Bonanza Calf Nutrition: Options for rearing male calves on farm

Red Tractor have issued a new dairy scheme standard for Autumn 2021, to ensure that the industry rear all calves with care, with the aim to eliminate euthanasia of calves by 2023, some milk contracts have already implemented this such as; Arla and Sainsbury's.

A written breeding and management policy must in in place and implemented, ensuring there is no euthanasia of calves. The policy must cover breeding choices, provision of rearing facilities to cover the number of livestock, an identified market for the breed of calf and a TB breakdown provision or plan. The annual collation of calf births and deaths must be maintained, trends will be observed with actions arising in the health plan.

OFFER: **FREE** refractometer with the first pallet of milk replacer purchased by a new customer

Bonanza Calf Nutrition Milk Powders:

Milky Way: £35.00/calf*

A condensed milk replacer based on skim milk, with 40-50 % more milk protein and energy than a standard milk replacer. Contains a multi fat blend of medium and long chain fatty acids encourage and maximises protein digestibility therefore, live weight gains and starter feed intakes are increased. We believe providing calves with 100-120g per day of the right protein is far better than feeding higher levels for calf health.

**Feeding 500g per day after 7 days of Transformula. Feeding twice a day, until day 29. Weaned at 6 weeks.*

Sweet Complete: £39.90/calf*

Sweet whey milk replacer, suited to twice a day feeding or through machines. Contains buttermilk which reduces stomach upsets and feed refusals as it acts as an emulsifier enhancing fat breakdown and it contains a lactic acid flavour. Additionally, it can reduce rotavirus infectivity. The use of a multi fat blend, medium and long chain fatty acids encourage and maximises protein digestibility therefore LWG. The blend of Omega 6:3 enhances calf ability to combat pneumonia.

**Feeding 700g per day after 7 days of Transformula. Feeding twice a day, until day 29. Weaned at 7 weeks.*

Shine Once-a-day: £38.40/calf*

A unique formulation of low heat skim which is slowly digested throughout the day, leaving calves more content with one whole feed and reducing scour incidences. Calves have improved rumen development on the once a day system, leading to earlier weaning and better performance at weaning with steady growth rates.

**Feeding 700g per day after 7 days of Transformula. Feeding twice a day, until day 29. Weaned at 6 weeks.*

Shine Twice-a-day. £44.60/calf*

The most tried and tested twice a day powder in the British Isles. A blend of skim, whey and buttermilk and a range of plant oils, encourages dry feed intake and rumen development prior to weaning- minimising stress and upset after weaning.

**Feeding 700g per day after 7 days of Transformula. Feeding twice a day, until day 29. Weaned at 7 weeks.*

BONANZA calf nutrition

Colostrum feeding

It is important to ensure the calf receives 10% of its birth weight of good quality colostrum ideally within the first two hours of life. The quality of the colostrum is measured by the amount of immunoglobulin G (IgG) it contains. The IgG concentration for good quality colostrum is >50g/l, or when using a refractometer >22% brix.

Transition milk

Transition milk is now often collected in the bulk tank with other milk where its benefits are diluted. Transition milk contains oligosaccharides, a type of carbohydrate, which help a calf's intestines close and keep disease out – its gut is extremely porous in the first two weeks of life and for this reason it is very susceptible to disease. This milk also contains more protein than cow's milk and higher levels of antibodies too. These antibodies cannot be absorbed into the bloodstream but instead line the intestine as an extra barrier to pathogens that try to enter a calf's gut. Transition milk is higher in solids than whole milk so this means more energy for the calf to fight infection and withstand environmental impacts. It also benefits the calf by stimulating the development of the digestive tract, increasing the surface area of the small intestine and its potential to absorb more nutrients. This, in turn, increases feed efficiency and improves calf health and growth. In a recent trial at Michigan State University, calves fed transition milk after colostrum until they were five days old were 3kg heavier at weaning compared to calves fed calf milk replacer (CMR) after the colostrum feed (Soest et.al, 2021).

It is important to contemplate how transition milk could be part of a calf feeding protocol. The wider use of teat sealants and an increase in the number of heifers in the dairy herd has reduced the amount of transition milk now retained for calves on many farms. Disease spread from pooled milk is also a concern.

To counter this, Bonanza Calf Nutrition has developed Transformula, a transition milk replacer that is manufactured with specific low-heat skimmed milk, buttermilk and six different fat sources. A range of natural plant extracts, yeasts and specific proteins are carefully selected and added to Transformula, each with a specific purpose. This feed provides a consistent, disease-free alternative and aids calf digestive maturation and calf feed intake before and after weaning. With the inclusion of anti-scour agents such as Kryptonite, Transformula will also help to prevent scour and targets specific scour causing agents such as Crypto and Rotavirus. Feeding adequate high quality colostrum and Transformula sets calves up for the rest of the rearing period, reducing labour and expense involved in rearing calves undernourished in the first week of life.

Price per calf approx. £4-5 extra per calf compared to using calf milk. This cost is low in comparison to the management and DLWG loss caused by disease, the use of antibiotics and electrolyte treatments.

Providing water

Water should be offered to calves from birth.

Water has an important role in developing the calf's rumen and is essential in the rumen's ability to ferment the concentrate and forage that the calf eats therefore, it is necessary for a successful weaning.

Rumen bacteria are responsible for fermentation of the calf starter to VFA's in the rumen. To ferment the substrate the rumen bacteria must live in a water environment, without sufficient water the bacteria cannot grow and the ruminal development is slowed.

It is important to note that milk and MR does not constitute as free water, it bypasses the rumen by the action of the oesophageal groove, this is active in the calf until 12 weeks of age.

In a trial comparing calves offered water adlib to calves that had restricted access to water, the ad-lib calves had an increased weight gain of 38% from birth to four weeks of age and had fewer scour days (Kertz et, al 1984).

Concentrates and forage

The calf begins to transition from monogastric to ruminant when the calf starts to intake concentrates, stimulating rumen development, for successful weaning it is advisable for the calf to be introduced to starter feed as soon as possible. A starter nut should be chosen with a protein content of between 16-18%, a nut would be advisable to eliminate the calf's ability to sort through a coarse mix. Good quality forage should also be provided to stimulate rumination.

At two weeks of age the calf should be beginning to consume starter feed, gradual weaning should begin when the calves are consuming >1kg of concentrates for at least three to four consecutive days. When deciding the best time to start gradually weaning large groups of calves the amount of concentrate consumed should be estimated at an average of >1.5-2kg per calf/day.

Hygiene

A strict hygiene protocol should be implemented, ensuring the pens are routinely cleaned out, washed and disinfected after each calf.

If possible, to reduce the disease spread between groups of heifers and bull calves it would be advisable to segregate the heifers from the bull calves. Ideally with a solid barrier between, or separate areas of the shed.

Clean feeders after every use, flushing the teats with hot water, using a brush. Dairy chemical washings can be used 5% peracetic acid, but must be thoroughly washed off. It is also important to ensure the feeder teats are changed regularly.

Hygiene tips

- Feed calves in order of age – youngest to oldest
- Keep a spare feeder or tube feeder for 'sick' calves
- Use a sick bay to separate poorly calves – ensuring they still have some interaction with other calves
- Replenish water and feed regularly to ensure it is kept clean and more palatable to the calves

Bonanza Calf Nutrition, Coes Rd Ind Estate, Dundalk, Co Louth.
UK: 0808 1781017 IRL: 00 353 (0)42 9336001 Fax: 00 353 (0)42 9336002
www.bonanzacalf.ie