

REARING HEALTHY CALVES – BIOSECURITY ON FARMS

**Using CREDENCE
sanitiser and
disinfectant to keep
your calves healthy**

What is CREDENCE?

CREDENCE is a specialist disinfectant and sanitiser product that comes in tablets specially formulated to have a ‘fizzing’ action on contact with water. This helps disperse the active sanitising compound around the water and the container.

CREDENCE is a stabilised form of chlorine, which has long persistency in drinking water. Because it is formulated with chlorine, it doesn’t interfere with the uptake of other minerals or affect sheep, which is a major problem with copper sulphate (blue crystals), which has been shown to cause bone problems leading to increased incidence of fractures in cattle.

CREDENCE is multi-functional and can be used (in different concentrations) to sanitise drinking water and as a disinfectant for sheds, vehicles and equipment.

Use	Litres per tablet
Biosecurity/footbaths	5
Equipment washing	10
Non-porous surfaces	15
Hand/udder washing	100
Water pipes cleanout	200
Drinking water	1000

Biosecurity in calf rearing

Calves are very susceptible to diseases caused by bacteria, viruses, fungi and toxic algae. In order to keep them healthy a growing, certain management practises must be followed.

At birth – all calves should be left for at least 12 hours on the dam to allow colostrum consumption and ingestion and uptake of immunoglobulins essential for the initial promotion of immunity. There is only a 24 hour window following birth when calves can uptake these large molecules from colostrum. After this period, the ‘loose junctions’ in the gut seal up, so no more can be taken up across the gut wall. Calves without sufficient colostrum intake will have poor or no immunity, and so will succumb to diseases faster with little hope of recovery. Ig blood tests can be done at 4 days of age to check if immunity is active.

Transport and penning: calves being transported or penned in sales yards or similar are at great risk of coming into contact with disease causing organisms from other animals or contaminated equipment and facilities. Make sure you ask your dealer and transporter that they clean down (e.g. disinfect with Credence using back pack sprayer, 1 tablet in 15 litres water) before your calves are exposed to such environments.

Pens, buckets, yards and vehicles should be washed down and treated with CREDENCE (1 tablet in 10 litres for equipment, 1 tablet in 15 litres for pens and trucks etc). Trials have shown CREDENCE has a fast contact kill rate (5 minutes claimed by manufacturer). Make sure all water sources used to rinse afterwards have been sanitised with 1 tablet CREDENCE per 1000 litres of water. A big problem on all kinds of farms is that, following disinfection, the water used to rinse down contains active pathogens, so the farmer is recontaminating equipment and property unwittingly. Treat stored water on farm with Credence (1 tablet per 100 litres) to keep it pathogen-free.

Clean drinking water – is a must for all animals, especially vulnerable calves. Research has shown that on-farm water is highly likely to be contaminated, especially if fed from bore holes or roof supplies. Even treated water typically only contains 1/10 of the chlorine required to kill off pathogens. All drinking water tanks, bores and troughs should be treated with 1 tablet of CREDENCE per 1000 litres to ensure it is safe to drink.

If using milk replacer, then the water used to make this up must be clean. Milk replacer normally requires 55°C temperature of water to dissolve – this is far below the heat needed to kill off pathogens and can encourage contamination. Only use water treated with Credence (1 tablet per 1000 litres).

Preparing the site for calves coming onto the farm should include the following:

- Disinfection of sheds and equipment (1 tablet CREDENCE dissolved in 15 litres of water, wait for 5 minutes and then rinse)
- Clean and disinfect all bottles and calfeterias (1 tablet CREDENCE dissolved in 10 litres of water, wait for 5 minutes and then rinse)
- Clean dry bedding
- Straw for consumption must be checked to make sure it is without mould

Milk feeding calves: equipment such as bottles or calfeterias are typically vectors for transmitting disease between animals. Rinsing with water and detergent has been shown to concentrate pathogenic bacteria in the teats, increasing risks of infection during next feeding. These should be disinfected after each feeding. For bottles used on multiple calves, dilute CREDENCE solution in a plant mister bottles should be sprayed on the teat between each animal fed. Disinfecting hard to reach areas is easy with CREDENCE. For calfeterias, dissolve the tablet in warm water in the calfeteria, swirl and then leave to sit for 5 minutes. Then transfer the solution to the next calfeteria, and rinse the treated one with clean water.

The effervescence of the tablet will ensure the active chlorine is dispersed throughout the equipment. As chlorine does not interfere with other minerals in the diet and CREDENCE is far less toxic or corrosive compared to other disinfectants, it is safer for the animal and for the equipment.

When calves are penned on farm, they need to be protected from **outside sources of infection**. Hand, boots, clothing and vehicles should all be disinfected on entry and exit to the calf rearing facility. Soaking foam rubber in CREDENCE solution (1 tablet per 5 litres of water) is a useful way of doing this. The rubber can be cut to fit a shallow bucket for dipping feet or as a long mat for vehicles to run over. Hands should be washed before and after handling calves using 1 tablet of CREDENCE in 100 litres of water.

On completion of calf rearing, all buckets, cafeterias and pens should be disinfected. If pens are systematically cleared and reused for new entry animals, these should be disinfected according to the same rules as when calf site is being prepared to initial use. Pathogens can survive in wood, earth flooring, bedding and equipment for long periods of time, allowing reinfection of a healthy new intake.

Technical information

In trials, Credence was applied as a spray to the bottle and calfeteria teats at a concentration of 1500 mg/l for 5 seconds. Contamination with disease organisms was reduced to virtually zero. In farm buildings swabs taken over a 15 day period from calf pens showed that Credence is important in maintaining hygiene. Annals of the 23rd Brazilian Congress of Veterinary Medicine recorded that *“The use of Credence revealed a quantitative reduction of the bacteria....., which are most times associated with neonatal enteritis, which were isolated from the calves pens, suggesting the efficacy of the product on the environments studied.”* As there is increasing concern regarding toxicity from using certain disinfectants on farm, it is reassuring to know that Credence performed excellently in an EU residues study and in a 1995 impact study was confirmed as biodegradeable and environmentally friendly.

For full research information and to order Credence within NZ contact Animal Health Direct, Hastings online.