


**2003 DAIRY COW AND REPLACEMENT BUDGET -- LARGE BREED<sup>1</sup>**
**Forage= 80% Corn Silage and 20% Hay**

ITEM	PRICE PER UNIT	--- Pounds of Milk Sold Per Cow <sup>2</sup> ---				YOUR BUDGET
		18,000	21,000	24,000	27,000	
<b>RECEIPTS</b>						
Milk Sales <sup>3</sup>	\$11.00 /cwt	\$1,980	\$2,310	\$2,640	\$2,970	_____
Bull Calf <sup>4</sup>	80 /head	36	36	36	36	_____
Heifer <sup>5</sup>		28	34	37	40	_____
Cull Cow <sup>6</sup>	35 /cwt	162	162	162	162	_____
<b>TOTAL RECEIPTS</b>		2206	2542	2875	3207	_____
<b>Variable Costs</b>						
Feed <sup>7</sup>						
Hay Equiv.	120 /ton	383	393	401	405	_____
Corn Silage	24.45 /ton	267	303	320	339	_____
Corn	2.62 /bu	146	163	180	196	_____
Soybean Meal 48%	0.10 /lb	263	298	334	371	_____
BiCarb	0.16 /lb	6	7	8	9	_____
Limestone	0.05 /lb	8	8	9	8	_____
Mag.Ox.	0.21 /lb	3	3	3	3	_____
Salt TM	0.12 /lb	17	17	17	17	_____
DiCal Phos	0.20 /lb	28	28	28	29	_____
Selenium 90	0.36 /lb	9	9	9	9	_____
Vitamins A,D,E	0.40 /lb	8	8	8	8	_____
Feed Additives	0.45 /lb	0	0	78	78	_____
Milk Replacer	0.85 /lb	13	13	13	13	_____
<b>TOTAL FEED COSTS</b>		1151	1250	1409	1486	_____
Other Variable Costs						
Veterinary & Medicine		75	80	85	90	_____
Breeding, Milk Testing & Reg.		35	40	45	50	_____
Utilities		64	66	68	70	_____
Bedding <sup>8</sup>		32	32	32	32	_____
Misc. & Supplies		106	106	106	106	_____
Marketing & Hauling Costs	0.50 /cwt	90	105	120	135	_____
Posilac® (bST) <sup>9</sup>	5.80 /dose	0	0	93	93	_____
Int. on Oper. Capital <sup>10</sup>	8 %	59	63	74	77	_____
<b>TOTAL OTHER VARIABLE COSTS</b>		461	492	622	653	_____
<b>TOTAL VARIABLE COSTS</b>		1611	1742	2031	2139	_____
<b>Fixed Costs</b>						
Labor Charge <sup>11</sup> 60 hrs.	10.50 /hr	630	630	630	630	_____
Interest & Insurance on Cow and Calf <sup>12</sup>		83	96	102	108	_____
Equipment Charge <sup>13</sup>	\$700 /cow	123	123	123	123	_____
Building Charge <sup>14</sup>	\$3,000 /cow	438	438	438	438	_____
Management Charge <sup>15</sup>	5%	110	127	144	160	_____
<b>TOTAL FIXED COSTS</b>		1385	1414	1436	1459	_____
<b>TOTAL COSTS</b>		2996	3156	3468	3598	_____
<b>RETURN ABOVE VARIABLE COSTS</b>		594	799	843	1069	_____
<b>RETURN ABOVE TOTAL COSTS</b>		(790)	(614)	(593)	(390)	_____
----- Per cwt of Milk Produced -----						
<b>TOTAL RECEIPTS</b>		12.25	12.10	11.98	11.88	_____
<b>FEED COSTS</b>		6.39	5.95	5.87	5.50	_____
<b>TOTAL VARIABLE COSTS</b>		8.95	8.30	8.46	7.92	_____
<b>TOTAL COSTS</b>		16.65	15.03	14.45	13.33	_____

FOOTNOTES TO RIGHT



<sup>1</sup> Enterprise budget includes the costs of a one cow lactation plus dry period as well as a replacement heifer. Dairy cows are presumed to be in the herd for three years. As a result, the dairy cow and replacement budgets include 0.38 of the feed requirements of raising a heifer. Heifer raising costs and feed requirements are given in the heifer budgets.

<sup>2</sup> "Milk Sold" equals the average pounds sold per cow over a 12-month period. It is about 95 percent of production as reported by the DHIA Rolling Herd Average.

<sup>3</sup> The milk price is stated as the gross per cwt price less promotion and government assessment.

<sup>4</sup> Bull calf receipts assume that 0.45 bulls are sold per cow per year. The 0.45 is based on a 13 month calving interval, a 2 percent death loss, and 50 percent of the calf crop (i.e.,  $0.45 = (12 \text{ months in a year} / 13 \text{ month calving interval}) \times 0.98 \text{ calves born live} \times 0.50 \text{ of calves born are bull calves}$ ). Bull calf price is \$80 per head. Receipts equal  $0.45 \times \$80$ .

<sup>5</sup> Heifer receipts are based on 11 percent cull rate. Of the 11 percent, 6 percent are sold at birth and 5 percent are sold at springing. Heifer calf prices and springing heifer prices are shown below:

	-----milk production-----			
	18,000	21,000	24,000	27,000
Heifer Calf	\$100	\$135	\$145	\$155
Springing Heifer	\$1,000	\$1,200	\$1,300	\$1,400

<sup>6</sup> Cull cow receipts are based on a 33 percent cull rate, sale price at \$35 per cwt, and culled animals weighing 1,400 lbs. Cull cow receipts equal  $0.33 \times \$0.35/\text{lb} \times 1,400 \text{ lbs}$ .

<sup>7</sup> Feed costs are calculated assuming 10 percent and 3 percent losses for forages and other feeds, respectively. Values not in italics give requirements for the cow and replacement. Values in italics are for the cow only.

Corn silage priced at cost of production (\$19.45/ton) + \$5 handling charge. Corn is priced at cost of production.

Costs of production can be found in the Ohio Crop Enterprise Budgets. Feed additives were assumed to be fed to the two highest production levels and cost \$0.45/lb. Feed additives could consist of any combination of supplemental fat, special trace mineral supplements, direct-fed microbials, etc.

Item	Price	Unit	18,000	21,000	24,000	27,000				
Hay Equiv.	\$120.00	/ton	3.19	<i>1.88</i>	3.28	<i>1.97</i>	3.35	<i>2.04</i>	3.38	<i>2.07</i>
Corn Silage	\$24.45	/ton	10.92	<i>8.62</i>	12.41	<i>10.11</i>	13.09	<i>10.79</i>	13.86	<i>11.56</i>
Corn	\$2.62	/bu	56	<i>40</i>	62	<i>47</i>	69	<i>53</i>	75	<i>59</i>
Soybean Meal	\$0.10	/lb	2626	<i>2457</i>	2983	<i>2814</i>	3344	<i>3175</i>	3712	<i>3543</i>
BiCarb	0.16	/lb	38	<i>38</i>	44	<i>44</i>	50	<i>50</i>	56	<i>56</i>
Limestone	0.05	/lb	168	<i>148</i>	154	<i>134</i>	171	<i>151</i>	162	<i>142</i>
Mag.Ox.	0.21	/lb	14	<i>14</i>	14	<i>14</i>	14	<i>14</i>	14	<i>14</i>
Salt TM	0.12	/lb	145	<i>126</i>	145	<i>126</i>	145	<i>126</i>	145	<i>126</i>
DiCal Phos	0.20	/lb	138	<i>119</i>	138	<i>119</i>	138	<i>119</i>	143	<i>124</i>
Selenium 90	0.36	/lb	24	<i>24</i>	24	<i>24</i>	25	<i>25</i>	25	<i>25</i>
Vits. A,D,E	0.4	/lb	21	<i>16</i>	21	<i>16</i>	21	<i>16</i>	21	<i>16</i>
Feed Additives	0.45	/lb	0	<i>0</i>	0	<i>0</i>	174	<i>174</i>	174	<i>174</i>
Milk Replacer	0.85	/lb	15		15		15		15	

<sup>8</sup> Bedding is assumed to be sand. Adjust your bedding costs accordingly.

<sup>9</sup> Posilac® used only at 24,000 and 27,000 lb production levels; 1 dose every two weeks for 32 weeks starting at 63rd day of lactation.

<sup>10</sup> Interest costs are based on a 8 percent interest rate. Interest costs are calculated on 50 percent of all variable costs excluding marketing and hauling.

<sup>11</sup> Part or all of labor may be a variable cost if paid labor varies with cows milked. It's a fixed cost if labor costs do not change with cows milked. Labor charge includes workers compensation, social security, and fringe benefits.

<sup>12</sup> This cost is based on a 8 percent interest rate and a 0.43 insurance rate. The cow's value is based on an average of the springing heifer price (see footnote 5) and the cull cow price (see footnote 6). The heifer's value is based on an average of the calf price and springing heifer price. Total value on which the interest and insurance charge is based is the cow's value plus 0.38 times the heifer's value.

<sup>13</sup> Equipment charge equals 17.6% of new equipment costs. Costs include interest, insurance, depreciation, and repairs. New equipment costs equals \$1,400 per cow and heifer. Equipment includes feed processing and distribution system, manure/waste system, tractor/scrapper, 1/2 pickup, and other miscellaneous items.

Based on "Livestock Building and Equipment Requirements", KSU Farm Management Guide, Rodney Jones and James Murphy

<sup>14</sup> Building charge equals 14.7% of new building costs. New building costs equal \$2,300 per cow and heifer.

Costs include interest, insurance, depreciation, and repairs. Buildings include free stall barn, feed storage, milking facilities, and fencing/corrals.

Based on "Livestock Building and Equipment Requirements", KSU Farm Management Guide, Rodney Jones and James Murphy

<sup>15</sup> Management charge is 5 percent of total receipts.