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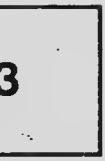

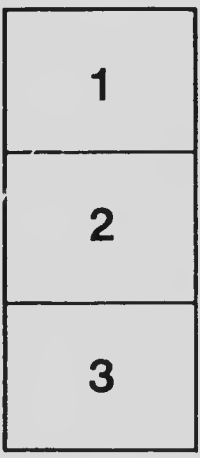

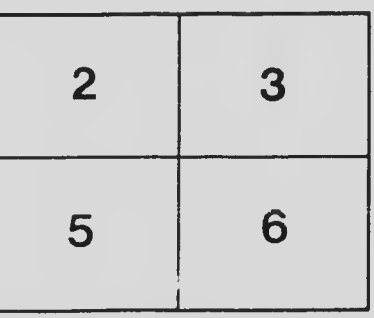

THE FEEDING OF BEEF CATTLE

BY

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AND

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The foundation principles of the successful selection of feeds and the feeding of beef cattle depend upon the palatability, variety, nutrition and ease of digestion, and succulence of ration given. All these essentials of a well-balanced ration for profitable production must be included whether raising or purchasing foodstuffs.

The Feeding of Calves: The secret of the most economical beef production is a proper start in life for the beef calf. It should never be allowed to lose the baby flesh.

The Spring Calf.—If suckled, the beef calf had best be born in the spring and run with the dam on good, well-shaded and well-watered pastures. If the beef cows are to be milked, the calves had best be born in the fall—September to November—and reared by hand in suitable quarters. Spring-born calves, suckled, require little if any extra feed for some months, aside from their mothers' milk and pasture. When pasture becomes dry and very short, green feed and grain may profitably be fed to both the cows and calves.

Feed Fall Calves which are not sucking the cows as follows: Allow the calf to suck for the first three days. The mother's milk is absolutely essential for a proper start. Feed 8 to 10 pounds of the mother's milk for the first ten days divided into three or four feeds, daily, for the first few days.

Gradually change the whole milk ration to a mixture of whole milk and skim-milk and finally to skim-milk and a supplement. At one month of age, the calf should be receiving 12 to 14 pounds of skim-milk plus ground scalded flax-seed jelly, and should also be receiving a small quantity of whole oats fed in the manger, fine clover or grass hay, water, and a very small quantity of salt daily.

During the next four months, the skim-milk might be increased to 15 or 20 pounds daily and the flax-seed jelly gradually replaced in the skim-milk with a cream substitute composed of ground flax, 1 part; ground oats, 2 parts; ground corn, 2 parts, scalded and mixed with the skim-milk. This cream substitute may be increased to 1 pound per calf, per day, in the milk.

During these four months the whole oats should be replaced by a dry grain mixture composed of equal parts bran, rolled oats, and ground corn. Start feeding at four weeks of age at the rate of one-eighth pound daily, gradually increased to 1½ pounds at twenty weeks of age, when the skim-milk may be profitably discontinued and the grain mixture increased proportionately. Feed roots or a mixture of roots and silage and good fine hay, preferably clover; drinking water, and salt, regularly.

From five to nine months of age the grain mixture should be changed so that at the end of this period, they may be receiving 4 pounds daily of a mixture of bran, 2 parts; ground oats, 2 parts; barley or corn, 1 part.

From nine to thirteen months of age these calves, born in the fall, will be on pasture. In the shortage of pasture it will pay to supply green feed and grain. The above grain mixture is excellent for this purpose.

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Finishing Baby Beef: *From thirteen to twenty months of age*, beef heifers or steers intended for the butcher, may usually be finished most profitably as baby beef, marketed from eighteen to twenty-two months of age. For stall finishing the following ration is good: Hay (alfalfa or clover preferable), 8 to 10 pounds daily; ensilage (preferably corn ensilage), 30 pounds daily, gradually reduced to 20 pounds at the end of the period; roots (preferably turnips), 30 pounds, gradually reduced to 20 pounds at the finish; grain mixture, 4 pounds, increased to 8 pounds daily at the finish, composed of equal parts bran, ground oats, ground barley, and linseed oil meal. The following replacements of the foregoing feeds may be made:—

1. Barley in place of corn or vice versa. 2. Linseed oil meal replaced by gluten meal, ground peas, or even cottonseed if it is outstandingly cheap as a protein meal. 3. Bran replaced by ground oats. 4 clover or alfalfa hay replaced by choice fine grass hays, increasing meal to obtain as rapid gains. Green oat sheaves when properly cured might profitably replace a large part of the hay ration. 5. If no ensilage is available, double the amount of roots in the daily ration. 6. If roots are not available, feed two-thirds more ensilage. 7. If neither roots nor ensilage are available supply better quality of hay, and more of it. Also add more linseed oil meal or some similar protein to the ration. Molasses sprinkled over the roughages or mixed with the meal, helps to replace a shortage of roots or ensilage and makes poor quality hay or straw more palatable.

Winter Feeding of Store Cattle to Finish on Grass: Do not lose the thrifty condition of the yearlings or young 2-year-olds which it is proposed to finish on grass during the next summer. If suitable high quality roughages are available, little if any grain is necessary. A good ration for this purpose is here suggested: Hay (alfalfa or clover as available), 10 to 12 pounds; roots, 40 to 60 pounds; corn ensilage, 25 to 40 pounds; or a mixture of equal parts of roots and ensilage, 50 pounds; clean oat straw, 5 pounds; grain, if necessary, 2 to 4 pounds of a mixture composed of oats and barley equal parts. If hay is not available, a ration composed of straw, 15 to 20 pounds; roots or ensilage as above; and a grain mixture composed of ground oats, barley, wheat, and oil cake, equal parts, fed from 1 to 5 pounds, will give good results.

Summer Finishing of Beef: Finish steers on good grass. If the pastures are short, an annual pasture might be profitable, as provided by the sowing of fall rye, oats, or barley, or a mixture of oats and clover. For the summer finishing of steers, it is profitable to feed meal three to four weeks before shipping. The result will be a firmer, better finish. A mixture of bran, oats, and barley, equal parts, will give very good results; the addition of a small quantity of peas or oil cake will further materially assist. Feed 2 to 6 pounds per day, with a limited quantity of hay.

Winter Finishing of Steers: A number of very good rations for the finishing of 2 or 3-year-old steers during the winter months, are herewith given. Note the following points:—

1. Decrease succulent roughage as the animal nears a finished condition. For example, 60 pounds of turnips, per steer, per day, in the early part of the finish, should decrease gradually to 40 pounds per day at the finish. In the same way ensilage might be decreased from 40 pounds to 30 pounds per day, or a mixture of equal parts roots and ensilage from 50 to 35 pounds per day.

2. Hay can profitably be increased slightly, at the finish. Alfalfa and clover hays are preferable, fed at the rate of from 10 to 16 pounds per steer, per day. If only rough, coarse, or poor quality hays are available, it may be profitable to cut the same and mix with the pulped roots or in the absence of the roots, to mix with 1 to 2 pounds of molasses per steer, per day.

3. Straw can be utilized to good advantage. Clean cut straw is best and may be fed at the rate of about 5 pounds per day. This may be fed long, as a separate light feed at noon, or it may be cut and mixed with the roots and ensilage.

4. The following grain mixtures will be found advantageous in finishing steers. Start feeding grain at the rate of 2 pounds per steer, daily, at the earliest part of the feeding, and finish at from 10 to 12 pounds per steer, per day.

Grain Mixtures: *No. 1.*—Bran, 2 parts; ground oats, 2 parts; ground barley, 2 parts; cottonseed meal, 9 parts. The cottonseed meal may be replaced by either linseed oil meal or ground peas.

No. 2.—Ground oats, 3 parts; ground barley, 3 parts; ground peas, 2 parts.

No. 3.—Bran, 3 parts; ground corn, 3 parts; linseed oil meal, 2 parts.

No. 4.—Bran, 4 parts; ground corn, 2 parts; ground oats, 1 part; linseed oil-meal, 1 part; cottonseed meal, 1 part.

No. 5.—Equal parts ground oats, ground barley, and cottonseed or peas.

Rations. A number of rations particularly adaptable to conditions in Western Canada are as follows:—

No. 1.—Hay, 5 pounds; turnips, 70 pounds; oat straw, ad lib., approximately 12 pounds daily; ground oats and barley equal parts, started at 2 pounds and finished at 15 pounds.

No. 2.—Straw, ad lib.; hay (alfalfa if available), 5 to 8 pounds; or good prairie hay, 7 to 12 pounds daily; cured oat sheaves, 1 daily; turnips if available, 40 pounds; or ensilage (corn or peas and oats) if available, 30 pounds; grain composed of oat and barley chop or a mixture of ground corn and oats, or ground peas and oats, starting at 2 pounds and finishing at 15 pounds per steer daily.

No. 3.—The same roughage ration as in No. 2 with a grain ration composed of ground oats, 2 parts; ground barley, 2 parts; ground wheat, 1 part, fed from 2 to 15 pounds daily.

No. 4.—Alfalfa hay, 12 to 15 pounds; cured green oat sheaves, 1 daily; roots if available, 30 pounds; grain, equal parts ground oats, barley and wheat, 2 to 12 pounds daily.

No. 5.—Straw, all they require; green oat sheaves, 2 daily; grain ration composed of equal parts ground oats, barley, and wheat, 2 to 15 pounds.

Feeding Steers at Shipping Time: Previous to loading on cars, feed only very lightly on roots, ensilage, pasture, or other succulent roughages, as the tendency will be to scour the animals and cause heavy shrinkage. Feed liberally on good clean hay with a light grain ration and best results will follow. Many stock-yards prohibit grain feeding after the animals are unloaded; hence the best quality of hay in liberal amounts and a reasonable amount of salt and good drinking water will fill the animals to best advantage for sales.

Feeding the Beef Cow: The feeding of the hand-milked beef-bred cow will be identically similar to that of the dairy cow. If, on the other hand, she is to suckle her calf well through the first nine months after its birth, feed liberally on good pasture and on succulent roughages.

Feeding the Beef Bull: The same principles apply in the feeding of both beef and dairy bulls. Keep the bull in fair flesh and very thrifty condition during the breeding season, else the progeny will not be as large, vigorous, virile, and resistant to disease, as should be. Over-feeding on roots and ensilage is to be guarded against. Good clean hay, particularly alfalfa or clover, with a light ration of roots or ensilage or a mixture of these two in the winter, or a grass paddock in the summer, will answer admirably as a roughage ration. The grain ration should be fed as needed. A mixture of equal parts bran and ground oats will probably give best results.

Rules in Feeding: Following are a few rules in feeding, which apply to all other classes of stock and which point toward the most economical feeding and the healthiest animals.

(1) Guard against overfeeding.

(2) Refrain from underfeeding and starving the cows.

(3) Make all changes in feeding gradually.

(4) Cater to the individual needs of the animals.

(5) As with all breeding stock, avoid extremes of condition, and supply reasonable exercise, fresh air and dry comfortable quarters.

THE HEALTH OF BEEF ANIMALS.

The ailments peculiar to the beef animal, are naturally somewhat similar to those of the dairy cow. The former, not being under the nervous and bodily strain of heavy feeding and high production, as a rule is less susceptible to disease. Particularly would this refer to mammary affections and to a lesser degree, to maladies incidental to parturition

Diarrhœa: *Cause.*—Overfeeding, indigestible, sour or decomposed food; with calves, due to sour or too cold milk, overfeeding, unclean pails, etc.

Treatment.—In early stages, adults should receive 1 ounces raw linseed oil with 1 ounce laudanum and 20 drops creosote. Give small quantities easily digested food and plenty of water. Calves, 1 to 2 ounces oil; 1 to 2 drams laudanum drops creosote, depending upon the size of calf. Dilute milk with lime-water. Feed milk several times daily in small quantities. Skim-milk calves should receive 1 drops formalin per quart milk added immediately after separation.

Impaction (*Third Stomach*) *Cause.*—Long continued feeding with coarse, unnutritious fodder; insufficient water.

Symptoms.—Gradual. Capricious appetite, dry nose, staring coat, unnatural diarrhœa followed by marked constipation.

Treatment.—Purge with 1 pound Epsom salts, 1 drams aloes; 1 ounce ginger in 2 quarts warm water. Follow with 1 quart linseed gruel every 8 hours. Water ad lib. Feed small warm bran mashes. Rectal injection may assist. Feed lightly on improvement.

Bloat (*Tympanitis*). *Cause.*—Sudden changes from dry to green feed as clover, alfalfa, turnip tops, rape, etc. Overfeeding on any of above fodders when wet or frozen.

Symptoms.—Distention, greater to left side. Animal grunts and moans, lies down and rises frequently.

Treatment.—Depends on condition or stage. If light attack, give 1 pint raw linseed oil, oil of turpentine, 2 to 4 ounces; ginger, 1 to 2 ounces. If severe bloating is shown, tap with trocar and canula, half way between last rib and hook bone on left side. If imperative, use a knife. After gas escapes give 1 pound Epsom salts; 4 tablespoonful ginger; 1 quart warm water. Feed small quantities soft food for a few days.

A highly recommended, recently originated treatment for bloat is as follows. Administer drench of ½ ounce formalin in 1 quart water. Tie a wooden block in the animal's mouth. Exercise gently if possible.

Grain Sick: Gorging at open grain bins, etc. *Treatment.*—1 to 2 pounds Epsom salts, 1 to 2 ounces ginger; 2 quarts water; given at once. Water as desired.

Milk Fever (*Parturient Apoplexy*): *Cause.*—Frequently by milking animal dry shortly after or within three days of calving. Heavy producers usually affected.

Symptoms.—Appear from shortly after calving until the fifth or sixth day. Animal is excited and restless with quickened breathing. Later becomes unsteady on feet, swaying. Falls and rises until finally is unable to regain feet. Eyes staring, head swings to one side.

Treatment.—Must be prompt. Milk dry. Fill quarters with air preferably from a regular outfit, or an ordinary bicycle pump, rubber tubing and milk tube. First carefully sterilize tube in boiling water. Tie ends of teats with tape when inflated. Repeat, if air escapes. Treatment should take effect in less than an hour. When animal is standing give chilled water with a small bran mash. Follow in a few hours with drench of Epsom salts, 1 pound; 4 drams ground ginger and 1 quart warm water. Feed lightly for a few days thereafter. *Do not drench a cow affected with milk fever* until she has recovered from the more immediate effects; choking and death may follow.

Retention of the After-Birth: *Cause.*—Not definitely known. *Treatment.*—If animal is healthy and weather fairly cool, wait for 18 hours, then apply gentle traction. If this fails, wash the arm in 5 per cent creolin solution, oil, and insert into the vagina. Gently remove each attachment from the lumps (cotyledons) until the whole mass fails. This may be a slow process but must not be hastened by force. Wash vulva, hips and tail with 5 per cent creolin and if any decomposition is present, inject into vagina.

Caked Udder (*Inflammation of the Udder*) (Mammitis or Garget): *Causes.*—Injuries, too long periods between milking; lying in draughts or on cold wet floors. Too high condition, too heavy feeding previous to and after calving.

Symptoms.—One or all quarters hard, swollen, and inflamed. Milk, thick and stringy, or watery and curdled; secretion, small.

Treatment.—Feed the fresh cow, as outlined, and prevent. Give physic of 1 pound Epsom salts, 4 drams ginger, 2 quarts warm water. Feed bran mashes, only, with 1 ounce nitre twice daily for three days or one-half ounce hyposulphate of soda three times daily in water or sloppy mash. Draw milk frequently with thorough rubbing. Bathe with hot water and soapy lather for half hour. Rub well. Apply ointment, after bathing, of tincture of camphor, one-half ounce; fluid extract belladonna, one-half ounce; oil turpentine, 1 ounce; 1 pint raw linseed oil. Rub well into the affected quarters.

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7