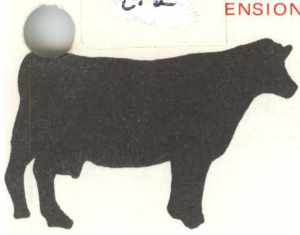


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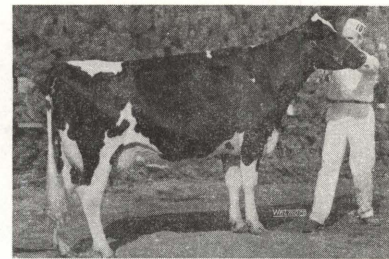
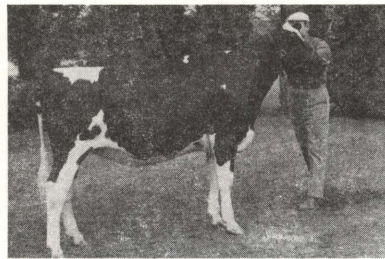
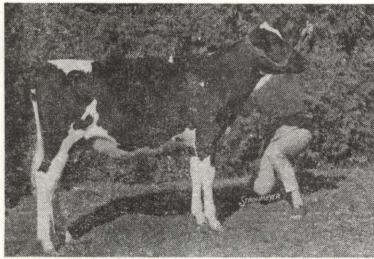
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Collins-Crest Ivanhoe Triune J is an example of a good heifer that with proper raising, became an even better cow (courtesy of Holstein-Friesian Association of America).

DAIRY REPLACEMENT HEIFERS:

The Cost of Raising Them and Their Value

G. M. Jones
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Few dairymen realize how much money is invested in a replacement heifer by the time that she reaches calving age (24 mos.). Many little items must be considered in establishing either the value of a dairy animal or the cost of raising one. Table 1 estimates the non-feed inputs at approximately \$349. Labor and the value of a live calf are the most costly items.

The cost of feed accounts for 50 to 58% of the investment in the raising of replacements. Examples of several different feeding programs for raising heifers to 24 mos. are shown in Table 2. Milk was fed for four weeks and hay and calf starter offered after the first week. Dairymen could save \$11 by feeding milk replacer or \$21 by using pickled colostrum (also referred to as sour or fermented colostrum). The latter saving represents about 6% of the feed cost.

Table 1. Costs, other than feed, for raising calves to 24 months

	\$per calf	Your farm
3 day old calves	100.00	_____
Labor (55 hr. at \$2.50/hr) ⁺	137.50	_____
Buildings and equipment, machinery, etc. ⁺	14.55	_____
Bedding ⁺	11.25	_____
Veterinary expenses and medical ⁺	5.00	_____
Breeding (\$10/insemination x 2 services/conception)	20.00	_____
Utilities ⁺	1.35	_____
Insurance	3.25	_____
Mortality cost	15.10	_____
Miscellaneous ⁺	7.83	_____
Interest on above costs at 8% (over 24 mos.)	33.17	_____
TOTAL	\$349.00	\$_____

⁺J. M. Moore. 1974. Costs and dairy return guides for Virginia. Extension Report M.B. 202, Department of Agricultural Economics, VPI & SU, Blacksburg.

Feed costs were established by breaking them down by various age groups (0-3 mos., 4-6 mos., 7-9 mos., 10-23 mos. and the 24th mo.) and estimating feed consumption according to recommendations and nutrient requirements. Calf mortality was assumed to be 7.2, 1.4 and 1.0% for the first month, 1 to 6 mos. and 6 to 24 mos., respectively.

Dairymen can save approximately \$120 per calf by using improved pastures for seven months of the year. Quality of forage becomes extremely important and the above refers only to good quality pasture; allowing heifers access to non-improved permanent pastures, with little concentrate supplement and/or poor quality hay, is one of the main reasons why heifers calve at 33 mos. of age rather than the desired 24 mos. Such practices would raise total costs to above those obtained when they were not allowed to graze.

Feed costs were based upon current prices or the estimated cost of producing forage and pasture. These estimated costs assume that dairymen pay \$2.50 per hour for hired help or for their own labor and earn 8% interest on their investment. An investment of \$700-\$800 suggests that dairymen cannot afford to delay first calving until heifers reach 30 mos. old nor can they afford to raise heifers sired by poor quality bulls.

Table 2. Amounts of feed and estimated feed cost from birth to 24 months under three systems of rearing

Feedstuff [†]	Ration				Your Farm price \$
	Hay lb.	Hay + Silage lb.	Hay + Pasture [‡] lb.	lb.	
Milk	230	230	230	230	
Concentrate					
18% Protein	244	594	244	244	
12% Protein	1,140	492	735	735	
Corn	---	---	675	675	
Alfalfa hay	535	6,939	535	535	
Grass hay	11,945	---	3,000	3,000	
Corn silage	---	12,157	---	---	
Pasture	---	---	420d	93.65	
Interest at 8% (over 24 mos.)	---	28.86	---	24.42	
TOTAL FEED	\$459.23	\$470.74	\$340.68	\$	
OTHER COSTS	349.00	349.00	349.00	\$	
TOTAL VALUE	\$808.23	\$819.74	\$689.68	\$	

[†]Feed costs: Milk, \$9.50/cwt.; milk replacer (10% fat), \$35/cwt.; 12% concentrate, \$130/ton; 18% concentrate, \$140/ton; grain corn, \$125/ton; corn silage, \$17/ton; alfalfa hay, \$70/ton; grass hay, \$50/ton; and improved pasture, \$6.75/month.

[‡]Improved pasture.

Total cash costs range from \$400 to \$535 (Table 3). This includes feed, milk, pasture, buildings and equipment, bedding, health, breeding fees, utilities, etc., but excludes reimbursement for labor, value of the calf and return on investment if capital had been invested in some other manner.

It is costly to raise herd replacements but it assures a dairyman of a calf's health status, age, breeding age and pedigree. It eliminates transportation stress and the cost, time and effort which would be required to find good replacements.

Much of this investment can be returned by breeding heifers to calve at 24 mos. rather than 30 mos. (DHI average). A heifer, which calves at 24 mos. of age and produces 12,000 lb. milk during her first lactation, may produce 3,800 lb. more milk at 56 mos. of age (the average age in most herds) and 6,700 lb. more at 7 yrs. of age. Feed costs are about \$2.19 per 100 lb. milk produced and, thus, the additional returns over feed costs at 56 and 84 mos. of age are \$278 and \$490, respectively, in favor of freshening at 24 months of age.

Table 3. Actual cash expenditures for raising calves to 24 months

	Feeding program		
	Hay	Hay + silage	Hay + pasture
Cash costs	\$522.46	\$533.97	\$403.91
Non-cash costs	285.77	285.77	285.77
TOTAL	808.23	819.74	689.68