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Management of Young Calves for the Small Scale Hobbiest, Part 2: Feeding

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Feeding the Young Calf

Calves need time for their rumens (first digestive area before the true stomach) to develop and become functional. The rumen is why we refer to cattle as ruminants. With this organ they are able to take low quality feeds (like forages) and convert into usable energy. While they are in the pre-ruminant phase they require liquid milk or milk replacer. It takes about 6 weeks for the rumen to become functional. Proper feeding will help avoid digestive upsets and increase the chances for survival.

Liquid Feeding

Calves can be successfully raised on either whole milk or milk replacer (a dried milk component product). Whole milk can be fed at the rate of 4 -6 quarts per day in two or three episodes (Gold Standards I). If feeding milk replacer use the following guidelines:

1. Don't necessarily buy the cheapest replacer you can find. It may/will usually contain low-quality milk components or cereal products, which make it less digestible and may cause scours (Heinrichs).

2. Look at the protein and fat content. Dried whole milk contains about 30 percent fat and 25 percent protein. Milk replacers come with a variety of protein and fat levels. A common milk replacer that many people use is a 20:20. This means 20% protein and 20% fat (the first number is protein and the second fat content). Because it is lower in fat and protein than whole milk, the calf will grow slower.

3. If you suspect a problem with your milk replacer, switch to milk and see if the situation improves. If it does, then you might try a replacer of higher quality.

4. Feed milk replacer according to manufacturer's recommendations. A typical amount would be 1 lb/day reconstituted with warm water (feed over two feedings). In winter, you will need to add a third feeding (1.5 lb total). In general, feeding at a rate of 10% body weight until weaned is a good rule of thumb.

5. Feed non-medicated milk replacer unless there is a diagnosed issue. Some milk replacers contain a small amount of antibiotics. We generally recommend that non-medicated milk replacers be used unless there is a chronic, diagnosed bacterial diarrhea that is responsive to medicated milk replacer and after improved husbandry and sanitation. Talk with your veterinarian if you have a chronic diarrhea issue. It might be a viral disease that will not respond to antibiotics.

Calf Starter and Hay

Calf starter should be offered to the calf near the end of the first week and kept fresh by replacing left-over amounts daily. This feed will help the rumen to become functional. At first a calf won't eat very much, so don't "pile-it-on." Try to feed so that there is just a little left each day. Hay should not be fed until you are ready to wean them. A good calf starter should contain at least 18% crude protein and have about 8 to 10% fiber. It should be a coarse texture mixture of a highly palatable product. Don't buy something that has a lot of fine particles as the calf will not do well on this product. Some starters will attract flies (as well as left over milk or milk replacer) so carefully monitor for this.

Clean water should be available for the calf at all times. They won't drink much at first, but will slowly increase

their intake. Your goal is to get them eating calf starter so they can be weaned. That will not happen without adequate water. It takes about 4 units of water for every 1 unit of starter (Kertz, 2012). It is also important to have it available in winter, but may have to be fed after they have consumed their milk as it will freeze.

Weaning

A good rule of thumb is to wean the calf when it is consuming 2-4 lb grain (or calf starter) per day for at least 2 days and has doubled its birth weight. This should happen between 6-8 weeks of age.

With a developed rumen the calf can thrive on just water, hay, and a small amount of grain depending on the quality of the hay. The rumen is still developing and becoming fully functional for some time after weaning so carefully monitor the calves body condition to make sure they don't lose weight. Feeding milk or milk replacer to calves is expensive and labor intensive. Many people are tempted to rush the calf to weaning without much thought in developing a functional rumen. As a result, these calves fail to thrive post weaning.

Weaned calves should receive good quality alfalfa or grass hay and all the water they want. These should be left out free choice. Hay and water exposed to the elements might become unpalatable and inedible to the calf so refresh these often. If you are using some sort of water trough or automatic water delivering device, it will take some time for the weaned calf to become trained to use these devices properly. If they were accustom to obtaining their water from a bucket during the pre-weaning phase, you should make a bucket of water available (along with the other watering devices) until you observe the calve using the new devices.

A grain mix should also be fed, but in limited quantities. A maximum of 4 - 6 lb per day should be fed during this time period. As a rule of thumb, your goal is to have calves consume a ration (hay and grain) that will allow the animal to grow at a rate of 1.7 to 2 lb/day without getting fat. This means the ration protein should be approximately 15-16%. It is also recommended that you talk with someone that can help you put together an acceptable ration. Using pasture is acceptable for animals over 4 months of age, but it is critical to monitor growth rates as pasture quality and availability change over the summer.

References

Gold Standards I, Dairy Calf and Heifer Association (accessed 9/17/13) http://www.calfandheifer.org/?page=GoldStandards

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