

Dairy (Grazing) Planning Budget

Using this planning budget, dairy farmers may estimate their costs and returns for 2022. Table 1 presents estimates for a 150-cow rotational grazing dairy (replacements raised on farm) in Missouri. Assumptions were based on price forecasts as of October 2021. Detailed inputs, feed requirements and investments are summarized in Tables 2, 3 and 4. The production practices used to develop these cost estimates are common for Missouri grazing dairies. Use the “Your estimate” column to plan your operation’s costs and returns for 2022.

Table 1. Missouri dairy (grazing) planning budget for 2022.

	11,000 pounds milk sold		14,000 pounds milk sold		Your estimate
	Dollars per cow ¹	Dollars per cwt ¹	Dollars per cow ¹	Dollars per cwt ¹	
Income					
Milk sales	2,007.54	18.25	2,555.05	18.25	
Government payments	137.50	1.25	175.00	1.25	
Bull and surplus heifer sales	66.63	0.61	66.63	0.48	
Cull cow sales	128.70	1.17	128.70	0.92	
Total income	2,340.37	21.28	2,925.38	20.90	
Operating costs					
Feed	1,067.68	9.71	1,158.56	8.28	
Labor	375.00	3.41	375.00	2.68	
Veterinary, drugs and supplies	85.00	0.77	95.00	0.68	
Utilities and water	55.00	0.50	55.00	0.39	
Fuel, oil and vehicle	65.00	0.59	65.00	0.46	
Milk hauling and promotion	110.00	1.00	140.00	1.00	
Building and equipment repair	166.09	1.51	166.09	1.19	
Breeding/genetic charges	54.00	0.49	54.00	0.39	
Professional fees (legal, accounting, etc.)	12.00	0.11	12.00	0.09	
Miscellaneous and DMC premiums	15.62	0.14	19.88	0.14	
Operating interest	43.59	0.40	46.01	0.33	
Total operating costs	2,048.99	18.63	2,186.55	15.62	
Ownership costs					
Depreciation on buildings and equipment	106.18	0.97	106.18	0.76	
Interest on land, buildings and equipment	225.17	2.05	225.17	1.61	
Interest on breeding stock	55.20	0.50	55.20	0.39	
Insurance/taxes on capital items	54.91	0.50	54.91	0.39	
Total ownership costs	441.46	4.01	441.46	3.15	
Total costs	2,490.45	22.64	2,628.01	18.77	
Income over operating costs	291.38	2.65	738.84	5.28	
Income over total costs	-150.07	-1.36	297.38	2.12	

¹ Totals may not sum due to rounding.
 Abbreviations: cwt = hundredweight

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Table 2. Input assumptions used in dairy (grazing) planning budget for 2022.

Selected input quantities	Quantity	Selected input prices	Dollars per unit
Cull cow sale weight, pounds	1,100	Cull cow sale price, per hundredweight	65
Labor, cows per worker	100	Annual labor salary and benefits, per worker	45,000
Calf crop, percent	95	Bull calf sale price, per head	100
Heifer replacement, percent	22	Surplus heifer calf sale price, per head	75
Operating interest, percent	4.6	Milk price, per hundredweight	18.25

Table 3. Feed requirements in dairy (grazing) planning budget for 2022, on a per cow basis.

Feed description	Cost per unit	11,000 pounds milk sold		14,000 pounds milk sold	
		Pounds	Dollars ²	Pounds	Dollars ²
Pasture (intensive dairy), dry matter per ton	90.00	7,335	330.09	7,658	344.59
Alfalfa hay, per ton	240.00	1,289	154.73	1,289	154.73
Corn, cracked, per bushel	5.25	910	85.31	1,384	129.78
Soybean hulls, per ton	190.00	910	86.45	1,068	101.47
Distillers grain, dry, per ton	230.00	791	90.91	949	109.09
Grass hay, per ton	85.00	670	28.47	639	27.18
Minerals/vitamins, per ton	1,100.00	186	102.38	186	102.38
Total lactating and dry cow feed cost			878.34	969.22	
Replacement heifer feed and forage cost ¹			189.34	189.34	
Total feed cost per cow			1,067.68	1,158.56	

¹ Total replacement heifer (0 to 24 months) feed cost is \$860.64 and was adjusted to a 22% heifer replacement rate.

² Totals may not sum due to rounding.

Table 4. Investment assumptions in dairy (grazing) planning budget for 2022.

Description	Quantity	Dollars per unit	Total dollars	Dollars per cow ²
Land, acres	200	3,700	740,000	4,111
Milking parlor, stalls	24	7,000	168,000	933
Breeding herd, cows	180	1,200	216,000	1,200
Working facility			14,800	82
Feed storage			11,480	64
Manure storage system			31,250	174
Equipment			31,000	172
Total¹			1,212,530	6,736

¹ Totals may not sum due to rounding.

² Represents total cows in herd.

Farmers can also customize this budget to fit their own operations by using the [Missouri Dairy Enterprise Tool](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/MODairyBudget.xlsx) (<https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/MODairyBudget.xlsx>). Download the spreadsheet tool to keep an electronic copy of your cost and return estimates for dairy production and heifer raising in Missouri.