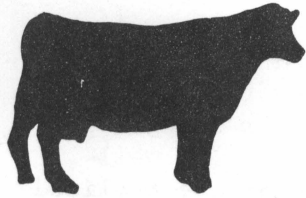


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Dairy guidelines

EXTENSION DIVISION VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY BLACKSBURG, VIRGINIA



Series 299 - January 1980

RAISING VEAL CALVES



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FEB 1 1980

Veal production is a specialized industry. It has some risks to it. Veal production requires attention to supply of calves, proper feeding and housing, disease prevention, and markets.

Marketing

Know the demands of veal buyers in the area. Finished veal calf weight is a primary factor that affects price received. Some markets demand calves weighing 160-200 lb; other markets want finished vealers to weigh 225-250 lb; and there is a growing market for 275-300 lb calves.

Prices paid for finished veal depend on color of meat, carcass quality, degree of finish, supply and demand, and season of year. The veal market requires a light-colored meat and white fat in the dressed carcass for top grades and prices. Veal prices tend to follow a seasonal pattern. Prices may be lowest in mid-summer and fall and highest in winter. They reflect the beef market.

Calf Selection

If you are not raising your own calves, you may purchase calves from local dairy-men or auctions. The beginner should not depend on auction markets unless the calves are purchased through a buyer. The risks of disease are too great.

A good veal calf has the following characteristics:

1. Bull calves from large breeds, either Holstein or Holstein x beef breed crosses. Select large blocky calves. Large heifer calves can be used.
2. Calves should weigh at least 90 to 95 lb.
3. Calves should appear healthy, vigorous, and free of infections or physical defects. Make sure that the navel is dry.
4. Insist that the calf be fed 3-4 lb colostrum from his dam during the first 2 hr of life and that the calf receive 8-10 lb colostrum per day for the first 3 days. Colostrum contains immunoglobulins which protect the calf against disease. The concentration of immunoglobulins in colostrum and the calf's ability to absorb them decrease rapidly over 24 hr. Do not feed milk from cows that have received an antibiotic treatment for mastitis or breeding problems. Antibiotic residues have been found in veal carcasses.

Housing

Keep calves dry and free from drafts. The calves must be tied individually in a manner that will prevent contact with each other or the bedding of other calves. Individual tie stalls with slat floors or spare box stalls or pens can be used.

For white or fancy veal, eliminate the opportunity to lick iron fixtures or equipment. This includes tie chains or nail heads in wooden stalls. Iron darkens the meat.

Air should be kept fresh. Provide good ventilation. Controlled forced ventilation is preferred. Intake and fan size should permit even air flow with minimum drafts. A minimum continuous ventilation rate of four air changes per hour is desired during the winter and 25 changes during the summer. A well-planned fresh air inlet system is essential. Most efficient gains are realized when the air temperature is 60 to 65°F.

Sanitation

Contaminated pens and feeding utensils can be major causes of infections or digestive upsets. Stalls or pens should be designed and built so that they can be cleaned and disinfected between calves. Calves should enter and leave the barn in a group. The empty building should be cleaned thoroughly. The use of coal-tar disinfectants is recommended. A can of lye flakes (13 oz) per 10 gal of hot water makes an effective disinfectant. Clean walls, ceilings, and stalls with a high pressure sprayer. Allow building to dry out before adding calves. With wooden slat floors, it may be desirable to have two removable floor sections for each elevated stall. When not in use, store floor sections outside and exposed to the sun.

Thoroughly clean all pails or bottles and milk replacer mixing equipment immediately after each feeding. After cleaning, sanitize with an iodophor or other disinfectant and allow to air dry. Do not reuse a pail or bottle until it has been cleaned and sanitized. Have at least one pail or bottle for each calf. Some veal producers identify the pail or bottle and each is used for feeding only that calf for as long as it is on the farm.

Feeding

Whole milk is ideal for producing veal, but milk feeding would be practical only on a dairy farm. Milk probably is more expensive to feed than an excellent quality milk replacer.

Select a good quality, high fat milk replacer. The replacer should contain 20 to 25% fat and at least 20 to 22% crude protein. All protein should be derived from milk protein sources (skim milk, whey, etc.).

Feeding precautions:

1. Follow the directions on the bag of milk replacer. Use the indicated amounts of milk replacer and water. Rates of reconstitution usually are 1 part powder to 5 to 6 parts water. Higher concentrations (1 part powder to 4 parts water) may be used during the final stages of fattening.
2. Feed twice daily and at regular intervals. It is preferred to have feedings 12 hr apart.
3. Avoid overfeeding during the first month. Calves should consume the amount of liquid fed at each feeding within 10 minutes. If feed remains after 15 minutes, carefully observe the calf for unusually loose bowels and check its temperature.

4. After 21 to 28 days calves that consume more than the suggested amounts should be encouraged to do so.
5. Follow the same order and routine for each feeding.
6. If a calf does not eat properly, gain satisfactorily, or respond rapidly to treatment, it should be culled immediately.

Disease Prevention

A good manager keeps a watchful eye for digestive upsets, respiratory problems, and other diseases or sicknesses. It is more profitable to prevent disease through good management practices than to treat a sick animal. When disease problems arise, early diagnosis and treatment by a veterinarian may avoid severe losses. Early treatment is essential to prevent spread of disease to other animals and reduce death loss. Isolate sick calves.

Upon arrival, calves may benefit from the following injections: vitamins A and E, selenium, and IBR-PI3 by nasal spray.

By careful observation, it is possible to anticipate the onset of scours on the day before it occurs. Look for dry muzzle, thick mucous appearing from the nostrils, very firm manure, refusal of milk, a tendency to lie stretched out, and a high rectal temperature (over 103°F).

If scours develops, withhold all milk or milk replacer for two feedings. Include a metabolite feeding (see Dairy Guideline Series 294). On the third and fourth feedings, give the normal amount of liquid and only one-half the amount of solids or powder. Resume the normal schedule at the fifth feeding if the manure has returned to normal.

Degree of Finish

The carcass must be well-fleshed. There must be a thin, even layer of fat covering the rump, back, and shoulders. The kidneys must be covered with fat. The inside of the ribs should also show indications of fat. The flesh should be firm and pale pink in color. The fat should be white. Carcasses of grain-fed calves have darker meat, lower fat coverage, and lower dressing percentage.

4-H Club Members Raising Two to Three Vealers

The production of high grade "white" veal is extremely risky. Such a project is not without risks. Problems include housing and factors which can color the carcass, scours and death losses, poor quality milk replacers, and sanitation of facilities and equipment. 4-H Club members may find the results discouraging. If raising only limited numbers of calves, 4-H'ers should consider raising grain-fed vealers to 500 lb or dairy steers to 1,000 lb.

Summary

The factors most often associated with unsatisfactory results in the production of veal include:

1. Starting with poor quality calves.
2. Improper feeding program.
3. Poor disease prevention and control measures.
4. Low market veal prices, high calf prices, and high feed costs.

Economics

Operating Expense:

Cost of calves	_____
Cost of feed	_____
Milk replacer = 1.5 lb. powder per 1 lb. gain	
Health aids and vet fees	_____
Marketing and trucking	_____
Feeding utensils and equipment	_____
Cleaners, sanitizing agents, supplies	_____
Housing (depreciation, stalls, taxes, insurance, heat, electric, water)	_____
Labor	_____
Miscellaneous	_____
	Total Expenses \$ _____

Income:

Liveweight x selling price, _____ lb. wt. x _____ \$/lb

Receipts \$ _____

Net Return:

Profit \$ _____

No. calves started	_____	Ave. selling wt.	_____
No. calves sold	_____	Ave. selling price	_____
Ave. purchase wt.	_____	Ave. daily gain	_____
Ave. purchase price	_____	Lb. feed consumed	_____
	Lb. feed per lb. gain	_____	
	Cost per lb. gain	_____	