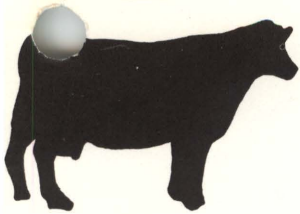


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dairy guidelines

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Holstein Steers--\$ Dairy Beef \$

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A growing number of dairymen are finding it profitable to raise bull calves for feeders, and, in some cases, to feed them out to slaughter weight. This is particularly true where a dairyman has the housing and lot space, feed and labor to handle an extra project.

HOLSTEIN STEERS = \$ DAIRY BEEF \$

Introduction

Dairy beef means raising dairy steers for meat purposes. It is not an animal that is half beef and half dairy breed. The project starts with selecting calves 3 to 7 days of age and includes their feeding and management until sold for beef. The steers can be sold as feeders at 300-400 lbs. or finished out at 900-1300 lbs. This finished weight should be attained between 12 and 24 months of age, depending upon the feeding program.

Why Dairy Beef?

1. Housewives are demanding leaner, meatier cuts of beef.
2. Dairy steers gain at a faster and more efficient rate (10 to 15%) than beef steers.
3. Home grown grains and forages can be used to advantage.
4. Surplus pasture and facilities can be profitably used.

Selection

Bull calves from one of the large dairy breeds (Holstein or Brown Swiss) should be selected for a dairy beef project. The larger breeds are usually more efficient in a feed-lot operation. Initial body weight of the calf determines to a great extent the length of time required to reach the desired final weight. Only Holstein and Brown Swiss calves heavier than 80 lbs. at birth can be expected to gain economically.

Castration and Dehorning

Calves should be castrated when they are between 6 and 8 weeks of age. There are several methods of castration. A veterinarian may castrate surgically. Forceps (emasculators) may be used to crush and cut the spermatic cords (one at a time). The emasculatome may also be used to crush the separate cords.

Two commonly used methods of dehorning are electric and chemical. Calves should be dehorned before they are 10 days of age with an electric dehorner. Hold the electric dehorner on the calf's head for 10 seconds. There should be a dark copper ring around the horn button. When using caustic, vigorously rub the caustic stick all around the bone of the horn button until the skin is broken. Be sure to wrap paper around the caustic to prevent burning your fingers. Encircle the area outside the broken skin with vaseline or grease to prevent the caustic from running into the calf's eyes.

Programs for Feeding Dairy Beef

Many home-grown grains and forages (corn, barley, oats, silage, hay, pasture) can be profitably converted to dairy beef when used carefully with proper supplementation. The higher the level of grain feeding, the earlier the animal reaches the market at the maximum weight and grade. Increasing the forage content of the ration increases the time on feed and overhead costs to reach a given grade, but lowers feed cost per pound gain and makes for more profit.

Research trials with dairy beef steers have shown feed costs per pound of gain to range between 9 to 17¢. Total cost of gain (feed, yardage, etc.) ranges between 14 to 23¢.

Feeding the First 8 Weeks

For the first 3 days, calves should receive colostrum (cow's first milk after freshening). Following this period calves may be fed milk, a regular milk replacer, or a high energy milk replacer. The high energy milk replacer may be called a veal formula.

Start the calf eating grain as soon as possible. A commercial grain mixture or one used for heifers is satisfactory. Be sure the grain feeder is kept clean. Provide hay and/or silage for the calf to eat. Feed it just as you would a heifer calf until it is 6 to 8 weeks of age. At this age a steer should weigh between 160-180 pounds.

Starting New Dairy Feeder Calves in the Feedlot

Calves started in a manner similar to heifer replacements (where hay or silage is included in the ration) should be placed on a full feed of long hay upon arrival at the feedlot. Hay can be fed at the rate of 1 lb. per 100 lbs. of body weight for the first day or two. Gradually decrease hay and increase grain and/or silage. The transition to grain and/or silage should take several days.

Calves with an unknown background should be started on hay.

Upon arrival, each calf should receive an injection of Vitamin A D E (1,000,000 I.U. A; 200,00 I.U. D; 100 I.U. E). This will help in the relief of stress, provide a boost for a healthy start, and aid in the prevention of ringworm.

Calves which go off feed or become sick or sluggish should be isolated and placed on a full feed of long hay. When recovery becomes evident, the grain ration can be fed. Gradually phase out the hay and put the calves back in the feedlot.

Feeding After 8 Weeks

Four rations are suggested for dairy steers. You need to decide which is best suited to your farm, which nutrients are most available or in surplus and which is cheapest for you to feed. One only feeds steers to make a profit; thus, carefully select which ration will be most profitable on your farm.

- A. A complete ration contains all the nutrients necessary for growing and fattening. Do not feed hay or silage in addition to the ration. A complete ration for dairy beef should contain at least 12%-14% protein, 15%-20% fiber, and 70% E.N.E. This ration is suggested:

680#	Corn and cob meal or ground shelled corn
100#	Soybean oil meal (44%)
200#	Baled hay (4-5 bales of good alfalfa or grass hay)
10#	Dicalcium phosphate
10#	Trace mineral salt
*	Vitamin A and D (3 million units of A and 4 million units of D)
<u>1,000#</u>	<u>Total</u>

The complete ration should be in front of the calf all of the time. Feed boxes should never be empty.

- B. Hay and grain ration. Good quality hay should be fed free choice and the grain mixture fed at the rate of 2 lbs. per 100 lbs. of body weight. The following grain mixture is suggested:

880# Corn and cob meal or ground shelled corn
100# Soybean oil meal (44%)
10# Dicalcium phosphate
10# Trace mineral salt
* Vitamin A and D (3 million units of A and 4 million units of D)
1,000# Total

- C. Corn silage and grain ration. Good quality corn silage should be fed 2 to 3 times a day or free choice plus this suggested grain mixture:

780# Corn and cob meal or ground shelled corn
200# Soybean oil meal (44%)
10# Dicalcium phosphate
10# Trace mineral salt
* Vitamin A and D (3 million units of A and 4 million units of D)
1,000# Total

The grain mixture should be fed at the rate of 2 lbs. per 100 lbs. of body weight. This procedure should be followed until the steer weighs 500 lbs. Then it can be fed corn silage 2 to 3 times a day free choice plus 2.5 lbs. of soybean oil meal per day. No other grains are needed to fatten the steer.

- D. Pasture and corn silage. Pasture calves after they are off to a good start and until they are 600-800 lbs. Then corn silage can be fed 2 to 3 times per day or free choice plus 2.5 lbs. of soybean oil meal per day. No other grains are needed to fatten the steer. If urea is in the silage, the level of feeding soybean oil meal can be reduced for an even more economical daily gain.

Dairy Beef Management Recommendations

A. Feedlot Facilities

Provide these amounts of lot space:

Paved lots--50-100 sq. ft. per head
Dirt lots--150-200 sq. ft. per head (more under conditions of wet soil and climate)

Provide a paved area of at least 10' around waterers and feed bunks. Allow slope of $\frac{1}{4}$ to $\frac{1}{2}$ inch/foot in paved lots and $\frac{1}{2}$ inch/foot or more in dirt lots, depending on soil and climatic conditions.

B. Shelter

Open sheds or windbreaks are usually adequate--and they are economical. In open sheds, allow 20 to 30 sq. ft. per head for calves up to 600 lbs. Allow 40 to 50 sq. ft. per head for older cattle weighing 600 lbs. or more.

C. Shade

Unless cattle have access to natural shade, they should have artificial shade during hot weather. Allow 15 to 25 sq. ft. of shade for calves and 25 to 35 sq. ft. for older cattle. Build shade 8 to 10' high.

D. Bedding

Provide bedding to help keep cattle dry, comfortable, and healthy. Recommended materials include straw, corn cobs, sawdust, shavings, peanut hulls--whichever is available at lowest cost. Bedding should consist of shavings or sawdust when all-concentrate rations are fed. Do not use straw with all-concentrate rations. In open lots, mounds covered with cobs or other bedding are desirable.

E. Fencing

Build fences at least 5' high. Pressure-treated lumber eliminates wood chewing. Cable fences have minimum maintenance costs.

F. Parasite Control

Provide rubbing devices that dispense insecticides to help control external parasites and make cattle more comfortable. These devices should not replace other external parasite-control measures. Provide facilities for restraining and handling individual animals to minimize production losses and prevent injury to personnel.

G. Feed and Water Facilities

Have the top of feed bunks 24" high for calves and 30" for older cattle. Provide feed bunks about 8" deep for calves and 10-12" for older cattle. Make feed bunks 24-30" wide when feeding from one side and about 36" wide when feeding from both sides. For grains and other concentrates, allow these amounts of feeder space per head:

<u>Hand Feeding</u>	<u>Self Feeding</u>
Calves 18-24"	Calves 6- 8"
Older cattle 20-30"	Older cattle 8-12"

Provide plenty of clean, fresh water at all times. Allow one linear foot of open watertank space for each 10 cattle; or one automatic watering bowl for each 25 cattle. A satisfactory water temperature range in winter is 40-50°, in summer, 60-80°.

H. General Management

Keep feed in front of cattle at all times.
Provide mineral and vitamin mix free choice at all times.
Provide salt free-choice at all times.
Control flies, grubs, and lice by routine treatment.

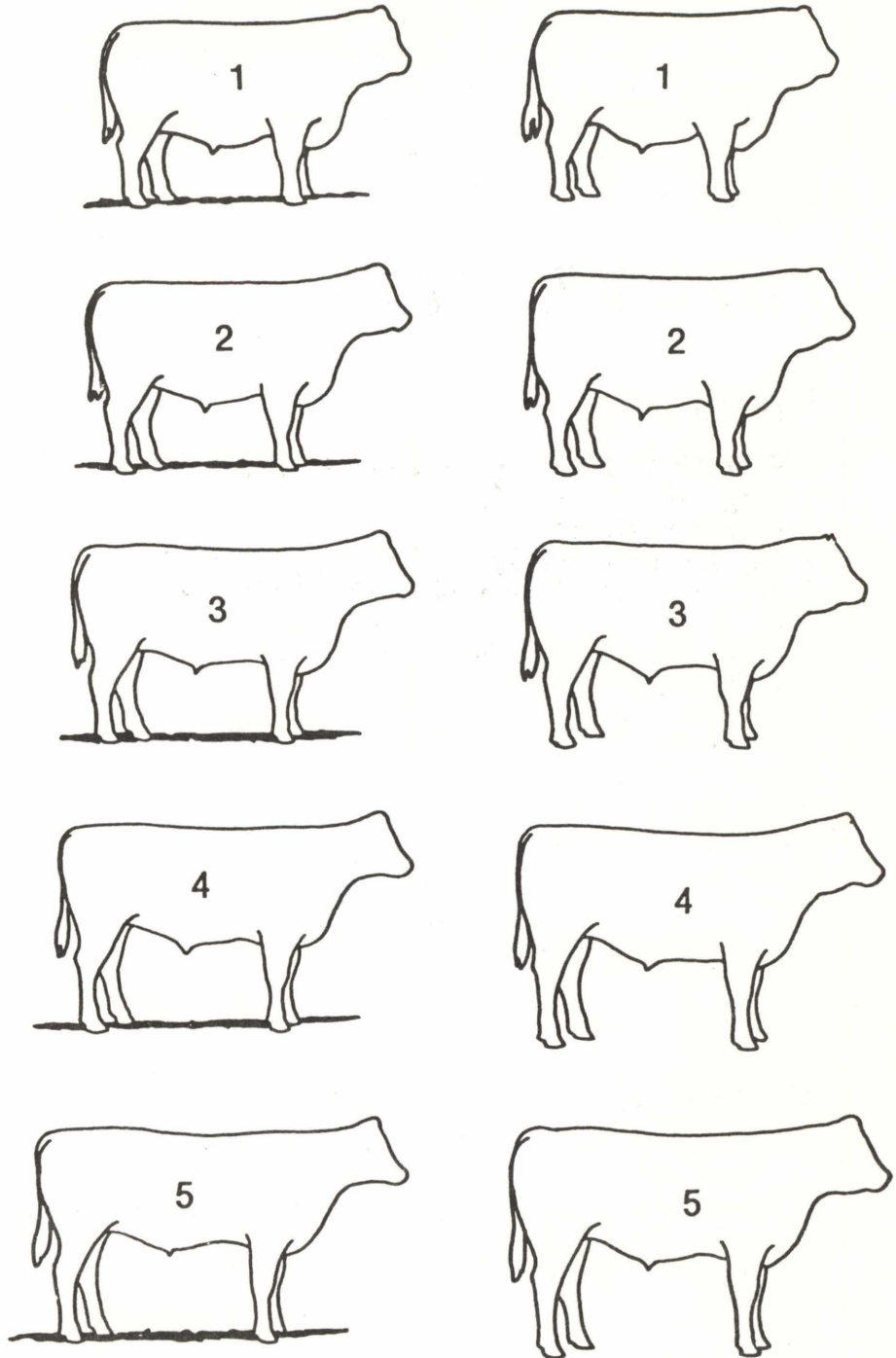
Worm cattle when needed.
Check closely with your veterinarian as needed.
Develop a disease control program--preventive and treatment.
Keep feedlots dry and clean. Muddy conditions will hold back gains or cause weight losses.
Sell poor performing cattle. The cost of medication, labor, and extra feed is not worth the effort.
Feed steers and heifers separately, if practical.
Stilbestrol will provide a 10 to 15% increase in gain and 15% to 20% better feed conversion. Contact your feed dealers for the details on stilbestrol.

Consult Your Veterinarian

Diagnosis of many animal diseases and problems can be determined accurately only by a veterinarian. Follow basic preventive measures and general good management practices, relying on veterinary advice for specific diagnosis.

Disease Condition	Symptoms	Prevention
Calf Scours	Staining of the tail caused by semifluid and foul smelling feces. Calf listless and has poor appetite.	Avoid feeding from dirty buckets and feeding cold and warm milk alternately; avoid milk too rich in fat, feeding irregularly, damp and unsanitary pens.
Pneumonia	Dullness, lack of appetite, high temperature, rapid and shallow respiration, and dilated nostrils. Muzzle is dry and coat is rough and skin dry.	Maintain good sanitation and feeding practices.
Bloat	Abnormal accumulation of gasses in the paunch.	Follow good pasture-feeding practices.
Foot Rot	Visual observation of sore feet.	Good sanitation and management practices.
Pinkeye	Visual observation (watery eyes, inflamed or cloudy).	Isolate infected animals from remainder of herd while under treatment, and control flies.
Worms	Visual observation. Young stock in poor condition--dry, rough coat.	Avoid overstocking pasture or pens. Regular worming spring and fall.

WHICH STEER TYPE IS BEST?



Pictured above are the five steer types evaluated at the 1969 Hereford Type Conference at Arlington, Wis. At the left is feeder calf as it began the feeding program and at the right is the finished product ready for market. The "Body Type Project" was conducted by Wisconsin University under the direction of Val Brungardt. Data revealed that in nearly every case the No. 5 calf was the most desirable type, followed by No. 4, No. 3, No. 2, and No. 1. The gainability, feed conversion and profit potential of the No. 5 steer more than offset any shortcomings in carcass quality.

Most Holstein steers fit the No. 5 type with some falling in type No. 4.

HOLSTEIN FEEDER PROJECT

Conducted by a dairyman 11/2/69

Receipts

Sale of 46 steers on 10/30/69
(Avg. 440 lb. each @ 28¢/lb.) \$5,667.20

Expenses

Purchased 50 Holstein bull calves @ \$34.59 on 4/20/69
(Avg. 100 lb. each) \$1,729.50
Ambiotic Medication 47.11
2,000 lb. high energy milk replacer @ \$21/cwt. 421.00
4,300 lb. calf starter pellets @ \$5/cwt. 215.00
100 lb. mineral mix--free choice 8.50
100 lb. (2-50 lb.) mineral salt blocks 3.40
Castration bands--rapid gain implants 31.95
24,000 lb. bulky feed @ \$70/ton 840.00
2 ton local hay @ \$40/ton 80.00
Trucking (1/2 cost) 100.00
Advertising in paper 7.50
Interest on money 86.00

Total Expenses \$3,569.96

Return to Labor and Capital \$2,097.24

Feeding Program

First 30 days Formula and pellets
Next 30 days Pellets and hay
Next 134 days 4 lbs. bulky feed each and good grass

(340 lb. gain in 194 days = 1.8 lbs. gain per day)

Family Labor

First 60 days 2 hours per day 120 hours
Next 134 days 1/2 hour per day 67 hours
Castration, dehorning, implanting, 5 hours

192 hours