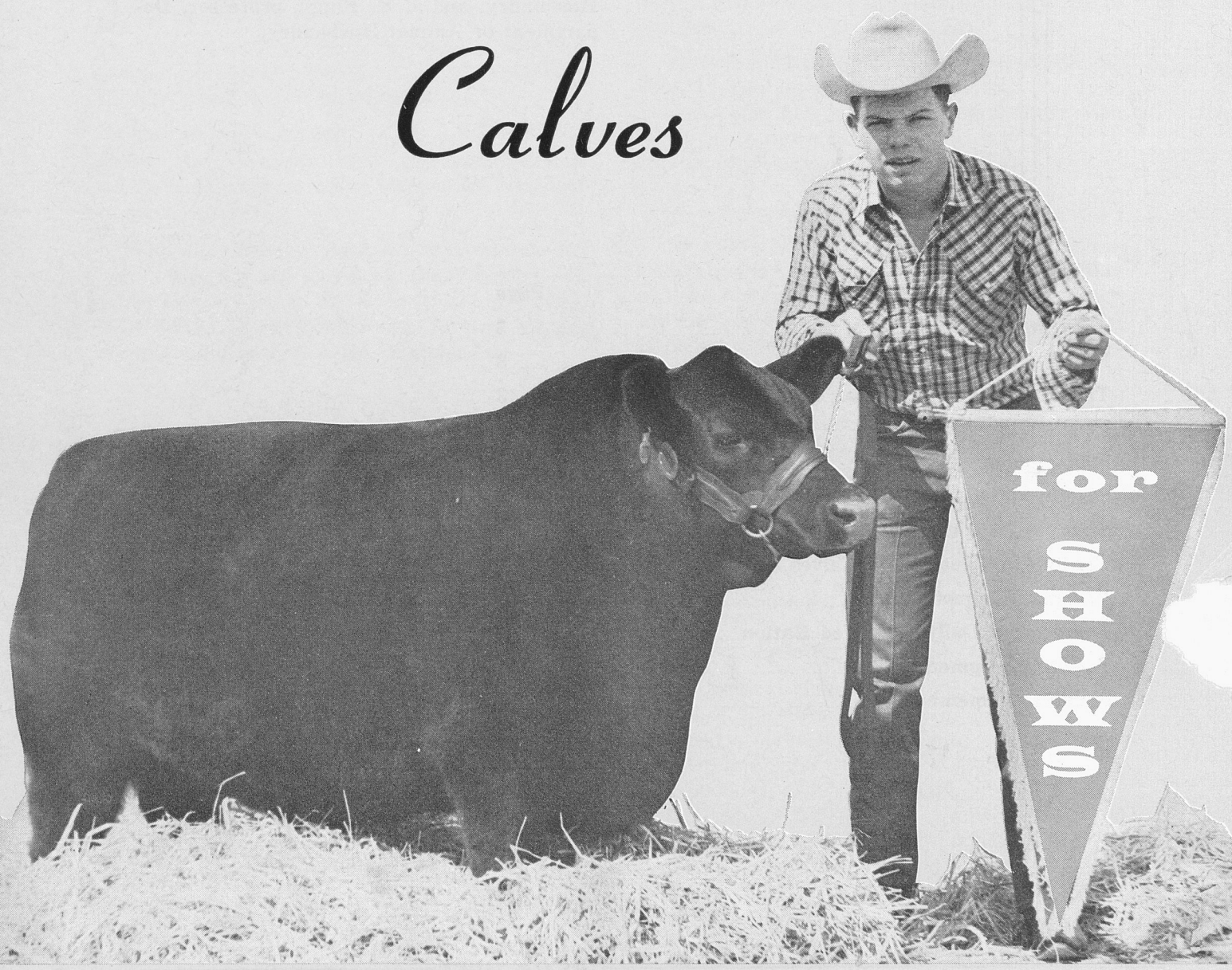


19.8

B-232

~~23.8~~

Feeding Beef Calves



— TEXAS A&M UNIVERSITY • College Station, Texas —
TEXAS AGRICULTURAL EXTENSION SERVICE, J. E. Hutchison, Director

acknowledgment

Grateful acknowledgment for assistance in preparing this publication is given to O. D. Butler, head, Department of Animal Husbandry, and J. K. Riggs, professor, Department of Animal Husbandry.

contents

	Page
Selecting Calves.....	3
Handling Calves in Transit.....	3
Training Calves to Nurse.....	3
Feeding the Nurse Cow.....	3
Management of Calves.....	3
Starting Milk-fed Calves on Feed.....	4
Starting Drylot Steer Calves on Feed.....	5
Feeding Bull and Heifer Calves in Drylot after Weaning..	6
Feeding Suggestions.....	6
Balancing a Daily Hand-fed Ration.....	8
Feedlot Equipment.....	8
Points to Remember.....	10

on the cover

1958 Houston Fat Stock Show Reserve Grand Champion Steer of Show. Owned by Eugene Duren, Goldthwaite, Texas.

Feeding Beef Calves for Shows

UEL D. THOMPSON AND L. A. MADDOX, JR.
Extension Animal Husbandmen
Texas A&M University

TWO METHODS OF FEEDING used in developing beef calves for shows are drylot feeding and milk feeding. The method to follow depends upon the financial condition of the club boy, age of calf, available time, amount of home-grown feed, cost of feed, degree of finish expected, premiums offered at shows and show rules where the calf is exhibited.

The drylot method—Drylot calves are fed grains and roughage with purchased protein supplements, but no milk. Calves are confined to the feedlot.

The milk-feeding method—This method involves keeping the calves on their mothers or nurse cows most or all of the feeding period. Only calves of top quality and for top competition should be fed in this manner.

Selecting Calves

Calves selected for either method of feeding should be of Fancy or Choice grade. They should be deep-bodied, thick individuals of uniform width, straight in top and underline, deep and full in the flank and rounds and square of rump, with straight legs and good heads. Quality is essential in calves that are to be fed to a high degree of finish. They should be purchased from herds known to produce good feeders.

Calves to be fed under the drylot method should be started on feed at weaning or soon after. Creep-fed calves have an advantage over those which have not learned to eat.

Calves fed under the milk-feeding method usually are purchased as baby calves. This may involve separating them from their mothers, changing their homes and getting them accustomed to a nurse cow.

Handling Calves in Transit

Avoid possible injury to calves while they are being moved to new homes. Use a halter that

fits well and tie each calf in the truck. Calves may be partly halter broken on the way home.

Place the calf in his shed or stall and allow him to rest several hours before attempting to get him to nurse.

Drylot calves that have not learned to eat should have only hay, water and salt the first 3 days. It is well for them to learn to eat with other calves or cattle. Creep-fed calves may be started on their drylot ration.

Training Calves to Nurse

Be cautious in getting the baby calf to use a nurse cow. Tie the cow securely and hobble to keep her from horning, kicking or frightening the new calf. It is an advantage to have a nurse cow which has a suckling calf at side. Ease the new calf up to the opposite side and let him nurse one teat. If the calf refuses to nurse, take him back to his stall and repeat the same procedure 6 to 12 hours later. The calf may be taught to nurse by placing the teat in the calf's mouth, or squirting milk on its nose. As a last resort, fill a small-necked bottle with milk and drench the calf. Limit the amount of milk until the new calf can take all of the nurse cow's milk without digestive troubles.

Feeding the Nurse Cow

No radical changes should be made in the ration of the nurse cow. If a change becomes necessary, make it gradually to prevent digestive trouble with the calf. A good mixture is 200 pounds yellow corn chops or ground sorghum grain, 200 pounds ground oats, 100 pounds wheat bran and 100 pounds cottonseed meal. Feed legume hay and silage when pastures are dry.

Management of Calves

Dehorning—Dehorn calves at the earliest possible age to obtain well-shaped heads and to insure the least possible injury. Use EQ-335 as a surgical dressing.

Castration—This necessary operation should take place at an early age. Slit down the side of the scrotum with a sharp knife but never cut off the end of the sac in removing the testicles. EQ-335 is a good surgical dressing. Do not use the bloodless castration method unless you are skilled in the use of the instrument.

Vaccination—Vaccinate calves to immunize them against blackleg and malignant edema.

External parasites—Toxaphene as a wettable powder or as an emulsifiable concentrate may be used to dip, spray or hand-sponge beef calves to control lice, flies, mosquitoes and ticks. This insecticide sponged or sprayed in the ear also controls Spinose ear ticks.

Rotenone spray or dust may be used to control grubs. Rotenone controls the cattle grub only after it has reached the back of the animal and has done its major damage. Trolene bolus, if properly given, will kill the grub before it reaches the back. Administer with a balling gun or mix with water and give as a drench. Use one bolus per 300 pounds body weight. Co-Ral is an effective control for cattle grub and other external parasites at 0.5 percent strength as a spray.

Screwworms may be controlled by using Co-Ral as a 5 percent powder. Co-Ral is available in a "squeeze" bottle or as a 0.5 percent spray. Use Korlan as a 5 percent smear or as a 0.5 percent spray. EQ-335 may be used as a smear.

Other insecticides may be used to control external parasites. Follow the instructions and cautions on the insecticide label. For correct dosage, cautions and tolerances of insecticides, refer to Texas Agricultural Extension Service L-256, "Texas Guide for Controlling External Parasites of Livestock and Poultry."

Internal parasites—Internal parasites, such as stomach and intestinal worms, are not often a problem with calves receiving the amount and type feed recommended. These parasites can thrive only in malnourished animals. However, if internal parasites are suspected, their presence should be established before starting treatment. Any drug effective in removing parasites has some harmful effect on the animal.

Bloat and scours—Bloat and scours are digestive disturbances caused by weather changes,

excitement, lack of exercise, stale feeds, over-feeding or too sudden a change in feeds. Two ounces of milk of magnesia per 100 pounds body weight, used as a drench on calves up to 400 pounds, should relieve either condition. Calves weighing over 400 pounds should be drenched with 12 ounces per 100 pounds body weight. Reduce the amount of concentrate feeds at the same time. Restore feeding gradually over a period of 3 to 5 days, depending on the calf's appetite. Consult your county agricultural agent or veterinarian if bloat is not relieved within 4 hours after treatment.

Warts—Infectious or virus-type warts usually grow on the head, neck, shoulders and occasionally on other parts of the body. Commercial wart vaccines may be helpful but are not always effective. Other types of warts usually require surgical attention.

Ringworms—Swab affected areas with a 7 percent iodine solution. Treat at least 1/2 inch outside the ring.

Starting Milk-fed Calves on Feed

Starting a calf on feed is an important step. The new calf usually begins to eat more readily if penned with another calf. Whole oats are more suitable to a young calf than other grain. Good quality roughage, such as cottonseed hulls, prairie or cane, should be available for the calf in limited amounts. A calf on full feed usually requires about 2 percent of its body weight in concentrate feeds and 1 percent of its body weight in dry roughage daily.

A baby calf on a nurse cow should be started on protein supplement only after learning to eat whole oats or grains. Limit the protein supplement to about 1/4 pound per feeding. Increase gradually until the calf is consuming the amount needed to balance with the milk protein. This will need adjusting from time to time, depending on nurse cow ration. However, 2 pounds daily or 5 percent of the mixture should be maximum.

The cost of feeds available and climatic conditions dictate the best mixture to feed. Make ration changes gradually over a period of about 1 week. A suggested feeding schedule of a concentrate mixture follows:

FEEDING SCHEDULE FOR MILK-FED STEER CALVES
(Initial weight—150 to 250 lb.)
100 lb. mixture

1ST 30 DAYS	7TH 30 DAYS
100 lb. crimped oats	45 lb. crimped oats
2ND 30 DAYS	30 lb. rolled corn
90 lb. crimped oats	10 lb. sweet feed
10 lb. sweet feed	8 lb. bran
3RD 30 DAYS	2 lb. alfalfa meal
80 lb. crimped oats	2 lb. linseed meal
10 lb. rolled corn	3 lb. cottonseed meal
10 lb. sweet feed	8TH 30 DAYS
4TH 30 DAYS	40 lb. crimped oats
65 lb. crimped oats	25 lb. rolled corn
15 lb. rolled corn	10 lb. rolled barley
10 lb. sweet feed	10 lb. sweet feed
5 lb. bran	8 lb. bran
2 lb. linseed meal	2 lb. alfalfa meal
3 lb. cottonseed meal	2 lb. linseed meal
5TH 30 DAYS	3 lb. cottonseed meal
55 lb. crimped oats	9TH 30 DAYS
20 lb. rolled corn	35 lb. crimped oats
10 lb. sweet feed	30 lb. rolled corn
8 lb. bran	10 lb. rolled barley
2 lb. alfalfa meal	10 lb. sweet feed
2 lb. linseed meal	8 lb. bran
3 lb. cottonseed meal	2 lb. alfalfa meal
6TH 30 DAYS	2 lb. linseed meal
50 lb. crimped oats	3 lb. cottonseed meal
25 lb. rolled corn	10TH 30 DAYS
10 lb. sweet feed	30 lb. crimped oats
8 lb. bran	30 lb. rolled corn
2 lb. alfalfa meal	15 lb. rolled barley
2 lb. linseed meal	10 lb. sweet feed
3 lb. cottonseed meal	8 lb. bran
	2 lb. alfalfa meal
	2 lb. linseed meal
	3 lb. cottonseed meal

Read roughage discussion on page 7.

Starting Drylot Steer Calves on Feed
(Weaned calves—400 to 500 lb.)

A calf gets on full feed more rapidly when started on a ration made up largely of good quality hay. For the first 3 days after the calf is received, it should have only good hay and water and access to salt. Prairie, cane, Johnson-grass hay or cottonseed hulls may be used, but for the first 15 days, feed as much as 2 pounds of alfalfa hay daily per head.

Hand-feeding—Start the calf on cottonseed meal or cake during the weaning period, if possible. Give about 2 pounds of alfalfa hay per day and all of the other roughage the calf will eat. Add ½ pound of cottonseed cake or meal on the fourth day. Successive increases of ½ pound daily per head may be given on the seventh, tenth and thirteenth days. Calves weighing from 400 to 500 pounds may have 2 pounds of 41 percent protein supplement daily per head.

Cracked sorghum grain, cracked shelled corn or ground ear corn may be started on the fifteenth day. Feed about 1 pound per head in

addition to the 2 pound allowance of cottonseed meal or cake and the full feed of roughage. Increase additional grain at the rate of ½ pound per day and at 1 to 2-day intervals, depending on the appetite and condition of the calf. The constant supply of 2 pounds of cottonseed meal, gradual increases in grain and limited feeding of roughage may continue throughout the entire fattening period with good results.

An alternative method which many prefer is to start with a mixture of grain or grains and cottonseed meal or cottonseed cake as soon as the calves have rested and had a fill of hay. The following mixture suggested for different periods of feeding should be fed in limited amounts, following the rule of gradual increases in concentrates and the limited feeding of roughage. Read roughage discussion on page 7.

FEEDING SCHEDULE FOR DRYLOT STEER CALVES
(Initial weight—400 to 500 lb.)
Concentrate Mixture—Hand-fed
100 lb. mixture

1ST 30 DAYS	4TH 30 DAYS
50 lb. cracked yellow corn	65 lb. cracked yellow corn
30 lb. crimped oats	20 lb. crimped oats
20 lb. cottonseed meal	15 lb. cottonseed meal
2ND 30 DAYS	5TH 30 DAYS
55 lb. cracked yellow corn	70 lb. cracked yellow corn
25 lb. crimped oats	15 lb. crimped oats
20 lb. cottonseed meal	15 lb. cottonseed meal
3RD 30 DAYS	6TH 30 DAYS
60 lb. cracked yellow corn	70 lb. cracked yellow corn
25 lb. crimped oats	15 lb. crimped oats
15 lb. cottonseed meal	15 lb. cottonseed meal

Feed roughage as explained on page 7.

Add synthetic vitamin A to the above mixture at the level of 20,000 units daily per head or 2 pounds of alfalfa hay or ¼ pound of alfalfa pellets.

Self-feeding—Some feeders prefer to use ground mixed rations for convenience. Some loss of feed palatability occurs when mixtures are left in self-feeders for several days. Heating of the mixture during hot weather varies, therefore, no set number of days may be stated. Keep the mixture as fresh as practical. Clean feeder troughs of soured or mouldy feed when necessary. If feeds are mixed between periods shown in the following mixtures, then it is advisable to make 5 percent changes at 15-day intervals instead of 10 percent changes at 30-day intervals. Make these changes by decreases in the roughage and a like amount increase in the

grain. Leave the cottonseed meal and alfalfa at the same level.

Molasses may be used to control dust, bind feed particles and increase palatability. If used, include 10 percent or less in the mixture.

GROUND ROUGHAGE AND GRAIN MIXTURE—Self-fed

100 lb. mixture

1ST 15 DAYS	10 lb. cottonseed meal
70 lb. roughage	5 lb. alfalfa meal
20 lb. sorghum grain	4TH 30 DAYS
5 lb. cottonseed meal	25 lb. roughage
5 lb. alfalfa meal	60 lb. sorghum grain
2ND 15 DAYS	10 lb. cottonseed meal
55 lb. roughage	5 lb. alfalfa meal
30 lb. sorghum grain	5TH 30 DAYS
10 lb. cottonseed meal	15 lb. roughage
5 lb. alfalfa meal	70 lb. sorghum grain
2ND 30 DAYS	10 lb. cottonseed meal
45 lb. roughage	5 lb. alfalfa meal
40 lb. sorghum grain	6TH 30 DAYS
10 lb. cottonseed meal	15 lb. roughage
5 lb. alfalfa meal	70 lb. sorghum grain
3RD 30 DAYS	10 lb. cottonseed meal
35 lb. roughage	5 lb. alfalfa meal
50 lb. sorghum grain	

Feeding Bull and Heifer Calves in Drylot after Weaning

Good growth and development should have more emphasis than fattening. Excessive fattening impairs breeding efficiency and lowers milk production. Rations for breeding cattle should contain a smaller percentage of heavy grains, such as corn, sorghum grain or barley, and a larger percentage of oats.

The feeding suggestions given on page 5 for starting weaned drylot steer calves on feed may be used to start weaned bulls and heifers on feed. A calf creep-fed before weaning may be hand-fed creep mixture after weaning. Gradually reduce the creep mixture by 1/4 pound daily, and add the same amount of the following mixture.

The following concentrate mixture may be fed throughout the entire feeding period. Feed at the rate of 1 1/2 pounds daily per head per 100 pounds calf body weight. Feed the calf twice daily. One hour after feeding the concentrate, remove any leftover feed from the trough. Make feed increases according to calf gains or about 3/4 pound at 15-day intervals. Expect good growth and development rather than a high degree of finish. Allow the calf to eat all of the good quality hay it wants. Keep hay fresh.

Concentrate Mixture—Hand-fed
(Initial weight 400 to 500 lb. calves)
100 lb. mixture

30 lb. cracked yellow corn
20 lb. rolled barley
35 lb. crimped oats
10 lb. cottonseed meal
5 lb. alfalfa meal

GROUND ROUGHAGE AND GRAIN MIXTURE—Self-fed

Choice of 100 lb. mixtures

GROWING MIXTURE NO. 1	GROWING MIXTURE NO. 2
15 lb. cottonseed meal	35 lb. cottonseed hulls
15 lb. ground alfalfa hay	35 lb. ground hegari fodder
70 lb. ground sorghum	10 lb. ground alfalfa hay
bundles with head on	10 lb. ground sorghum grain
Salt and bonemeal free choice	10 lb. cottonseed meal
	Salt and bonemeal free choice

GROWING MIXTURE NO. 3

20 lb. ground sorghum grain
15 lb. cottonseed meal
35 lb. ground hegari hay
28 lb. ground Johnsongrass hay
2 lb. alfalfa leaf meal
Salt and bonemeal free choice

Decrease the pounds of protein in growing mixtures numbers 1, 2 and 3 by 5 pounds, and increase the grain 5 pounds as the calf reaches 700 pounds of weight.

Follow the same management practices given on page 5 for self-feeding steers.

Feeding Suggestions

Select good-quality grain. Avoid weevil-eaten, dusty and spoiled feeds. Calves weighing up to 400 pounds can digest whole kernel corn or sorghum grains satisfactorily but, beyond this weight, the grains should be cracked.

Grains—Yellow corn is the best fattening grain, but it may be replaced pound for pound in any mixture by sorghum grain. Rolled or coarsely ground wheat or barley may replace up to 50 percent of the corn or sorghum grain in the ration. Oats are a good growing feed and may be fed whole, rolled, crimped or ground.

Protein—Cottonseed, peanut, soybean or linseed as meals, pellets, cubes or cakes supply protein. Pea-sized cake, screenings or small pellets are more desirable than meal unless all feeds are ground. A combination of at least two of the protein feeds has some merit, particularly from a palatability standpoint. Equal parts of cottonseed and linseed meals are as good as linseed meal alone. Linseed meal in a ration tends to produce a glossier hair coat than does cottonseed meal. Availability and price may determine which to use.

Roughage—Cottonseed hulls are the most satisfactory roughage for club calf feeding. More digestive troubles are encountered by feeding cane, Johnsongrass or Sudan hays. Pea-green alfalfa is usually too expensive and too high in protein to feed more than 2 pounds daily per head. Brownish colored alfalfa hay may be fed in the same manner as prairie, common or coastal bermuda and cottonseed hulls.

Grass hays are highly variable in their quality. High quality hay is free of mould, smut, dust and bad odors. It has a bright green color, is fine stemmed, leafy and practically free of seed heads. Clean hay bunk daily, removing all refused hay.

The amount of roughage to feed depends on the feeding schedule being followed and the individual calf. A nurse cow calf may be fed its roughage free choice for the first 60 to 100 days and limited thereafter to no more than 1 percent daily of calf body weight. Limit the hand-fed drylot calf to no more than 1 percent daily of its body weight when on full feed.

Vitamin A—One to 2 pounds per head per day of green legume hay may supply adequate vitamin A. Due to the variability in the carotene content of these hays, 5 percent of alfalfa meal or pellets added to the mixture may replace 1 to 2 pounds of hay. Calves on nurse cows grazing green pasturage get their vitamin A in the milk. Synthetic vitamin A also may be mixed with the ration at the level of 20,000 international units daily per head.

Vitamin D—Texas cattle receive ample vitamin D from sunlight.

B-complex vitamins—These vitamins need not be added to the ration.

Sweet feed—Sweet feed should contain cracked corn, rolled barley, crimped oats and molasses. It should be free of materials such as peanut hulls, rice hulls and corn cobs. Use no more than 10 percent in the ration.

Wheat bran—Wheat bran adds variety to the ration and is somewhat laxative, thus making a good conditioner.

Minerals—Mineral requirements, except salt, are usually supplied in the ration for the nurse cow calf. Granulated salt should be available at all times. Drylot calves should have access to steamed bonemeal and granulated salt.

Yeast—Yeast feeds are of little value to normal, healthy cattle on a good ration. They may help in cases where the stomach flora has been disturbed.

Tranquilizers—Tranquilizers affect the central nervous system, and the effects are highly variable. No recommendation for their use in rations can be made at this time. Extremely nervous animals may be calmed by injections or by high oral levels in feed. Such treatments are temporary and may be effective up to 36 hours. Consult your veterinarian for recommendations.

Antibiotics—Antibiotics such as aureomycin or terramycin supplied in the feed mixture at the rate of 10 to 15 milligrams daily per 100 pounds live weight may be effective in the prevention of some feedlot troubles. This low-level feeding will help control low-level infection, but has little effect on increasing gain.

Hormones—Hormones such as Stilbestrol and Estradiol-Progesterone increase rate and economy of gain, but lower the carcass grade by one-third. The hormones prepared in premix protein supplements and in commercial mixed feeds are safe to use. Ear implants also may be used according to the manufacturer's recommendations. Certain restrictions with reference to slaughter must be followed. Cattle receiving hormones in feeds must be taken off such feed 48 hours before slaughtering. Ear implants must be made at least 100 days before slaughter.

Hormones cause high tailheads and low loins, thus affecting general appearance. They may have an advantage when feeding for feed efficiency and gain.

Hormones are not recommended in rations or as ear implants for bull or heifer calves.

Management practices—Calves up to 400 pounds do better on whole, crimped, rolled or coarse cracked grain than on finely ground grains. Calves fed longer than 140 days have less digestive troubles when fed coarse rather than finely ground feeds.

Calves do better on twice-a-day feeding at a regular time than when self-fed. Remove left over feed after 1 hour.

Daily mixed feed apparently is more appetizing than premix batches. Two calves eating

together do better than one. Clean the feed troughs and pens, and scrub the water trough daily. Pelleted feeds have merit but increase feed cost.

Balancing a Daily Hand-fed Ration

Question: How many quarts or pounds of each feed are needed daily for a 600-pound calf in drylot?

FEED WEIGHTS	
Feeds	Weight in Lb. Per Qt.
Barley, whole	1.5
Corn, whole	1.7
Corn, ground	1.5
Corn and cobmeal	1.4
Cottonseed meal	1.5
Molasses, cane	3.0
Oats	1.0
Sorghum grain, whole	1.8
Sorghum grain, ground	1.6
Wheat, whole	1.9
Wheat, ground	1.7
Wheat bran	0.5

STANDARD FEED REQUIREMENTS

Concentrate—2% of body weight, of which 2 pounds is a protein supplement of 41% crude protein content.

Dry Roughage—1% of body weight

$$600 \text{ lb.} \times .02 = 12 \text{ lb. total concentrate}$$

$$600 \text{ lb.} \times .01 = 6 \text{ lb. dry roughage}$$

$$18 \text{ lb. total feed}$$

Ration	Percent	Lb. or Qt.
Cracked yellow corn	50 × 12 lb. =	6 4
Crimped oats	15 × 12 lb. =	1.8 1.8
Rolled barley	10 × 12 lb. =	1.2 .8
Sweet feed	10 × 12 lb. =	1.2 .8
Cottonseed pellets	10 × 12 lb. =	1.2 .8
Alfalfa pellets	5 × 12 lb. =	.6 .4
Total	100%	12 lb. or 8.6 qt.

$$12 \text{ lb.} \div 2 \text{ times daily} = 6 \text{ lb. each feeding.}$$

$$8.6 \text{ qt.} \div 2 \text{ times daily} = 4.3 \text{ qt. each feeding.}$$

$$\text{Roughage fed once daily—} 600 \times .01 = 6 \text{ lb.}$$

Feeds vary in weight; therefore, each feeder should weigh each feed in the coffee can or bucket he uses and write down the volume required to fulfill the poundage requirement. New purchases should be checked.

At least 1 week is required to make a gradual increase, particularly the protein portion.

Feedlot Equipment

Proper equipment in the feedlot and the management of the calf throughout the feeding period are of prime importance.

Shed—A 6' x 8' shed is ample space for one calf. Plenty of air circulation through the shed adds to the comfort of the calf during hot weather.

Shade—A 10' x 10' brush arbor is large enough to furnish shade during the heat of the day. Clean sand under this arbor, moistened twice a day, will aid in keeping the calf cool and comfortable.

Grain feed bunk—A self-feeder attached to a shed wall to protect the feed from chickens will insure clean feed. Open troughs should be under shed.

Feeders located under the brush arbor are advisable in some areas, particularly during hot weather.

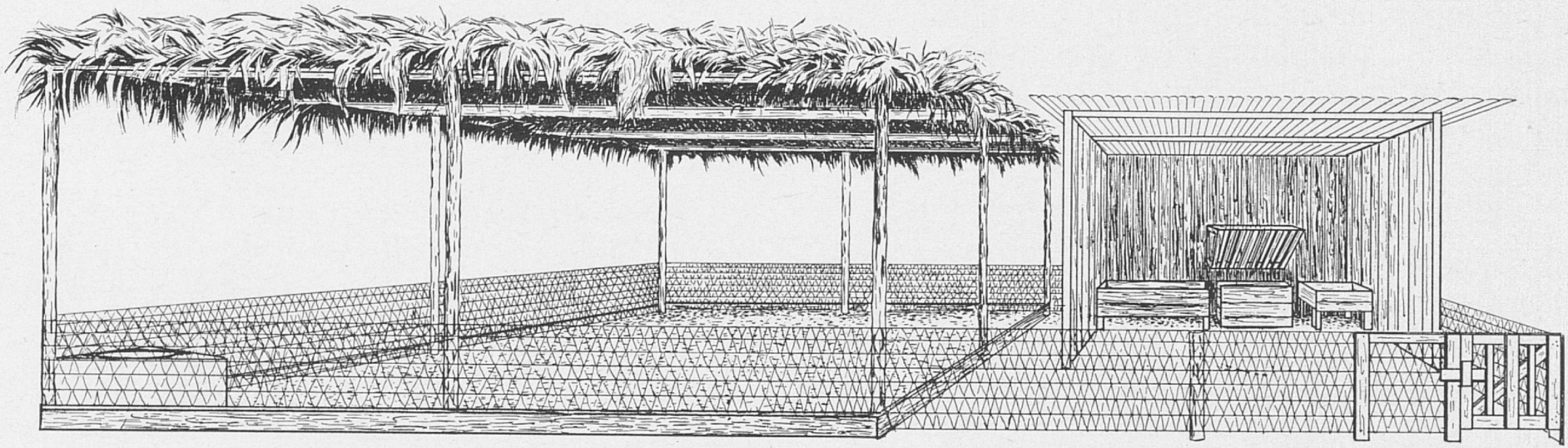
Hay-bunk—A small box placed on the ground, attached to the wall of a shed, and holding only one or two blocks of hay is preferable. This type of bunk will conserve hay but should be cleaned daily. Discard all old hay.

Salt box—This should be attached to a shed wall and should contain fresh granulated salt at all times as a lick for the calf.

Small water container—Fresh, clean water, some distance from the feed bunk, should be available to the calf at all times. The calf will not drink sufficient water if chickens also drink from the same trough. Keep the trough or container clean.

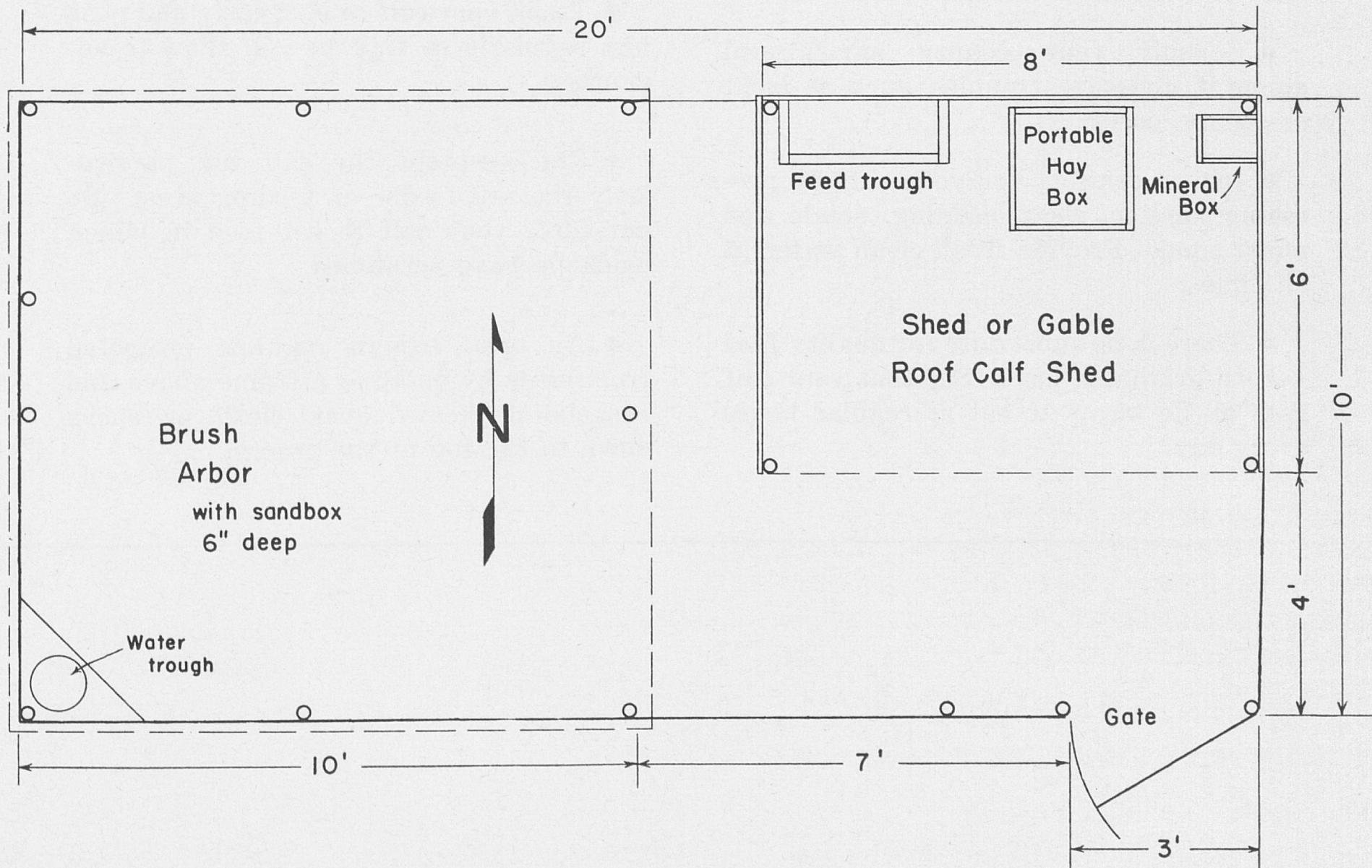
Bedding—Creek sand, if available, is best; otherwise, straw or some similar material can be used. Keep bedding clean.

Feedlot—This should be well drained, sanitary at all times and provide at least 200 square feet of space to assure the calf plenty of room for exercise. Keep the lot clean to avoid many troubles.



Sketch showing minimum feedlot equipment and arrangement for feeding one calf.

BRUSH ARBOR	WATER TROUGH	FEED TROUGH	PORTABLE HAY BOX	MINERAL BOX	SHED OR GABLE ROOF TYPE CALF SHED
Feeding may be done here during hot weather. PEN Poles and posts 5 ft. apart. Net wire or board fence.	Removable type No. 2 wash tub size.	4 in. above ground 3 ft. long 2 ft. wide 8 in. deep Use 2 in. lumber If self-feeder is desired use A&M Extension Service Plan No. 242	1 x 12 lumber 2 ft. long 2 ft. wide 2 ft. deep	8 in. above ground 1 ft. long 1 ft. wide 4 in. deep	8 ft. long 6 ft. wide 6 ft. high at plate Dirt floor Hinged openings at bottom



For each additional calf allow: 100 sq. ft. more pen space, 2 running ft. more feed trough space, 24 sq. ft. more shed and brush arbor space, 1 running ft. more hay box space and 10 gal. more water trough capacity.

Points to Remember

- Select Fancy or Choice grade calves from a herd known to produce good feeders.
- Be sure to dehorn, knife castrate and vaccinate calves early, being careful to avoid injury and infection.
- Treat calves promptly at first appearance of external or internal parasites.
- Consult your county agricultural agent if digestive troubles, such as bloat or scours, occur.
- Insure comfort for your calf by providing shelter, clean bedding, shade and moist sand. Provide fresh clean water at all times.
- There is no substitute for quality feed—both grain and hays. See that your calf gets all he wants to eat at regular hours every day.
- Brush your calf every day and wash him frequently.
- Be sure to trim the hoofs occasionally.
- Get thoroughly acquainted with your calf at the start of the feeding period.
- Teach your calf to lead early and pose him regularly so that he will show to advantage.
- Chicken-proof the calf lot, particularly the self-feeder or feeding area. Do not force your calf to eat feed in which chickens have scratched.
- An open trough may be protected from birds by building a frame above and suspending heavy duck cloth or sacks down to the top of the trough.

BLANK PAGE IN ORIGINAL



Your County **EXTENSION AGENTS**

• can furnish you the latest information on farming, ranching and homemaking. They represent both Texas A&M University and the United States Department of Agriculture in your county.

• Most county Extension agents have their offices in the county courthouse or agriculture building. They welcome your visits, calls or letters for assistance.

• This publication is one of many prepared by the Texas Agricultural Extension Service to present up-to-date, authoritative information, based on results of research. Extension publications are available from your local agents or from the Department of Agricultural Information, College Station, Texas.

