



# 4-H Bucket Calf Resource

(Source-UNL Extension Holt/Boyd County)

## 4-H Bucket Calf Project

### **PURPOSE:**

1. To teach proper health care, environmental needs and nutritional requirements of young cattle.
2. To teach basic beef/dairy management skills without a large investment.
3. To teach basic record keeping and communication skills.
4. To provide a better understanding of the cattle industry.

### **PROJECT GUIDELINES:**

- Project is open to 4-H members who have an "active member" status and are enrolled in the Bucket Calf Project.
- There are two age levels: Beginner (ages 8-12) and Advanced (ages 13 & over).
- Any newborn or orphan calf (steer, bull, or heifer) that is born between March 1 and May 31 of the current year. The calf may be beef, dairy, or cross and be purebred or crossbred.
- Calf must be bucket or bottle fed. No nursing permitted.
- Member may **identify up to ten animals** but will be limited to **two calves for exhibit** at fair.
- These calves are only eligible to be shown in the Bucket Calf class and Bucket Calf showmanship class. (Bucket calves are not allowed in the Small Beef Showmanship Class which is for Feeder Calves only.)
- Calves must be identified with a 4-H ear tag on an ID form and the Bucket Calf Identification form is due by June 15 in the Extension Office.
- Exhibitor must have completed the annual Livestock Quality Assurance class.
- **NOTE:** Second Year Bucket Calf must have been shown the previous year and qualified by virtue of the above guidelines. Refer to the fair book for specific guidelines for the second year calf project.

### **PROJECT EVALUATION:**

1. The project will be evaluated on a three-part point system.
  - i. Written Records 100
  - ii. Oral Interview 100
  - iii. Show-ability (Health, Cleanliness and Showmanship) 100
2. Written records should be completed and brought to the 4-H Office at the fairgrounds on entry day.
3. The Show-ability will be evaluated during the fair in a show ring evaluation.
4. Ribbon placing will be based on overall points given for the written records, interview and show ring evaluation. Champion and Reserve Champion awards in the Beginning Class and Champion and Reserve Champion awards in the Advanced Class will be based on overall points.

## COUNTY FAIR REQUIREMENTS:

1. Calves will be shown at halter. Clipping and grooming are mandatory for the advanced class and are optional on the bucket calves for the beginning class.
2. Calves that weighed in for the Rate-of-Gain Contest will be weighed at the Fair during the time indicated in the fairbook.
3. Show ring evaluation will occur at the fair.
4. See health requirements listed in the current fairbook.
5. Judging of the Bucket Calf class will be based on:
  - What the member has learned about care and management of raising the calf/calves.
  - The fitting and showing of the calf with emphasis on what the member has learned.
  - General health, condition and management of the calf and member's knowledge of project.
  - Accurate and complete records of the Bucket Calf project.
6. Members are encouraged to keep animals and enter them in appropriate beef or dairy classes next year.
7. The interview might include such questions as:
  - Where and when did you obtain your calf? Was there a cost involved, and how did you finance?
  - How old was the calf when you received it? How old is it now?
  - What health problems did you have with the calf?
  - What did you feed the calf the first day at home?
  - What is colostrum, and did you feed any to your calf?
  - What was your milk feeding program? How long did you feed milk?
  - When did you start giving the calf solid feed? How often did you change the ration?
  - Did you feed any antibiotics?
  - What is in milk replacer?
  - Did you warm your milk and how warm?
  - What kind of housing did you have for your calf?
  - When did you start training your calf?
  - Do you plan to make a profit on your calf?
  - What are your plans for your calf after the fair?
  - What have you enjoyed most in working with your calf?
8. Other Project Resources:
  - Beef or Dairy Project Manuals
  - Veterinary Science Project Manuals
  - Project Leader
  - Feed Company Nutritionist
  - Veterinarian

## CARE OF NEWBORN CALF

1. Provide clean well-bedded pen, free of drafts.
2. Swab the navel with tincture of iodine as soon as calf is born.
3. Provide colostrum to the calf for at least three days. (First milk produced by the dam.)
4. If unusual health problems exist, vaccinate, give antibiotics and Vitamins A and D by injection.

## FEEDING RECOMMENDATIONS

**Colostrum**- The need for and benefit of Colostrum cannot be over-emphasized! A source of colostrum should be obtained from a dairy and frozen for use if calf is obtained within 24 hours of birth. If colostrum is available, it can supply the entire liquid feeding program. Since the antibodies in colostrum are capable of being absorbed from the intestinal tract only during the first day after birth, it is essential that the calf be given colostrum during the first 24 hours of life (first 12 hours preferred).

**Antibodies** - Feeding antibiotics (Terramycin or Aureomycin) stimulates the growth of young calves and reduces the incidence of calf scours. Feed recommended levels (50- 100 mg ONCE-A-DAY) in the milk, starting with the first bucket feeding. Antibiotics should be also contained in the calf starter ration (See Table 3).

**Milk Feeding** - Beginning with the fourth day, feed whole milk or properly diluted colostrum at the rate of one pound for each 12 lbs. of body weight daily. Continue feeding milk until the calf is eating 1.5 lbs. of calf starter daily. When feeding milk replacer, follow the manufacturer's directions. Recommended analyses of milk replacers are as follows:

**Protein** - 22-24%

**Fiber** - not more than 0.5%

**Fat** - 10-15%

**Vitamin A** - not less than 1700 IU/lb.

**Calcium** - 0.55%

**Vitamin D** - not less than 265 IU/lb.

**Phosphorus** - 0.45%

**Vitamin E** - not less than 135 IU/lb.

**Sodium Chloride** - 0.45%

**Aureomycin or Terramycin** - 25-30 mb/lb.

**Calf Starter** - Begin feeding calf starter and good quality hay during the first week. At about four months of age replace the calf starter with a cheaper type of calf grower ration. Good green, leafy, soft-stemmed hay containing at least 50% alfalfa is best for calves. Allow them all the hay they will eat. It is of great importance that the calf be made to consume starter and hay at an early age.

Calves do not like finely ground and dusty feeds. Ingredients that must be ground for calf starters should be coarsely ground, cracked, rolled or flaked. Recommended calf starter is shown in Table 1. Calf starters should contain the following levels of nutrients:

**Protein** - 16%

**Net Energy (Lact)** - 72Mcal/cwt

**Calcium** - 0.41%

**Phosphorus** - 0.32%

**Vitamin A** - not less than 1000 IU/lb.

**Vitamin D** - not less than 150 IU/lb.

**Vitamin E** - not less than 135 IU/lb.

**Sodium Chloride** - 0.45%

**Aureomycin or Terramycin** - 5-10 mb/lb.

Four Months to One Year – Calf should be fed the right amounts of nutrients to obtain optimum growth. Keep calves in good condition but avoid getting them too fat! This feeding program could be accomplished by feeding all the legume or GOOD mixed legume - grass hay they will eat, and 2-8 pounds daily of an economical grain mixture. (Amount depends on the condition of the calf and quality of forages available.) Good pasture or silage could be used to replace part of the hay, provided sufficient grain is fed to supply adequate energy and protein. Trace-mineralized salt and fresh water should be available at all times.

### **Some Points About Calf Feeding**

1. Give the calf colostrum starting immediately after birth for at least the first three days of life. Leaving calf with its mother for three days if possible would be most desirable.
2. Do not overfeed or underfeed calf. Weigh or measure milk - follow feeding recommendations. Feed milk once or twice daily at regular intervals. Warm milk to 100° F, especially during the first three weeks.
3. Use nipple feeder pail to prevent calf from gulping milk. However, nipples, valves and buckets must be washed and sanitized to prevent bacterial infections. Calf disease can also be passed from one calf to another by the nipple feeder.
4. Always have fresh water available in clean pail or from automatic drinking cup after calf is about three weeks old. Water pail should be in the front of the pen, opposite from the feed.
5. After calf is weaned, keep trace mineralized salt before it at all times.
6. Do not depend on silage as a source of feed for calf under 6 months of age. Silage should not constitute all of the roughage after 6 months of age.
7. Do not depend on pasture as a source of feed for a young calf, except under the most favorable conditions. Too often a calf is neglected and undernourished on poor pasture. Good pasture nearby the barn with shade and water can be a satisfactory supplemental feed and provide the calf exercise and clean quarters.

**UNIFORM FEEDING IS  
ONE OF THE  
ESSENTIALS IN RAISING  
A THRIFTY CALF**

## **HOUSING**

1. Place calf in a pen (4'x 6') until weaned. Keep pen well-bedded and free from drafts.
2. Thoroughly clean and re-bed pen frequently.
3. Equipment used for feeding in calf pen should be constructed of materials that are easily cleaned.
4. Place drinking cups and feeding boxes so that top is about 20" from the floor.

## **MANAGEMENT**

1. Identify calf immediately after birth. The state 4-H logo ear tag must be used.
2. Dehorn calves when the horn button can be felt. The electric dehorner is the method of choice. Caustic potash or dehorning paste may also be used.
3. Extra teats on dairy heifer calves should be removed as soon after birth as possible. The extra teat should be thoroughly disinfected with iodine and snipped off close to the body with very sharp shears. Disinfect the wound.
4. In mild weather, calves may be exercised out-of-doors, but exercise is not absolutely necessary for pre-weaning calves.
5. Use nipple feeder pails to prevent the calf from gulping milk and to reduce digestive upsets. However, if the nipples and valves are not properly cleaned, possible bacterial infection may outweigh all advantages obtained from their use. Wash and sterilize calf pails. Keep the calf pails as clean as the dishes you eat from.
6. After calf is weaned it could be grouped according to age in a large pen with others. See that all calves actually eat their fair share.
7. Observe groups of calves frequently for sucking.
8. When calves are unthrifty, check for external and internal parasites.



**TABLE 1. KANSAS STATE CALF STARTER MIX**

<b>INGREDIENTS</b>	<b>AMOUNTS</b>
Corn (cracked) or Sorghum Grain (rolled)	400 lbs.
Oats (crimped or coarsely ground)	200 lbs.
Wheat Bran	100 lbs.
Oil Meal (soybean or degossypolized cottonseed)	165 lbs.
Dehydrated Alfalfa* (coarse chop or granules)	70 lbs.
Bonemeal (or calcium-phosphorus supplement)	10 lbs.
Trace Mineralized Salt	5 lbs.
Vitamin D	250,000 IU
Vitamin A (stabilized)	2,500,000 IU
Aureomycin or Terramycin	15 gms
Molasses (may be included if facilities are available for mixing)	50 lbs.

\* Some Benefit

Calves do not like finely ground and dusty feeds. Ingredients that must be ground should be coarsely ground, cracked, rolled, or flaked.

**TABLE 2. A GOOD GROWER RATION (after four months of age)**

<b>INGREDIENTS</b>	<b>AMOUNTS</b>
Corn (ground) or Grain Sorghum (rolled)	700 lbs.
Oil Meal (soybean or cottonseed)	100 lbs.
Bonemeal (or calcium-phosphorus supplement)	7 lbs.
Trace mineralized salt	7 lbs.

**TABLE 3. ANTIBIOTICS FOR CALF FEEDING**

Supplement	Grams per Pound of Supplement	Amount fed each calf, once daily during milk feeding period		Amount of supplement required to furnish 15 grams antibiotic per 1,000 lbs. KSU Calf Starter
		Grams	Teaspoons	
<b>*Aureomycin</b>				
Aurofac 25	25.0	1 ½	½	0.6
Aurofac 10	10.0	3	1	1.5
Aurofac D	5.0	6	2	3.0
Aurofac 2A	3.6	8	3	4.2
Aurofac	1.8	16	5	8.4
**Auromycin Crumbles	2.6	**10	**3	5.8
<b>***Terramycin</b>				
TM - 50	50.0	¾	¼	0.3
TM - 10	10.0	3	1	1.5
TM - 5	5.0	6	2	3.0
TM - 3.6	3.6	8	3	4.2
TM - 3 + 3	3.0	9	3 ½	5.0

\*American Cyanamid Co.

\*\*Does not mix well with milk

\*\*\*Charles Pfizer and Company