

AUG 10 1939

680.71
Or 3c1
no. 335
c.3

DOCUMENT Extension Circular 335
COLLECTION
OREGON
COLLECTION

August
1939

~~DISCARD~~

FEEDING CALVES FOR VEAL

By

I. R. Jones

Associate Professor of Dairy Husbandry

Federal Cooperative Extension Service
Oregon State College
Corvallis

Cooperative Extension Work in Agriculture and Home Economics
Wm. A. Schoenfeld, Director
Oregon State College and United States Department of Agriculture, Cooperating
Printed and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914

FEEDING CALVES FOR VEAL

by

I. R. Jones, Associate Professor of Dairy Husbandry
Oregon State College

Veal is made the country over mainly from dairy calves. In the case of the purebred dairy cattle breeder, a good share of the surplus animals are sold as breeding stock. On the other hand, the dairyman with grade cows often has available surplus animals which can be made into veal.

It would seem from a study of experiments that have been conducted at various experiment stations, that if one is to grow calves into veal, the object should be to make the highest grade of veal. This means growing and fattening the calf as quickly as possible with the fat being white in color. About the only successful way to do this is to feed the calf as much whole milk as possible, or allow it to nurse the dam or some nurse cow. If fed by hand it is very desirable to weigh the milk, to use judgment in the rate of increase, and to observe precautions to prevent digestive disturbances by feeding only sweet milk at blood temperature, or 100° F., out of clean pails. The calf should be penned alone in clean quarters.

Whether it is profitable to feed calves for veal depends upon three main considerations, namely: The size of the calf at birth, the selling price of milk and butterfat, and the market price of veal.

Size at Birth Important

The relationship between the size of the calf at birth and the profit is easily understood when it is realized that approximately 10 pounds of whole milk, testing 4 per cent butterfat, are required for one pound of gain. Usually the best market weight for veal calves is about 150 pounds. If the calf at birth weighs 100 pounds, and it requires 10 pounds of milk for each pound of gain, then it would take 500 pounds of milk to grow the calf to 150 pounds. On the other hand, if the calf weighed only 60 pounds at birth, it would require 900 pounds of milk to grow it to 150 pounds. The difference in profit, due to the varying sizes of calves at birth and the resulting amount of milk necessary, may easily be the deciding factor in whether one should attempt to produce veal or not. The differences in income over feed-cost due to variations in birth-weight of calves is illustrated in the following table:

Estimated Income Over Feed Cost From Veal
Production With Calves Varying in
Birth Weight and Marketed at 150 Pounds

Birth weight of calves -lbs.	Amount of milk -lbs.	Value of milk at 1.20 per cwt.	Value of veal at 8.00 per cwt.	Income over Feed Cost
40	1100	\$13.20	\$12.00	-1.20
50	1000	12.00	12.00	--
60	900	10.80	12.00	1.20
70	800	9.60	12.00	2.40
80	700	8.40	12.00	3.60
90	600	7.20	12.00	4.80
100	500	6.00	12.00	6.00

Price of Milk or Butterfat

When milk and butterfat prices are high, then the market price of veal must be correspondingly high if the making of veal is to be more profitable than the sale of milk or butterfat. With milk at \$1.60 per hundred pounds or 40 cents per pound of butterfat, on the farm, the calf weighing 100 pounds at birth would consume \$8.00 worth of milk; the 60 pound calf would consume milk valued at \$14.40.

If milk is worth \$1.00 per 100 pounds, based on butterfat at 25 cents per pound, and no value is placed on the skim milk, the large calf would have a feed cost of \$5.00 as compared to \$9.00 for the calf weighing 60 pounds at birth.

Price of Veal

The third main consideration as to whether veal production is profitable or not, namely the price of veal, is, of course, very important. Veal, as sold on the market is graded according to fatness, finish, age, and weight. Choice veal, the highest grade, usually sells at approximately \$1.00 per 100-weight more than good veal, the next highest classification. Likewise, good veal usually sells for about \$1.00 per 100-weight more than medium veal; and medium veal some \$1.50 per 100-weight more than cull or common veal. If one attempts to feed calves for veal, it is certainly desirable to produce the highest possible grade.

Again using the example mentioned before of the calf weighing 100 pounds at birth and sold when weighing 150 pounds, if this calf graded choice and the market price was \$8.50 per 100-weight, it would bring \$12.75. With a feed cost of \$5.00 on the basis of 4% milk and 25-cent butterfat, the return above feed cost on the calf would be \$7.75. In the case of the calf weighing 60 pounds at birth and consuming 900 pounds of milk, and provided it also met the choice grade, the return above cost of feed on the basis of 25-cent butterfat, would be \$3.75.

If the calves used in the illustration graded only medium and the price received was \$6.50 per 100-weight, the large calf would give a return above feed-cost of \$4.75 as compared to 75 cents on the small calf.

If milk could be sold for \$1.60 per 100 pounds on the farm, the large calf grading medium would return only \$1.75, and the small calf would show a net loss of \$4.65. At this price for milk, only the large calf grown into choice grade veal would return a profit above the feed cost.

In the above illustrations no value has been placed on the calf at birth.

It is interesting to note that in Oregon Agricultural Experiment Station Bulletin No. 318, which reports records obtained on some 3700 veal calves for the year 1932, the average calf consumed 488 pounds of milk testing 4.2% butterfat, the milk being fed over a 41-day feeding period. With 25-cent butterfat, or \$1.05 per 100 pounds for the milk, this represents a feed cost of \$5.12. If the average of these calves weighed 140 pounds on sale and graded medium, carrying a price of \$6.50 per 100-weight, the return above feed cost would amount to \$3.97 per calf.

Stabling Veal Calves

A calf fed for veal should be kept in a dark stall and should be controlled so that it does not take too much exercise. It is the usual practice in Denmark and other European countries to place calves in very small darkened stalls when being fed for veal.

Experiments conducted at the Pennsylvania Agricultural Experiment Station have shown that calves fed whole milk and maintained in dark stalls gained on the average two and two-tenths pounds daily. Calves allowed whole milk from nurse cows gained one and seven-tenths pounds daily, and calves fed skim milk and grain gained a little less than one pound daily. It would seem that keeping calves in darkened pens is very desirable for good gains. This experiment also indicated that it is almost impossible to grow the calf quickly enough in order for it to make good gains on skim milk and grain. If the calf does grow slowly, it is usually more than six or seven weeks old at marketable age and does not show finish, thus it goes into the grade of cull or common veal, which sells at a much lower price than the top grades.

In conclusion, it appears that if dairymen are to feed calves for veal, the first consideration should be to select a calf which is large at birth; second, to feed the calf all the whole milk it will take in order to grow it rapidly; and third, to maintain it in quarters sanitary in every way, but not too roomy so that the calf does not expend a great deal of energy in taking exercise.

-----000-----