

# LINKS AND EXTRACTS TO SCIENTIFIC STUDIES SUPPORTING THE CROC TPS

## QUALITY OF WATER

### [Agriculture Victoria](#)

Dams are the main source of water for livestock in Victoria. The quality of this water source is therefore a high priority for livestock producers. Research indicates that cattle, when provided with high quality water, will drink more, eat more and ultimately, gain weight more quickly. Because weight gain in livestock is a priority for producers, it is worthwhile ensuring that stock water is of high quality.

## AERATION OF WATER

### [CSIRO the effect of water quality on cattle performance](#)

Water aerated and pumped to a trough in early summer tended to produce greater ( $P < 0.05$ ) weight gains in calves than those drinking directly from the dugout. The effect of treatment on improving cattle weight gains appeared to be related to improved water palatability, which increased water and feed consumption.

## OXYGENATION

### [Nanobubbles for Livestock](#)

Water injected with oxygen nanobubbles and fed to various farm-raised animals has consistently demonstrated to have a very positive effect on the animal's health. Consumption of the water on a regular basis appears to lower animal stress levels which improves feeding efficiencies, resulting in faster growth rates. Any animal can benefit from drinking the water. Current testing with pigs fed oxygen nanobubble water have been recorded to have the following biological effects on the body:

- Improved Blood Flow • Increased Growth Hormone Secretion • Increased Neurotransmitter Secretion • Reduced Stress Levels

### [Improvement of Production with nanobubbles](#)

\*\*European private trial work

At the end of the test, the farmer certified the following results:

- Significant **profit increase** due to increased production and lower costs: **up to 150 EUR per animal per cycle**
- Improved health of animals: over **60% reduction of mortality**
- Improved quality and wellbeing of animals: up to **30% less antibiotics** needed
- Optimized productivity: up to **15% weight gain** through improved animal metabolism

## **WATER SOFTENING**

### **Biological Effects of Magnetic Water on Human and Animals**

Ebraham and Azab (2017) Sabratha University

Magnetized drinking water improves nutrient digestibility, saves water consumption, optimizing rumen fermentation parameters, and it could be an effective way to reduce methane production and contributing to mitigate environmental impact in livestock, positive animal health, which is reflected in the increase in milk yield and its component and improves blood picture and antioxidant status. Magnetized drinking water caused increase milk production, mutton, and wool in sheep not only that, but more weight gain in geese and egg production and hatchability in turkey can be achieved, and increasing in milk yields in dairy cows and ewes. It can be concluded that magnetic water treatment improved blood picture, biochemical parameters, semen quality, and antioxidant status in human and animals. So, magnetic water must be used to mitigate the harmful effects of drugs, toxins, and environmental pollutant on human and animals.

### **Effects of sulphates in water on cattle performance**

Data from our research showed that growing steers in dry-lot receiving water with over 3,000 ppm sulfates had reduced average daily gain, DM intake, water intake, and gain/feed (Patterson et al., 2003). Steers receiving the high sulfate water had a high rate of polioencephalomalacia (PEM), a metabolic disorder induced by high sulfur ingestion.

### **Effect of magnetic water on lactating goats**

#### **Effect of magnetic water on the performance of lactating goats**

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In conclusion, magnetic treatment could improve water quality and consumption, feeding value, ruminal fermentation, blood picture, antioxidant status and hence milk and labneh yields especially with 3600gauss.