

Boar Studs - Turning Semen Into Pigs



In the vast majority of pig farms, breeding boars are no where to be found. So with that information, how are sows bred? The majority of sows in the U.S. are bred using a technique called Artificial Insemination, OR AI. AI is not new and was first used in swine in the 1930's. Boar studs (boar farms) are used to collect boar semen, which is then used to breed sows.

I interviewed an employee from a boar stud to learn more about it and also to learn exactly what they do there. Hopefully you will find this interview as interesting as I did. First some background information:

What is Artificial Insemination (AI) in livestock?

AI is the process of placing semen in an animal's uterus without the actual act of mating.

Why do farmers use AI?

Less injuries to both sows and boars

- Prevent overuse of boars (because they are animals, they are prone to overbreeding resulting in reduced semen count)
- Higher conception rates
- Larger Litter size
- Greater confidence in semen quality (because it's tested)
- Farmers are also able to use more superior boars. Superior boars are able to breed more sows artificially than natural.

What are the negative aspects of AI?

The management and use of AI requires more training, equipment and technology compared to natural mating using boars.

Tell me a little about the boar stud.

Our main barn holds nearly 300 boars. We also have two isolation barns where we keep about 65 boars. New boars come from a boar stud replacement farm located in South Dakota. New boars coming to the boar stud need to be blood tested and acclimated to the farm's health status. Our farm uses three lines of boars (genetics). The farm is also a "filtered" farm, which means air filters are incorporated into the ventilation fans. Filtering air helps reduce or eliminate air-transmitted viruses and illnesses.

Our farm has four collection pens--each using automated semen collection devices. Each boar is collected once or twice a week, which helps prevent overuse.

We employ four full-time and six part-time people.

How many doses of semen do boars produce?

5-65 doses are possible for every boar at each collection.

What happens with the semen after it is collected?

The semen is taken to a lab where it is examined under a microscope. The lab technician determines how many doses are available and adds an extender to the semen. The extender allows the semen to be used for up to 7 days. Semen is matched and mixed with other boars' semen to make multiple doses. The semen doses are stored in a cooled environment and then distributed to sow farms. Semen is delivered to farms by trucks.

What is your job at the boar stud?

I alternate weeks--one week in the barn and one week in the lab.

How many sow farms do you provide semen to?

Roughly 35 farms, which equates to about 75,000 sows.

Has technology changed in the past 5 years, if so how?

Yes, more automation. Most collections are collected by machines rather than manually.

Automation helps to use labor more efficiently.

What is a typical day for you?

My alarm goes off at 3:00 a.m. I grab something to eat and arrive at the farm at 3:45 a.m. I take a shower at the farm (required). By 4:00 a.m. I am mixing extender, checking testers and get them ready for the day. By 5:00 a.m., production starts. By noon I am done, although sometimes I work past noon depending on workload. Sometimes we provide semen for other boar studs if they have a health status interruption.

What do you like best about your job?

I like the variety of work. I like that I am working with animals, computers and people.

What are the biggest challenges in your job?

Biosecurity! Making sure all protocols are followed. We need to be constantly updated on all sow farm's health status. We can't deliver semen directly to a sow farm that has a change in health status. In those cases, we don't drive directly to the sow farm because this can be a main way to transmit virus/illnesses. An alternate site will be determined to deliver semen.

We send semen samples for a PCR test, which tests for PEDV (viruses) to the University of Minnesota Veterinary Diagnostic lab daily.

What additional questions do you have?