Clean and Accessible Water

Point of production: Farrow to Finish
Country of origin: Denmark

Improved pig health and productivity, along with lower antibiotic consumption and costs, are the results of using a water purification system and ensuring adequate access to water. Danish producer, Jens Ole Bladt has installed a water purification system from Danish Clean Water (DCW) to ensure clean water and prevent formation of biofilm in storage facilities, pipelines and drinking troughs.

The system delivers a biodegradable disinfectant which reduces the presence of pathogenic bacteria and is approved for drinking water for production animals.

What is Biofilm?

As microbes grow, they attach themselves to wetted surfaces in the water distribution system. They protect themselves from disinfecting agents by forming biofilms. A biofilm contains a group of bacteria enveloped within a polymeric slime that ensures adhesion to the pipe surface.

Best practice - Automated water purification system

As well as using the fully automated water purification system, there are a number of practical steps taken to ensure clean water is provided consistently.

Water for newly weaned pigs is provided using feed troughs and systematic checks take place several times per day to ensure that clean water is accessible for all pigs. Also, the troughs are cleaned systematically at least once a day, or more often if the water is not clean enough.

When the pigs are older, the troughs are solely used for wet feed, but two drinking cups are present in each pen (28-30 pigs per pen), which is double the number of cups normally advised for that number of pigs.

The system's supplier calculates the running costs to be 0.10 - 0.50 DKK per cubic meter of water.

Additional information

Jens' farm already had a high standard of hygiene, so on farms with slightly lower standards of water quality, the impact of this water system has potential to be even greater.

Cost/Benefit analysis

The following results have been calculated using the farm's data and the InterPIG model:

Rearing and finishing mortality decreased by 1%.

Daily rearing and finishing live weight gain were 10% and 5% higher respectively.

Feed conversion ratio was 3% better due to better utilisation of feed.

Jens reported 10% reduced illness with diarrhoea, which resulted in lower veterinary costs estimated at a decrease of 10%.

Additional maintenance costs of the system were estimated at 0.055 € per cubic meter of water.

Based on these assumptions, the variable production costs decreased by 2.84% and fixed costs decreased by 3.51%.

The total costs were 3.06% lower as a result of the water system: €1.40/kg vs €1.36/kg hot slaughter weight.

Further Research & Project Links

https:// www.eupig.eu/

Link to technical report

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Theme: Precision

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