No. 135

OKLAHOMA COOPERATIVE EXTENSION SERVICE
4-H Youth Development

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Feeding a Bucket Calf

Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

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The 4-H Bucket Calf Project is designed to introduce youth 7-12 years-olds to beef and dairy 4-H projects. By allowing younger children the experience of working with a smaller, less intimidating size of animal, they become comfortable with beef and dairy cattle as they grow. This is designed to be a short-term project with calves purchased in May and finalized with showing at the local county fair in the late summer or fall.

A bucket calf is an orphan or newborn calf purchased when they are one to ten days old. The calves may be male or female, beef or dairy. The calves are started on a bottle (or bucket) and nipple.

Bottle Feeding

A calf will instinctively nurse its mother, but nursing a nipple bottle or drinking from a bucket is a new learning experience. Teaching a calf to suck from a nipple bottle is much easier than teaching one to drink from a bucket. A nipple bottle is convenient for measuring the correct amount of liquid feed. A bucket is convenient for encouraging calves to consume calf starter (a dry feed, which can be put in the bucket as a calf finishes the milk replacer).

The easiest way to teach your calf to consume milk or milk replacer is to take advantage of the calf's instincts. Since calves will instinctively nurse, insert one or two fingers in its mouth (yes, they have teeth, but only on the bottom) and let the calf start sucking. Then insert the nipple of the bottle in its mouth and let it continue to suck. If bucket feeding is used, force the calf's mouth into the bucket of milk while it is sucking on your fingers.

A good milk replacer will contain at least 22 percent protein and 15 percent fat. Because of the fat level, it is easier to mix when warm water is added. Milk replacer may be fed warm, but not above 100 °F. Mixing smaller amounts allows for easier mixing. Avoid changes in amounts or temperature of milk or replacer.

Follow label instructions when using milk replacer. Holding the level of liquid feed constant encourages the calf to consume calf starter as its size and appetite increase. A calf needs 8 percent of its birth weight in milk or milk replacer a day. If a calf weighs 100 pounds at birth it should be fed 8 pounds of liquid in two equal feedings each day(Table 1). Likewise, a calf weighing 80 pounds should be fed about 6.5 pounds each day in two equal feedings (Table 1).

Table 1. Milk replacer caculations.

100lbs X .08 = 8 lbs 8 lbs = 1gal 1 gal = 4 qts So, feed 2 qts a feeding, twice a day.
80lbs X .08 = 6.4 lbs 8 lbs = 1gal 1 gal = 4 qts 1 qt = 2 lbs So, feed approximately 1.75 qts each feeding

Each calf should be fed from a separate nipple bottle or bucket to avoid spreading diseases from one calf to another. Calves raised separately do best. Separate pens will reduce disease transmission and make it easier to feed.

Water should be made available for the calf even though it is being fed milk or milk replacer. It is best to offer water at least 20 minutes after feeding the liquid feed because water helps maintain the clotting enzyme (rennet), which is needed in the calf's stomach.

Within a few days after the calf is born, it should be encouraged to consume dry feed, both calf starter and hay, to avoid upset stomachs and prevent nutritional scours. Dry feed consumption is necessary for the calf to develop a functional rumen. In the beginning, feed small amounts of calf starter and a grass or grass – legume hay. Hay quality is very important. Look for hay with green color, fine stems and many leaves. It is important to keep the dry feed fresh, so don't feed more than the calf will clean up in a day. Once the calf starts eating dry feed, clean water should be made available at all times.

Weaning Your Calf

Weaning – means changing the calf's diet from one composed mostly of milk (bottle feeding) to one that is all dry feed.

It is not practical to feed milk or milk replacer after calves are consuming enough dry feed to continue growing well. The change from a diet composed of milk and dry feed to one that is all dry feed can create some stress on your calf. This is one reason why it is important for your calf to eat calf starter and hay at an early age, so it will be somewhat adjusted to dry feed.

Usually by the time calves are 6-8 weeks old they can be weaned from liquid feeds. The key for determining when a calf

can be weaned is the amount of calf starter it is eating. Calves can be weaned when they are consuming at least 1 $^1/_2$ pounds of calf starter per day (Table 2). Provide trace-mineralized salt at all times in a location out of the weather.

The amount of nutrients consumed is important to the recently weaned calf in order for it to continue growing well. Until the calf is about 3 months old, continue feeding all of the calf starter your calf will eat, plus free choice hay. At that time, a less expensive grower mix could replace the more expensive calf starter (Table 3).

Weaning is a stressful experience for calves. You may notice that your calf may bawl for milk for a couple of days, especially near feeding time. Because the change of diet causes stress, the only thing you should do at weaning is to discontinue feeding its liquid portion of the diet. Doing other things such as moving it to a group pen, dehorning, vaccinating, etc., can cause additional stress.

Clean water along with clean, dry housing with protection from the elements will ease any stress problems. See 4-H publication No.137 Bucket Calf Housing, for more information and to learn what health problems to watch for with your calf, see the 4-H publication No. 136 Keeping Your Calf Healthy.

Table 2. Calf Starter Diet.

Corn, Cracked	52 pounds
Oats, Rolled	20 pounds
Soybean Meal	19.5 pounds
Molasses	7.1 pounds
Limestone, Ground	1 pound
Trace Mineral Salt	.25 pound
Vitamin Supplement	
(Should supply 1000 I.U. vitamin A, 140 I.U. vitamin E per pound of of starter)	

Table 3. Calf Grower Diet.

Corn, Cracked	76 pounds
Soybean Meal	17 pounds
Molasses, Liquid	5 pounds
Limestone, Ground	1.2 pounds
Trace Mineral Salt	.3 pound
Dicalcium Phosphate	.3 pound
Salt	.2 pound
Vitamins A, D, and E	
Vitamin A	1000 IU/lb
Vitamin D	140 IU/lb
Vitamin E	20 IU/lb
Additives (Lasalocid and/or another coccidiostat may be added)	

Reference

Adapted from the Kansas Dairy Leaders Notebook.

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