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Baby Beef Production *for* 4-H Club Members

IN NORTH CAROLINA



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AGE OF CALF TO FEED

As a general rule steers suitable for 4-H Club work should be from 12 to 18 months of age at show time. This means that they should be from 4 to 10 months old when put on feed, as it generally takes about eight months to properly fatten a young growing calf.

Steers only will be eligible to show. They must be without horns.

All breeds will show together and animals may be purebreds, grades or crossbreds but they should by all means show a high percentage of beef breeding.

SELECTION OF CALVES

In view of the fact that there will be county group classes as well as individual competition, it will be well for all calves fed in a county to be as uniform as possible in general conformation and quality. Each club member may select his or her own calves with the guidance of the county agent or club leader, or the calves may be selected and purchased in a group and distributed among the members by some equitable means.

When possible each club member should have two calves because two fed together will do better than one. Then too, he will have a better chance of winning.

The price of calves should be closely in line with commercial prices of stockers and feeders although in topping a man's calf crop it is only reasonable that some slight premium be paid. It is felt, however, that most cattle breeders in the State will be interested in the promotion of Baby Beef Club Work to the extent of selling calves to 4-H Club Members at reasonable prices.

THE KIND OF CALF TO FEED

It takes a good calf to make a good baby beef. Proper feed and feeding will do a lot for a calf but no amount of flesh will make a top-finished animal out of a naturally poor type individual.

Form: In form the calf should be thick, deep, blocky, compact and close to the ground. He should have a straight top and underline, carry his width and depth evenly from end to end, be smooth in the shoulders, wide in the spring of rib, thick in the loin, smooth over the hips, level in the rump with a smooth tail setting. The hind quarters should be well developed, both in width and depth, with a deep, full twist. The legs should be short and straight.

Head and Neck: The head should be wide between the eyes and short from eyes to muzzle. The muzzle should be broad and the entire head have a neat appearance. The neck should be short and thick and neatly and smoothly joined to head and shoulders.

Constitution: A good constitution is an indication of good feeding qualities. The chest should be deep and wide, the heart girth well developed and the fore flank deep and full.

Quality: The calf should show good quality which is indicated by a clean cut appearance of the head, medium sized bone, a loose pliable hide, and a silky coat of hair.

Breeding: In order to get the desirable form, quality and feeding ability to make a good baby beef it is necessary to obtain a calf with a high percentage of beef breeding. He may be purebred, high grade or a cross of two of the beef breeds. Avoid animals with any appreciable amount of dairy breeding. Occasionally, one may look good as a calf but in most cases the older he gets the worse he will look.



A TYPICAL WELL CONDITIONED ANIMAL

FEEDS

Corn is probably the best fattening feed we have and generally makes up a liberal part of any fattening ration. It is best to feed shelled corn to young calves, then as they get older have it coarsely cracked. Corn and cob meal is too bulky for young fattening calves.

Barley is about equal to corn in fattening ability. Many feeders use it for replacing part of the corn, especially during the last few months of the fattening period, contending that it puts on a smoother and mellower finish. Barley should be coarsely ground, soaked or cooked as it is too hard to be digested whole.

Wheat is about equal to corn or barley in feeding value and if cheaper may be used to replace part of either of these grains during the early part of the feeding period. Wheat is not as palatable as these other grains and should not be fed in large quantities or over a long period of time. It should be coarsely ground.

Oats are too high in fiber to make up any large part of the fattening ration. However, if home grown or not unreasonable in price small amounts should be fed for variety and for furnishing the necessary bulk to the ration. They should be rolled, crushed or coarsely ground.

Wheat Bran is high in protein and minerals, is slightly laxative and may be used to replace part of the oats if the price is not too high.

Cottonseed Meal is the leading protein feed available in the South. It is sometimes used as the sole concentrate in feeding commercial cattle for a 90 to 100 day feeding period but more often is fed as a protein supplement to balance carbonaceous feeds such as corn or barley.

Linseed Oil Meal is quite similar to cottonseed meal in feeding value although it contains more minerals and is more laxative. It is often used by show men to put a better bloom on cattle. In the South, however, it is usually too high in price to be practical. If it is not unreasonable in price use the "pea size" cake to replace part or all of the cottonseed meal or other protein concentrate in the ration, especially toward the end of the feeding period.

Other Protein Concentrates include soybean meal and peanut meal, either of which may be used in place of cottonseed meal.

Milk is the best feed for the young calf. He should be kept on his mother's milk as long as possible and it is often practical to supply a nurse cow when the mother fails to give enough milk. After the calf is two or three months old he should be allowed to nurse twice each day just before he is fed his grain ration. When calves reach a weight of 700 pounds *they must be taken off milk*. It is also a requirement that all calves regardless of weight *be taken off milk at least two months before they are to be shown*.

Black Strap Molasses is sometimes fed as an appetizer by mixing a small amount with enough water to moisten the feed. Only such feed as is to be fed at once should be prepared in this way. If this sweet, moist feed is allowed to stand long it will become sour and if eaten will cause digestive troubles. Some prefer using a small amount of a commercial sweet feed. This is less trouble but usually more expensive.

ROUGHAGES

Silage is a valuable feed for fattening cattle. One to two pounds of good sweet silage mixed with the grain will increase the palatability of the baby beef ration.

Legume Hays such as alfalfa, clover, soybean, lespedeza, or cow pea are valuable in cattle feeding. They not only furnish the dry roughage which is needed but effect a saving in protein supplement. They also contain more

minerals and vitamins than most other feeds. An unlimited amount of legume hay is sometimes too laxative for certain individuals. In these cases reduce the amount fed and substitute a carbonaceous roughage such as grass hay or corn stover.

Mixed Hay is the term usually applied to a timothy and clover mixture although it may indicate any grass and legume combination. Such a hay may be used as the dry roughage in fattening calves and is often preferable to a straight legume.

Timothy or other grass hay is not as nutritious as legume hay but many experienced show men prefer them just prior to and on the show circuit because they are less laxative.

Corn Stover is that part of the corn plant remaining after the ears are removed. It is sometimes used as the sole roughage in the commercial feeding of mature cattle and may be fed to calves in limited amounts with a good legume hay.

FEEDING

The calf should be gotten onto feed as early as possible in order that he may be fat for the fairs and shows. A calf finishes much slower than older animals because he is growing as well as fattening. Do not get the mistaken idea that a calf should be grown first and then fattened. Feed a fattening ration from the start and the growth will take care of itself. It generally takes at least 8 months of intense feeding to put a calf in good condition and more time will do no harm. Do not be afraid of getting a calf too fat. Experience in 4-H Club baby beef feeding in many states has proven that for every calf that is fat enough there are many that lack finish and the overfat animal is very rare indeed.

Only feeds that are generally produced in North Carolina are given in the following rations. Substitutions may be made where practical, being guided by the suggestions under the heading "FEEDS" in this circular.

SUGGESTED RATIIONS

The rations given below only indicate the proportions of the various feeds to be fed. In starting a calf feed only a small amount, 1 to 4 pounds depending on the size of the calf, then gradually increase it until he is on full feed, or in other words getting all he will eat. See GENERAL FEEDING DIRECTIONS.

STARTING RATION

Corn	4 parts by weight
Oats	2 parts by weight
Protein concentrate	1 part by weight
Hay	at will*

After the calf gets to eating well, gradually increase the proportion of corn until four or five months before show time he will be getting the following ration:

Corn	7 parts by weight
Oats	2 parts by weight
Protein concentrate	1 part by weight
Sweet Feed (See Black Strap Molasses under FEEDS)	
Hay	at will*

* As a rule roughage consumption decreases as the feeding period advances and the calf is eating more and more grain. When an individual has an abnormal appetite for hay and fails to eat enough grain, the hay should be limited. A calf that has a tendency to be paunchy should have his hay allowance cut down.

GENERAL FEEDING DIRECTIONS

In getting calves started on feed it is best to feed only a small amount at first, gradually increasing it until they are on full feed or, in other words, getting all they will eat. For calves that are to be fed six months or longer six or eight weeks time should be taken to get them on full feed.

The grain mixture should be kept coarse and flaky at all times. If finely ground and floury, digestive troubles often result. Some good feeders chop up some good quality hay and mix it with the grain.

Regularity in the time of feeding is very important, set times for feeding and let nothing prevent feeding at those times each day.

How Often to Feed—During the first part of the feeding period feed twice each day, for example: 7:00 a.m. and 6:00 p.m. By the middle of the feeding period this may well be increased to three times a day, 7:00 a.m., 12:30 p.m., and 6:00 p.m.

Avoid Abrupt Changes in the ration. This applies both to kinds and amounts of feed.

The amount of feed given at each feeding after calves are on full feed should be such as will be cleaned up within a reasonable length of time. If any feed is left over from one feeding period to the next, clean it out and give it to the breeding cattle or hogs. **Keep the appetites keen.** If calves go off feed for any reason cut the amount down, then as their appetites come back, gradually increase it again. Sometimes it may be advisable to miss a feed or two.

Water: Clean, fresh water should be available for calves at all times.

Salt should be kept in a box where calves can help themselves at will. Some feeders also mix a small amount with the feed.

CARE AND MANAGEMENT

Feed Boxes should be reasonably close to the ground so that calves will not have to strain to reach them. They should be kept clean at all times.

Shelter sufficient to keep calves comfortable and free from drafts should be provided.

A dry, clean bed is necessary for calves to do well. Remove all wet bedding and manure daily.

Castrate bull calves at an early age. Use a bloodless castrating instrument if one is available. If not make two incisions with a sharp knife, one for each testicle, on the front part of the scrotum, seeing that each cut runs low enough to insure good drainage.

Dehorning: Calves intended for slaughter should be dehorned. This is best done when they are a few days old by the use of caustic or a calf dehorner. If this is not done when the calf is young a saw or regular dehorning instrument is necessary.

Halter Break calves early. It is usually best to keep calves tied for a few days before attempting to lead them. A halter made of one-half inch rope is best for breaking calves to lead. After they are halter broken let them run loose. If kept in a stall, turn them out in a small dry lot each day for exercise except in very bad weather.

Groom calves frequently. A comb may be used for loosening dirt but do most of the grooming with a stiff brush. Never use a comb on the switch.

Wash calves each week for several weeks before show time. Scrub thoroughly with soap (tar soap is best) and water, being sure to rinse all the soap out of the coat. After rinsing and scraping surplus water from the coat dampen all over with a weak coal tar dip solution and curl. Get some one with experience to show you how to curl and dress the coat of hair.

Train calves to lead and stand properly. The calf should stand with the feet squarely under him, the back straight, and the head in a natural position. During the latter part of the feeding period when the calf is getting quite fat he often fails to take enough exercise. Then it is necessary to lead him each day. Start in with a short walk increasing the distance daily up to a quarter or half mile.

Be firm, yet quiet and gentle as possible with the calf. He will show to better advantage if well trained but not spoiled.

In summer when flies are bad the calf should be kept in a darkened, but well ventilated stall during the day and outside in a dry lot at night. This tends to promote a better coat of hair and avoids bleaching by the sun.

The hair may be improved in appearance and feel by using a mixture of olive oil and alcohol, half and half. Apply by moistening a woolen cloth and rubbing on the coat. Do not use enough to mat the hair.

Records are an important part of Baby Beef Club Work. A neat, accurate record should always be kept. Be sure to record the initial weight, and cost or value. Also keep a complete record of weights and values of all feeds fed. If scales are available record weight of calf every 28 days. This will show how the calf is gaining in comparison with other 4-H Club calves.