

The importance of good management for rearing healthy young calves

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Israeli dairy farming is well known worldwide for its high yielding cows and most advanced dairy technologies.

The country's herd consists of 120,000 milking cows and an annual average production of 11,781 litres per cow (2013).

In order to maintain such an impressive performance in the future, one must start at the beginning by rearing healthy heifers.

The female calves in the dairy farm are literally the future of the dairy and therefore must be treated the best available way in order to continue building up the best producing cows for the future.

The first day of life is the most important day for the calf's health. During the first few hours after the calf is born, the farm has two major tasks. The first is to separate the newly born calf from its mother, dry the calf if necessary and carefully move it to a clean and protected place. This place must be well cleaned and disinfected in advance, prior to the calf's arrival.

The second task is to provide the colostrum correctly. Calves are born without antibodies in their blood system, therefore colostrum consumption is vital for their protection until their immune system is fully functioning.

During the first day of life the calf should receive at least four litres of high quality colostrum (based on a Holstein calf of approximately 40kg).

Our recommendation is to feed soon after birth two litres of colostrum and immediately continue and offer a second lot of two litres.

If the calf consumes the whole quantity of four litres given soon after birth, it has had a sufficient amount of colostrum for saturating its needs. If the calf does not consume the second lot of colostrum, the calf should be left for 2-3 hours and then be fed again two litres of colostrum.

As a rule of thumb, colostrum requirements for the first day are 12% of the calf's birth weight.

Soon after birth, dip (or spray) the

naval cord with a commercial disinfection product based on alcohol (the alcohol's purpose is to dry the naval cord in addition to its disinfecting properties).

For other treatments to be carried out during the first day of life, follow the advice of the veterinarian/professional dairy advisor.

On the second and third day of life feed twice a day two litres of colostrum. From the second day onwards, clean drinking water should be offered for free consumption by the calf.

Dry feed and weaning

After the first week, dry feed should be offered. Since the dry feed extremely enhances the calf's health and performance (body weight gain), it is highly important to get the young calves to eat the dry feed as early as possible. Dry feed must be of high quality and designated for young calves. Serve fresh feed daily.

Safe weaning can take place after calves consume sufficient quantity of dry feed. Normally, under good management at the age of 50 days calves will be consuming 2kg of dry feed daily and can be weaned.

At weaning time, daily control and care of the calf's health status is vital.

Health problems

At the intensive dairy farm, the large number of calves leads to pathogen contamination and to stress, causing lower immunity, which means higher susceptibility to diseases.

Disorders with symptoms of diarrhoea rank the highest among health concerns in calf rearing. Digestive tract disorders cause an estimated 50% of calf death losses within the first three weeks of life. The incidence of calf death occurs primarily in calves up to the 10th day of life.

Diarrhoea is a significantly costly phenomenon for the dairy business; losses are a result of mortality, treatment costs, labour costs, lower performance of the calves and a prolonged rearing period.

On top of all these expenses, the

Age of calf (days)	Milk per feeding (litres)*	Milk feedings (day)	In case of milk replacer feeding (g/day)	Expected dry feed consumption (g/day)
1-4	Colostrum			
5-14	2.0	2	500	150
15-21	2.5	2	625	300
22-28	3.0	2	750	400
29-50	4.0	1	500	800

* For milk replacer same volumes with 125g/l concentration

Table 1. Milk feeding and dry feed chart for the dairy calf (female and male). This chart should be treated as a guideline only. Feeding should be adjusted to the farm and climate conditions.

most costly one can be the decline in milk production of the adult cow.

The top killer of the young weak calf with diarrhoea is dehydration and starvation. Therefore, treatments and an effective prevention of gut upsets must be provided at the onset of diarrhoea.

Many pathogens of young calves (mainly viruses and Cryptosporidium) are antibiotic resistant. Medication in this case does not help and may weaken the calf furthermore.

Pectolit is a feed formulated for this crucial time. It is a unique feed that was developed in Israel in 1988 and since then has expanded commercially to many other countries.

Pectolit has two main functions; the first is to treat and stop diarrhoea of young calves and the second is to feed the calf.

Stopping diarrhoea occurs as a result of the ingredients in the feed. Pectolit contains a minimal amount of milk products, which reduces growth of negative/pathogenic bacteria in the gut.

Pectolit contains vegetable substances (like carob powder) that eliminate pathogenic bacteria. It reduces peristaltic movements of the gut (and thus reduces water loss). The product also contains glucose and glycine that support absorption of electrolytes and nutrients. It will help heal the epithelium of the gut by supplying tannins.

The anti-diarrhoea effect of Pectolit is obvious and the farmer will see positive results a few hours after feeding it to the calf.

In addition to the essential elec-

trolytes, minerals and vitamins, the product contains available energy from dextrose along with proteins, coco fat and lactose.

Pectolit provides a safe substitute for milk feeding; it can be used for a period of a few days without the risk of starving the young calf and prevents loss of body condition

Treating sick calves

When a young calf suffers from diarrhoea – stop milk feeding, feed Pectolit twice a day (if the calf is weak and in bad body condition feed Pectolit three times a day). Dilute the product in warm water (38-40c), mix it well and feed to the calf.

Feed Pectolit twice a day. The dose is for a normal size calf (37-45kg). For large calves or small calves, the quantity can be adjusted.

The product can be fed as the sole feed for 1-3 days. If the calf is not stabilised after this period, it is recommended to combine milk or milk powder together with Pectolit.

Start with a 0.5 litres of milk and gradually increase the milk portion and reduce the part of Pectolit.

In case of sick calves (E. coli, salmonella or other pathogens), the product can be a good support for the calf recovery during medication treatment.

Pectolit is a safe feed with no risk to weak or healthy calves; an extra dose can always help prevent dehydration or starvation.

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