Collecting a Water Sample

Water Line Best Practice Series

Iowa Pork Industry Center and Swine Medicine Education Center, Iowa State University

Key Takeaway: Collecting water samples helps monitor water quality changes that could affect water consumption, pig health, production, and biosecurity.

Why Sample Different Water Sources?

Routinely collecting samples benefits the farmer by getting a complete understanding of the quality of the farm water. It is recommended to test at least once a year or once per turn, if able. Most water tests should assess minerals, dissolved solids, nitrates, sulfates, coliforms, E. coli, and pH levels. There should be at least two samples collected for each assessment, one sample from the water source and the other from a location inside the farm. The sample on the farm should be taken near a water line or directly from a water source inside the barn.

How Water Quality Varies by Source

Research shows that water quality can vary at different sources. The different sources of water include well, surface, or rural treated water.

- **Well Water:** Relatively stable water quality, but can change with influences in groundwater and rainfall, depending on the time of year.
- **Surface Water:** Quality changes more rapidly with the time of year, temperature, precipitation, and several other factors.
- **Treated Rural Water:** Rural water is already checked for quality; however, it is still important to perform routine checks.

Supplies Needed and Collection Procedure

It is essential to sterilize the site of the water source prior to collecting the sample. For sterilization supplies, you can choose to use either alcohol wipes, a diluted bleach solution and gauze pads, or a flame torch. Supplies for the water collection include a 5-gallon bucket, scrub brush, 500 mL sterile bottle or 16-ounce clean plastic bottle, marker or pen, ice packs, shipping cooler and box, and the completed submission form placed in a sealed Ziploc bag.

First, clean the sample tap with water and a scrub brush, ensuring to flush the water for 10 to 20 seconds or until the debris is removed from the line. Sterilize the tap via alcohol swap, diluted bleach solution, or flame torch. After sterilizing the tap, open the valve to collect at least 16 ounces of water for each sample. Label the bottle with the date and location using a marker or pen. Place the sample in a cooler with ice packs, along with the completed submission form. Lastly, submit the sample to an appropriate referral lab.

Watch video here: