



It's the Pits

Importance of Water in a Livestock Operation

Limiting water intake or utilizing poor quality water can depress animal performance more quickly and drastically than any other nutrient deficiency.

All livestock needs clean drinking water for proper growth and revitalization. Pigs require water for metabolic functions, body temperature, transfer of nutrients into the body tissues, removal of waste, milk production and for growth and reproduction. "An animal can lose practically all its fat and over half of its protein and yet live, while a loss of one-tenth of its water results in death."

(http://www.ncsu.edu/project/swine_extension/healthyhogs/book1995/almond.htm)

Water is essential for nearly all body functions, and even minor dehydration can result in reduced feed intake, lower daily gain, poorer feed conversion, reduced milk production and lower weaning weights. When performance problems are being investigated feed is often analyzed, but the water supply is frequently overlooked.

Source: Action for Productivity series from BPEX

Water Issues

If contaminants are present in the water supply, including minerals (total dissolved solids, or TDS), manure, microorganisms and algae, it can affect the odor, taste, and the chemical properties. Contaminated water can cause disease and infection or lead to a decrease in total water intake. When water intake is lessened, feed intake is also decreased, which results in less weight gain.

Cattle Water Problems

Manure contaminates many cattle water supplies, especially when the primary source of water is a pond where cattle may spend a good deal of time. Manure on the cattle's hooves is passed into the drinking water when they step into the pond and can also be directly deposited when the animal defecates. Livestock drinking water that is contaminated with manure can become a hot spot for pathogenic bacterial growth, which, in turn, can cause animal disease. High levels of pathogenic bacterial species such as E. coli, E. Aerogenes and Klebsiella can lead to mastitis, urinary tract infections, diarrhea and numerous other unsavory and often lethal infections.

Swine Water Problems

Water is also a big component of a pig's diet. The new "hotter" feed rations and production techniques can make them susceptible to different diseases such as dysentery or salmonel-

la. Providing the required amount of water helps animals fight off diseases and infections. The universal rule is this: If pigs don't drink enough, they won't eat enough. According to Mike Brumm, a University of Nebraska swine specialist, "Water may be the key to getting an extra 0.05 pound of average daily gain, or improving feed efficiency from 2.81 to 2.72."

ProfitPro Water Revitalization Technologies

ProfitPro offers two water revitalization technologies for animal agriculture: WaterRite and the AquaKat. These two technologies can be used separately or together.

WaterRite

WaterRite is injected into the drinking water.

WaterRite™ Swine Finisher Study	
\$6,000 Feed Savings per Turn	
<ul style="list-style-type: none"> ▪ WaterRite barn verses Control barn full turn ▪ Both barns on microbial feed additive 	
Performance Parameter	WaterRite Advantage
Facility Turns:	
Days/turn	-8
Turns/year	+0.21
Performance Factors:	
Average days on feed	-6
Pounds feed/head	-49
Average daily gain	+0.02

AquaKat

AquaKat is a signal emitter (transmitter, catalyst) that passes an information pattern (frequency) on to the water. It is attached to the water line and classified as a physical water treatment device.

AquaKat used on a Dairy Farms

Among other benefits, it has been found that the AquaKat stabilizes hard water, addresses iron in the water, eliminates hydrogen sulphide (a rotten egg smell) and makes the water taste better. Since cows like the improved taste of AquaKat water they drink more water, and it is healthier for them. Records indicate that on farms where an AquaKat has been installed milk production on average has increased by 0.4 gallons per cow per day. Milk quality has also improved and there has been a reduction in the use of detergents associated with clean-up in the milk parlors.

The use of WaterRite and/or the AquaKat in animal production alone or together provide the following benefits:

- Releases oxygen molecules from water, which creates an aerobic condition and neutralizes pathogens and bacteria
- Revitalizes water, rich in energy
- Spring water quality and attributes
- Feels softer to touch and has a fresher taste
- Balances the pH of water
- Cleans out water lines
- Boosts the immune system and improves animal vitality and health
- Enhances libido and breed back
- Aids in ease of facility cleaning
- Aids in the bioaugmentation of manure
- Optimized solubility and higher absorption capacity of mineral substances in the water

For more information on **WaterRite** or **AquaKat**
contact ProfitPro at **1-888-875-2425** or your
ProfitPro representative in your area
(<http://manure.profitproag.com/contactus.html>).