Fiji DAIRYNOTE 1.4 – Calf and Heifer Rearing: Pasteurisation of Milk

Good Practice Guide for Fiji Dairy Farmers

Pasteurisation of Milk

The dairy industry in Fiji is intent on reducing the occurrence of Tuberculosis (TB). Increasing the survival rate of heifer calves and ensuring minimised exposure to TB requires two simple but effective steps:

- removing calves at birth
- heat treating colostrum and milk

Removing calves at birth avoids suckling, which can transfer TB. This can be done after calves are standing and have been cleaned by their mothers. Heating milk to 60°C for an hour will kill most bugs and can actually improve the absorption of immunoglobulin (IgG), which is the active ingredient in colostrum that gives calves improved immunity against disease. Heating milk higher than 60°C is not recommended.

Heat treatment

Heat treatment can be done using an electric water-heating urn and stainless-steel pot, can or a large pot of water instead of an urn. Surplus colostrum can be kept refrigerated for several days or better still, frozen 2 litres at a time in a clean (new) plastic bag. When a new calf is born, you then have stored colostrum ready in the size needed for a single feed.

Electric water heating urn

1. Fill the urn with water and bring to a temperature of around 75°C.
2. Place a stainless pot/can with 2 litres of colostrum inside it for 30 minutes.
   a. Use a thermometer to check the colostrum doesn't heat above 60°C as this will affect the IgG levels and make it thick and hard to drink.
3. Add cold water to the urn if the temperature starts to go above 60°C. Allow the colostrum to cool until it is just warm enough for the calf to drink (about 35-38°C).

Large pot of water

Instead of an urn, a large pot of water can be used and heated on a gas cooker or fire. Follow steps 2 and 3 above.

To ensure effective use of colostrum also requires proper cleaning of the pasteuriser, colostrum storage and colostrum feeding equipment. Proper handling, storage, refrigeration and/or freezing of colostrum is also required to prevent bacterial contamination, growth in the raw product and re-contamination in heat-treated colostrum.

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