4-H Bucket Calf Project Information

Purpose:

1. To design a cattle project to fit the physical size and maturity level of younger youths.
2. To teach proper health care and nutritional requirements of young cattle.
3. To teach basic beef management skills without a large investment.
4. To teach basic record-keeping skills.
5. To provide a better understanding of the feeder cattle industry.

Guidelines:

1. Bucket Calf - An orphan or newborn calf (male or female); beef, dairy, or cross; fed on bucket or bottle.
2. Select and/or purchase a calf born between January 1 and June 1 of the current project year. This class is limited to 4-H members ages 8-11 and only one calf per year per 4-H'er. Develop management and marketing plan with parent, leader or banker.
3. 4-H member is responsible for maintaining 4-H Bucket Calf Record. Please provide these record sheets to the interview judge the morning of the show.
4. Fair Classes - Calves will be shown at halter in special class before the Beef Show begins.

   <u>Classes will be judged based on:</u>
   a) What 4-H'er learned about caring for and raising calf.
   b) Fitting and showing according to beef guidelines, with emphasis on how much the 4-H'er learned and can do without help. However, parental guidance is encouraged.
   c) General health of calf and knowledge of 4-H'er in health-related areas.
   d) Dairy or beef quality of calf should not be considered, since purchase is not made on that basis.
   e) Completion of record sheet, to best of member's ability.
5. Awards – Class will be judged on completed record sheets, knowledge of the calf and the general health and appearance of the calf. Rosettes will be awarded to Champion and Reserve. Clover Kids receive participation ribbons only.
6. Age of 4-H'er - This project is suggested for youths 8-11 years of age.
7. Other Project Assistance - Project Leader, veterinarian, feed company nutritionist, veterinary science project materials, beef or dairy project materials.

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).

Antibiotics - 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 also be 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	0.42%	Vitamin E	not less than 135 IU/lb.
Sodium Chloride	0.45%		

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. A recommended calf starter is shown in Table 1. Calf starters should contain the following levels of nutrients:

Protein	16%	Sodium Chloride	0.45%
Net Energy (Lact)	72 Mcal/cwt.	Vitamin A	not less than 1,000 IU/lb.
Calcium	0.41%	Vitamin D	not less than 150 IU/lb.
Phosphorus	0.32%		

Feeding a soft 3/16" hay-starter pellet (3 parts calf starter and 1 part ground hay) has the advantages of faster gains, less feed waste and labor-saving. For pelleting, all grains should be rolled. The pellet can be fed in a single-hole hog self-feeder, starting at three days of age. After 3 1/2 months on the hay-starter pellet, introduce long hay to the calf. Discontinue the pellet at 4 months of age in favor of a less expensive grower ration and long hay. (With very thrifty calves, the hay-grain pellet may be discontinued at 3 months).

4 months to 1 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 100^0F, 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.

DON'T GUESS!
Measure calf's milk at each feeding!

Uniform feeding is one of the essentials in raising a thrifty calf.

Housing and Herdsmanship

1. Place calf in a pen (4'x6') 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 constricted of materials that are easily cleaned.
4. Place drinking cups and feeding boxes so that top is about 20" from the floor.
5. Exhibitors are responsible for Herdsmanship during Fair. If animals are not being fed or pans are empty, they should be put away. Feed should be covered and contained in an appropriate container. Keep walkways clear.

Management

1. Identify calf immediately after birth. An eartag may 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 heifter 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 wall 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 sterize 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 calved frequently for sucking.
8. When calves are unthrifty, check for external and internal parasites.

Table 1 - Calf starter mix

Ingredients	Amounts
Corn (cracked) or Grain Sorghum (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
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)

Ingredients Amounts

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. Calf Starter
***Aureomycin**	**(grams)**	**(grams)**	**(teaspoons)**	**(pounds)**
Aurofac 25	25	1.5	½	.06
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
***** Terramycin**				
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	9	3.5	5.0
*American Cyanamid Co. ** Does not mix well with milk ***Charles Pfizer Company				

Table 4 - Cost of Raising a Bucket Calf Worksheet (to help complete records)

Birth to 3 months of age

Milk[1]....._____lbs @$ ____/cwt = $_____

Starter....._____lbs @$ ____/cwt = $_____

Hay....._____lbs @$ ____/cwt = $_____

3 - 6 months

Concentrate mixture ....._____lbs @$ ____/cwt = $ _____

Hay....._____lbs @$ ____/cwt = $ _____

6 months - 1 year

Concentrate mixture ....._____lbs @$ ____/cwt = $ _____

Hay....._____lbs @$ ____/cwt = $_____

Estimated feed cost..... $ _____

Estimate overhead, labor, etc..... $ _____

Estimated cost of raising bucket calf..... $_____[2]

Cost will vary according to type of program, cost of feed, etc.

[1] This cost can be replaced if surplus colostrum is stored for later use. Also, a good milk replacer will often be more economical to use than marketable whole milk.

[2] Does not include original cost of calf.

4-H Premium Book Description

Bucket Calf Class

1. For bucket calf records, exhibit should include the 4-H Bucket Calf Project Record sheets. These records must be turned in to the interview judge during scheduled interview time (before noon on the day of the 4-H Show).
2. Each exhibitor will comply with the General Eligibility Rules of the 4-H Show.
3. A health certificate is not required, however calves should be healthy.
4. Calves will be haltered and tied. All male calves must be castrated before the fair.
5. Class will be judged on 4-H'ers knowledge of project and showmanship skills. Records will also be taken into account with judging.
6. Class may be divided by age of the exhibitor in bucket calf show, 8 - 11 years at the discretion of the judge.
7. Calves must have been born between January 1 and June 1 of current project year. Calves are to be away from real or substitute mothers from June 1.
8. One calf per exhibitor.
9. Ribbons will be awarded to all exhibitors.
   Rosettes will be awarded for Champion and Reserve in 1st Year and 2nd Year Bucket Calf Classes.
   Champion and Reserve 2nd Year Bucket Calves will return to compete for Division awards during the Beef Show.
   All Clover Kids receive participation ribbons only.