

The effect of temperature on drinking water

Clean drinking water can make all the difference in poultry production. Keeping the drinking water system clean is of vital importance. For the benefit of bird health as well as a better profitability of the farm, Intracare recently investigated the effect of temperature in drinking systems.

A contaminated water system can result in reduced effectiveness of medicines and vaccines, water with millions of micro-organisms, blocking or leaking nipples and change in taste or smell of the water. As a result, your birds will take in water of reduced quality.

The first days of chicks' lives are their most important ones. Day old chicks are, in many cases, hatched only 15 hours before they arrive at the farm. If the drinking system is not clean, the amount of micro-organism can be up to millions and the first water that they drink can be teeming with *E. coli* bacteria.

In co-operation with the Dutch GD Animal Health Services, Intracare conducted research on the effect of temperature on a contaminated or a not thoroughly cleaned drinking system. The results show that especially in the first days, the water temperature is more or less the same as the temperature in the broiler farm, as the water flow is very low.

With temperature levels 16°C lower than the broiler house temperature, there is hardly any infection risk. Health risks are increased at higher temperatures.

Micro-organisms can grow with a temper-

ature of 25-35°C and within five hours, some 100 bacteria can multiply up to 3.5 million.

In general it was found that the microbial condition of the source of the water is usually satisfactory.

Contamination arises in the drinking system, especially in the second half of the lines. Therefore, cleaning a drinking system during the cycle is vitally important to avoid bacterial levels that can infect your flock.

Further to the new Biocidal Product Regulation (BPR, Regulation (EU) 528/2012) issued by the European Union, a product has to be tested and approved by the authorities. Upon approval, the product can safely be used in the direct surroundings of animals.

The product types have the codes PT02 up to PT05. When farmers want to use a product for cleaning and disinfecting their water systems (drinking lines, nipples), the product is required to have all separate PT-registrations, up to PT05. If they do not, they are not allowed to use in water for the animals.

Intra Hydrocare has been used successfully for years for cleaning and disinfecting surfaces and pipe systems in the livestock sector and has had all registrations from PT02 up to PT05.

The PT codes are PT02 (private area and public health area disinfectants and other biocidal products), PT03 (veterinary hygiene biocidal products), PT04 (food and feed area disinfectants) and PT05 (drinking water disinfectants).

This product is a safe cleaning product and disinfectant based on hydrogen peroxide, stabilised with chelated silver. To stabilise the hydrogen peroxide with silver is very important as this provides a good cleaning capacity even at the end of the pipeline. Pure hydrogen peroxide cleans only the first part of the line.

Research has shown that for good cleaning results approximately 50% of hydrogen peroxide is required. The amount of hydrogen peroxide in, for example, peracetic acid is almost half compared to that in Intra Hydrocare. As a consequence, you need only half a dosage of Intra Hydrocare to get the required cleaning results, which will lead to lower production costs. ■

Fig. 1. Temperature of drinking water in the poultry house.

