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# Dairy Herd

  

## PLANNING GUIDE



Even with current concerns with milk surpluses, falling milk prices, and increasing operating expenses, a well-managed dairy enterprise is still profitable. But many dairymen are not doing that well. They are asking: Should we continue in dairying? This guide is designed to provide planning information and procedures for use in the present situation.

### SHOULD I CONTINUE IN DAIRYING - A SHORT TERM LOOK

To continue in the short run, a dairyman should at least cover feed and other cash costs. Estimated variable costs and returns (see line 5, page 3, this year) would indicate that the average and above average dairymen are more than covering these costs.

### SHOULD I CONTINUE IN DAIRYING - A LONGER TERM LOOK

Generally, a dairyman can compete with other dairymen and other farm enterprises if the following locational, resource and management conditions prevail:

**LOCATION** Access to a stable milk market (preferably Grade A) and situated on land better suited to forage than to feedgrains.

**RESOURCES/  
MANAGEMENT** Dairying tends to fit best on smaller farms where land is limiting relative to labor. This means that your skills should be strongest in handling animals. A skilled herdsman should be able to handle 40-45 cows with a 14,000 pound herd average. You should also be able to keep calf death losses and calving interval low enough that you can replace the herd at a rate that will permit close culling of the herd. Rations should be balanced carefully and feeding rates tied closely to levels of production. Good records should be kept to aid you in feeding and culling. See lines 10 and 11, page 3.

The entering or expansion minded dairyman should also consider several other factors such as: Do you like to work with animals? How old are you? How is your health? How good are your facilities? What is your financial and labor situation?

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PLANNING INFORMATION

**TOTAL CASH INCOME** - Includes milk sales plus cull sales calculated as follows: cull cows, 1,300# x 30% x \$45/cwt; bull calves, 42% x \$100; heifer calves, 4% x \$100; non-breeding heifers, 5% x 900# x \$60.

**TOTAL VARIABLE EXPENSES** - Include only those cash costs and home raised items which relate directly to the dairy cow and her replacement. These costs will vary by herd size, production level, kind and amount of technology used, etc.

**HOME PRODUCED RESOURCES USED** - The annual feed requirements per cow and normal replacement (about 1.0 replacement animals per dairy cow) used in the example are:

	12,000 Pounds Of Milk Per Cow			
	High Hay		High Silage	
	Per Day <sup>1/</sup>	Per Year <sup>2/</sup>	Per Day <sup>1/</sup>	Per Year <sup>2/</sup>
Hay	25#	6.0 ton	16#	4.25 ton
Corn Silage	22#	5.2 ton	45#	9.75 ton
Pasture, Hay Eq. <sup>3/</sup>	--	0.8 ton	--	0.8 ton
Corn Equivalent	15#	100 bu.	13.8#	90 bu.
Soybean Meal	1/2#	320 lbs.	3/4#	380 lbs.

	16,000 Pounds Of Milk Per Cow			
	High Hay		High Silage	
	Per Day <sup>1/</sup>	Per Year <sup>2/</sup>	Per Day <sup>1/</sup>	Per Year <sup>2/</sup>
Hay	25#	6.0 ton	16#	4.25 ton
Corn Silage	22#	5.2 ton	45#	9.75 ton
Pasture, Hay Eq. <sup>3/</sup>	--	0.8 ton	--	0.8 ton
Corn Equivalent	17#	110 bu.	15.3#	100 bu.
Soybean Meal	2.3#	960 lbs.	2.5#	1,020 lbs.

<sup>1/</sup> Average amount of feed fed per day to dairy cow only.

<sup>2/</sup> For annual totals, multiply daily ration times 365 days and add 1/2 of feed required by heifer replacements as shown on page 4.

<sup>3/</sup> For replacement heifer only. If no pasture is used, add this H.E. requirement to hay and/or corn silage tonnage.

**Repairs** - Repair costs on dairy buildings and equipment, tractors, trucks and cars that would not be incurred if items were not used for dairy: \$45 per cow.

**Bedding** - Requirements vary with the waste management system from about 500 lbs. per cow in a liquid manure system to 1.5 tons in a solid manure handling system.

**RETURN TO LABOR AND FACILITIES** - These returns remain after paying direct cash costs, market value for home raised feeds, bedding and interest on livestock investment.

**FIXED COSTS** - Include those costs which tend to continue regardless of whether production takes place.

**FACILITIES** - The following assumptions regarding buildings (including feed storage) and equipment.

	Old	New Low Cost	New. Mod. Cost
Buildings	\$500	\$1,200	\$1,500
Equipment	600	800	1,000

**LABOR AND MANAGEMENT CHARGE** - Annual labor hours required to care for cow and replacement times desired hourly rate. Typical hourly labor requirements per cow unit are:

	40 Cows	75 Cows	100 Cows
Stanchion, Conventional (hrs.)	85	--	--
Stanchion, Mechanized (hrs.)	75	65	60
Free Stall (hrs.)	65	50	40

**ESTIMATED LONG RUN COSTS AND RETURNS**  
(per cow unit with replacements at 1:1 basis)

	NEXT 3 - 5 YEARS			YOUR FARM
Milk Sold Per Cow (#)	12,000	14,000	16,000	
Milk sales @ \$11.50	\$1,380	\$1,610	\$1,840	
Cull sales	220	240	260	
Total Cash Income	(1) \$1,600	\$1,850	\$2,100	
 <u>VARIABLE COSTS</u>				
Feed Costs:				
Corn eq. - 90, 95, 100 bu. @ \$2.65	\$238	\$252	\$265	
Corn silage - 9.75 tons @ \$22	214	214	214	
Hay - 4.25 tons @ \$60	255	255	255	
Purchased feeds (protein, salt, mineral)	135	150	160	
Total Feed Costs	(2) \$842	\$871	\$894	
 <u>OTHER VARIABLE COSTS</u>				
Hauling & marketing (35¢/cwt + \$8 for culls)	\$50	\$57	\$65	
Health	45	50	55	
Breeding	18	20	22	
Power and fuel	80	80	80	
Repairs	45	45	45	
Bedding	40	40	40	
Supplies, test, etc.	55	55	55	
Insurance on livestock	10	10	10	
Interest on livestock (1,200 x 12.5%)	(3) 150	150	150	
Total Other Costs	(4) \$493	\$507	\$522	
Total Variable Costs (2 + 4)	(5) \$1,335	\$1,378	\$1,416	
Return To Labor & Facilities (1 - 5)	(6) \$265	\$472	\$684	
 <u>FIXED COSTS</u>				
Buildings and equipment	(7) \$160	\$175	\$185	
Labor and management	(8) 250	250	250	
Total Fixed Costs (7 + 8)	(9) \$410	\$425	\$435	
Return Over All Costs [1 - (5+9)]	(10) -\$145	\$47	\$249	
Return To Labor (8 + 10)	(11) \$105	\$297	\$499	
Maximum Principal And Interest Payment Per Cow Per Year [10 + (3+7)]	(12) \$165	\$372	\$584	
Maximum Debt Per Cow When				
Principal And Interest Are: 12%	\$1,375	\$3,100	\$4,865	
16%	\$1,030	\$2,325	\$3,650	

ESTIMATED COST OF RAISING DAIRY HEIFERS

HEIFERS - BIRTH TO 24 MONTHS

		<u>NEXT 3-5 YEARS</u>	<u>MY FARM</u>
Value of calf at birth (including death loss)		\$100	_____
<b><u>FEED*</u></b>			
Milk replacer	40 lbs.	20	_____
Calf starter	90 lbs.	10	_____
Corn equivalent	20 bu.	53	_____
Protein supplement	160 lbs.	21	_____
Hay equivalent	4.5 tons	276	_____
(3 tons silage and 3.5 tons hay)			
Salt and mineral		5	_____
Pasture charge		22	_____
Total Feed Cost		\$407	_____
<b><u>OTHER VARIABLE COSTS</u></b>			
Bedding	1,200 lbs.	30	_____
Health		22	_____
Breeding fee (1.5 services/replacement)		25	_____
Power, fuel, repairs		10	_____
Supplies, miscellaneous		5	_____
Total Nonfeed Cost		\$ 92	_____
Interest on feed and other costs (16% x ½ total)		38	_____
Total Calf, Feed and Other Costs		\$637	_____
<b><u>OTHER REQUIRED RESOURCES</u></b>			
Building @10% (\$120-200)		16	_____
Equipment @17% (\$40-60)		9	_____
Interest on original animal		35	_____
Labor (10-30 hours)	15 hrs.	60	_____
Total Other Resources		120	_____
<b>TOTAL COST OF RAISING A HEIFER</b>		<b>\$757</b>	_____

\* Prices used: corn - \$2.65 per bushel; corn silage - \$22 per ton; hay - \$60 per ton; protein - \$13 per cwt.; 16 percent protein calf starter - \$11 per cwt.; and milk replacer - \$50 per cwt.