

EARLY WEANING IN DROUGHT CONDITIONS

Are your cows or heifers not cycling? Do your calves seem to be getting thinner and not gaining weight? Is your pasture depleted with no hopes of recovery?

If you answer "yes" to one of these questions, then early weaning may be in order.

Trials have shown that weaning the calf at 45 days of age brought on heat 12 days earlier and improved conception rates 6 percent. Calf performance up to 200 days was similar for early versus late weaned calves during normal moisture years. In drought years there is every reason to expect early-weaned calves to perform better. Recent research shows that early weaned calves placed on a high energy ration from weaning may have higher marbling at harvest.

Check List for Facilities

- excellent fenced lot
- well-drained lot
- 100 sq. ft. per head at weaning time
- 400 sq.ft. per head one week after weaning
- bunks and water at 18" throat height
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Feeding Management for Early-Weaned Calves

- wet down dusty lots, reduces respiratory tract irritation
- butt feedbunk end up to fence to reduce walking
- expose calves to grain 10 days before weaning
- start calves on feed slowly, don't load the bunk
- spread feed out in entire bunk, then small calves get their share
- offer feed amounts that calves will clean up in 10 to 20 minutes
- feed calves twice daily – easier to spot sick calves and make feed adjustments

Health Considerations

Calves that are weaned early can experience considerable stress and are susceptible to respiratory disease during the three to four weeks following weaning. Heat and dust during summer months aggravate this stress.

Monitor weaned calves carefully and take the temperature of any animals that appear gaunt, depressed, or show other signs of respiratory disease. Early diagnosis and intensive individual treatment is especially important. Use of antibiotics such as oxytetracycline or chlortetracycline during the 28-day post weaning period may be necessary. In addition to respiratory disease, these

antibiotics help reduce susceptibility to enterotoxemia which can occur if grain consumption is high or feed intake is variable. Mass medication at treatment levels with antibiotics in the drinking water may be needed if symptoms of respiratory involvement such as a nasal and/or eye discharge and coughing occur in more than 10% of the calves.

Vaccinate and perform other health procedures 14 or more days prior to weaning. If this is not done, vaccinate on the day calves are weaned and do not wait. Specific vaccines and treatments should be used on the advice of a veterinarian. Usually, calves should be vaccinated for IBR, BVD, PI-3, BRSV, and the Clostridial group (enterotoxemia, blackleg, and so-called sudden death syndrome). Calves should be wormed at this time. If killed virus vaccines are used, calves should be re-vaccinated in 3-4 weeks.

Face flies, horn flies, and stable flies can irritate young calves, especially during hot weather. Environmental sprays, baits, face mops, dust bags, insecticide ear tags, and other control methods should be used.

Ration Considerations

Simple, home-grown feed rations can be utilized. However, keep these feedstuffs palatable and of high quality so that the calves find them tasty and easy to consume and digest.

Knowing and meeting the 90-120 day old calf's daily needs is fundamental to a successful early weaning program. Within 7 to 10 days after weaning, the calf should be consuming 2.5 to 3.0 percent of its body weight daily.

Light calves, 200 to 300 pounds, need a ration that contains 14 to 17 percent crude protein and 70 to 80 percent total digestible nutrients on a dry matter basis. This cannot be done with a straight hay diet.

Feed for early weaned calves should be selected with care. Medium to high-quality hay is more desirable. Save the coarse, stemmy first-crop hay for later.

Another ration must be providing enough energy or calories in the feed that fills the calf. If the calf receives only low-quality, low-energy feeds (i.e. medium to low-quality hay) its belly will be full, but it will be short on nutrition. Weight losses may occur in this situation.

Calves have a sweet tooth; thus one can play up to it by adding molasses to the ration. This increases ration palatability and aroma and lowers dust problems. Liquid molasses should not make up over 5 percent of the ration, while dried molasses can be used at a 10-15 percent rate.

Byproduct feeds such as corn gluten or soy hulls can be incorporated into starting rations. Both provide highly digestible fiber. Corn gluten also adds protein to the ration. Soy hulls add bulk to the ration similar to oats. It is suggested to limit soy hulls to 15-20% of the grain mix so that energy is not diluted. Corn gluten should be limited to no more than 30-50% for the same reason.

Most formulated rations for early weaned calves will need protein supplementation. If a commercial supplement is used, be sure all the protein comes from a natural protein source such as soybean meal, cottonseed meal, linseed meal,

etc. Research shows the rumen of a young calf lacks the ability to optimally utilize a non-protein nitrogen source such as urea.

Table 1 shows some simple concentrates that may be fed with hay. Feed 2% of the calf's body weight in hay the first day and 1 pound of the grain mix. Slowly increase the grain and decrease hay so that at the end of 7 to 10 days 200 lb. calves are eating 4-5 lbs., 300 lb. calves are eating 5-6 lbs. and 400 lb. calves are eating 7-8 lbs. of the grain mix. The total ration should be at least 2/3 grain mix - 1/3 hay at this time. Be sure salt, vitamin A, calcium, phosphorus and trace minerals are supplied in the supplement or by other means.

Table 1. Rations for Early Weaned Calves

	Weight at Weaning		
	200 lb. Calves	300 lb. Calves	400 lb. Calves
Grain mix - corn/supplement			
% Corn	62	76	78
% 32-36% All-natural protein supplement*	38	24	22
Grain mix with oats			
% Corn	39	45	54
% Oats	24	36	33
% 32-36 to All-natural protein supplement*	37	19	13
Grain mix with dry corn gluten feed			
% Corn	41	44	50
% Corn gluten feed	41	44	50
% 32-36% All-natural protein supplement*	16	10	--
% High calcium gluten balancer**	2	1.5	1
Grain mix with distillers dried grains			
% Corn	60	59	72
% Distillers Dried Grains with solubles	22	39	27
% 32-36% All-natural protein supplement	16	--	--
% High calcium gluten balancer**	2	2	1
Grain mix with soy hulls			
% Corn	55	63	65
% Soy hulls	15	15	15
% 32-36% All-natural protein supplement*	30	22	20
lbs. of grain mix after 7-10 days	4-5	5-6	7-8
% CP of grain mix (DM basis) 1/3 hay (55% TDN)	22	17	15
% CP of total ration 2/3 grain mix - 1/3 hay (10% CP)	17	14	13

*Contains 2.5% Ca and 1% P. May need to supplement .05 to .15 lb. per day of a 22-12% Ca-P mineral mix or equivalent to balance Calcium in hay (less if hay is legume, more if hay is grass or oat).

**Contains at least 25% Ca. Should be fortified with trace minerals and vitamins to requirements.

If a complete starting ration is preferred, the following has been used successfully in starting trials at ISU.

Table 2. ISU Rhodes Starting Ration

<u>Ingredient</u>	<u>% as-fed</u>
Corn	40.0
Corn cobs	37.0
Soybean meal, 44%	17.21
Molasses	4.20
Limestone	1.24
Iodized salt	0.22
Trace mineral premix	0.02
<u>Vitamin A premixa</u>	<u>0.11</u>

a2,000,000 IU/lb.

When grinding and mixing a ration, be certain the grind is very coarse. Finely ground feeds are generally refused or sorted quite badly.

In summary, treat the calf fairly and success will be the result. Do not lock the calf up in a barn. Give him a clean, well-drained lot, a fresh supply of feed and water daily, and the results will be satisfying to you; the calf will gain better and the cow will be maintained at lower cost during the drought.

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