: 25%;">Never</th> <th style="width: 25%;"></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;"><input type="checkbox"/><sub>1</sub></td> <td style="text-align: center;"><input checked="" type="checkbox"/><sub>2</sub></td> <td style="text-align: center;"><input type="checkbox"/><sub>3</sub></td> <td style="text-align: center;"><input type="checkbox"/><sub>4</sub></td> </tr> </tbody> </table>	Always	Sometimes	Never		<input type="checkbox"/> <sub>1</sub>	<input checked="" type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>
Always	Sometimes	Never							
<input type="checkbox"/> <sub>1</sub>	<input checked="" type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>	<input type="checkbox"/> <sub>4</sub>						

**Section 8, Questions 1-6:** The questions in this section are about animals leaving the selected site in the one year time frame. Having to select response codes from two separate lists makes these questions more complicated than the questions in Section 7 covered above. Consider the scenario below and the way this section is subsequently filled out based upon it.

Over 900 (915) pigs were sold as regular market weight hogs from the selected site, but **150** of these were really healthy and sold as “Antibiotic free market pigs” at a premium to a local packer who is not regularly inspected by Federal or State personnel. That left **765** market weight hogs that went to a regular (federally inspected) packing plant. The selected site borrowed a teaser boar in August 2020 once from a site not part of this operation to see who was in heat on the selected site. **Sixty sows** were sold to a buying station as culls from the selected site that sends them to a commercial renderer. The local vet school bought **234** feeder pigs from the site to grow out for the commercial market and another **50** feeder pigs went to a butcher’s shop as BBQ pigs for local distribution (Custom slaughter for sale to end consumer).

<b>LIST 1 – Type of Swine</b>		<b>LIST 2 – Destination</b>	
1 - Sows or gilts	(Specify: <sup>0820</sup> _____)	1 - Other site within this operation or within the operation that owns the swine.	
2 - Boars		2 - Other site outside this operation or outside the operation that owns the swine.	
3 - Culled breeding stock		3 - Federal or State inspected slaughter (regular inspection)	
4 - Newly Weaned pigs		4 - Custom exempt slaughter (no regular inspection)	
5 - Feeder pigs (40-60 pounds)		5 - Custom slaughter for sale to end consumer	
6 - Market weight hogs		6 - Slaughtered on farm	
7 - Other		7 - Livestock Market/Auction	
	8 - Buying station (e.g., for cull swine)		
	9 - Fair or show or other exhibition		
	10 - Other (Specify: <sup>0821</sup> _____)		
	11 - Don't Know		

  

1. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many swine were moved off the selected site for a <b>Commercial market</b> (e.g., regular packing plant or rendering)? (Enter <b>Zero</b> if None and SKIP to Question 2).....	<b>Head</b>	0800 <b>765+60+234</b>
	<b>Code</b>	0801 <b>6</b>
	a. What was the primary Type of these pigs? (Enter code from List 1).....	0802 <b>3</b>
b. What was the primary Destination for these pigs? (Enter code from List 2).....	<b>Head</b>	0803 <b>50</b>
2. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many swine were moved off the selected site for a <b>“Locally grown”</b> or <b>“In State”</b> market? (Enter <b>Zero</b> if None and SKIP to Question 3).....	<b>Code</b>	0804 <b>5</b>
	a. What was the primary Type of these pigs? (Enter code from List 1).....	0805 <b>5</b>
	b. What was the primary Destination for these pigs? (Enter code from List 2).....	<b>Head</b>
3. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many swine were moved off the selected site for a <b>Breed specific pork market</b> ? (Enter <b>Zero</b> if None and SKIP to Question 4).....	<b>Code</b>	0807
	a. What was the primary Type of these pigs? (Enter code from List 1).....	0808
	b. What was the primary Destination for these pigs? (Enter code from List 2).....	

4. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many swine were moved off the selected site for a <b>Specialty market</b> (e.g., organic, pasture raised, antibiotic free)? (Enter <b>Zero</b> if None and SKIP to Question 5).....	<b>Head</b>
	0809 <b>150</b>
a. What was the primary Type of these pigs? (Enter code from List 1).....	<b>Code</b>
	0810 <b>6</b>
b. What was the primary Destination for these pigs? (Enter code from List 2).....	0811 <b>4</b>
5. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , how many swine were moved off the selected site to go <b>Direct to another owner</b> (e.g., gilts for a breeding herd)? (Enter <b>Zero</b> if None and SKIP to Question 6).....	<b>Head</b>
	0812 <b>0</b>
a. What was the primary Type of these pigs? (Enter code from List 1).....	<b>Code</b>
	0813
6. Between <b>June 1, 2020</b> and <b>May 31, 2021</b> , what was the number of times any pigs were transported off the selected site and then returned? (e.g., showing a hog at a fair, loaned for breeding. (Enter <b>Zero</b> if None).....	<b>Times</b>
	0814 <b>0</b>

**First, organize the information by “market” type.** Who went to the **Commercial market** route? We know that 765 market weight hogs (915 minus the 150 that went to a specialty market-“Antibiotic free.”), 60 cull sows and 234 feeders went (ultimately in the case of the latter) to the Commercial market. These are added together as shown above. Since 765 (the market weight hogs) is the largest number of all types sold, the primary type going to the commercial market is market weight hogs (List 1-number 6) and the primary physical destination (also based on largest number moved) is a Federal or State inspected slaughterhouse (List 2-number 3).

Next, for the “**Locally grown**” or “**In State**” **market** route we know that 50 feeder pigs (primary type number 5) went to the local butcher’s shop as BBQ pigs for local distribution (primary physical destination number 5).

No one went to a **Breed specific pork market**, but 150 market weight pigs (primary type number 6) went to an “Antibiotic free” **Specialty market** route to a local packer who is not regularly inspected by Federal or State personnel (primary physical destination number 4).

Finally, the site borrowed a teaser boar once. Question 6 is “0” because the boar didn’t come from this selected site.