

Dairy Heifer Planning Budget

This budget presents information useful to farmers raising dairy heifers. Table 1 presents estimates for the 2021 year for dairy calves purchased at birth, bred and sold at 24 months in Missouri. Assumptions were based on price forecasts as of October 2020. Detailed inputs and feed requirements are summarized in Tables 2 and 3. The production practices used to develop these cost estimates are common in Missouri. Farmers are encouraged to customize this budget to fit their operation.

Table 1. Missouri dairy heifer planning budget for 2021.

| | Per heifer sold ¹ | Your estimate |
|---|------------------------------|---------------|
| Income | | |
| Springer heifer sales (0.95 head) | 1,187.50 | |
| Cull heifer sales (0.025 head) | 24.38 | |
| Yearling heifer sales (0.025 head) | 18.13 | |
| Less death loss (4 percent) of purchased calves | -3.40 | |
| Total income | 1,226.60 | |
| Operating costs | | |
| Purchased heifer calf and interest | 92.96 | |
| Feed (birth to 24 months of age) | 752.85 | |
| Labor | 155.00 | |
| Veterinary, drugs and supplies | 25.00 | |
| Breeding costs for artificial insemination services | 45.00 | |
| Transportation and marketing | 15.00 | |
| Utilities, fuel and oil | 18.75 | |
| Building and equipment repairs | 9.68 | |
| Miscellaneous | 15.00 | |
| Operating interest | 23.32 | |
| Total operating costs | 1,152.55 | |
| Ownership costs | | |
| Depreciation on buildings and equipment | 52.09 | |
| Interest on buildings and equipment | 23.95 | |
| Insurance and taxes on buildings and equipment | 14.08 | |
| Total ownership costs | 90.12 | |
| Total costs | 1,242.66 | |
| Income over operating costs | 74.05 | |
| Income over total costs | -16.06 | |
| Total cost per day per heifer sold | 1.60 | |
| Total cost per pound of gain per heifer sold | 0.96 | |
| Springer heifer breakeven price per head | 1,266.91 | |

¹ Totals may not sum due to rounding.

Table 2. Input assumptions used in dairy heifer planning budget for 2021.

| Selected input quantities | Quantity | Selected input prices | Dollars per unit |
|-------------------------------------|----------|--|------------------|
| Cull heifer sale weight, pounds | 1,300 | Cull and yearling heifer sale price, per pound | 0.75 |
| Yearling heifer sale weight, pounds | 725 | Springer heifer sale price, per head | 1,250.00 |
| Labor, hours | 10 | Labor cost, per hour | 15.50 |
| | | Heifer purchase price | 85.00 |

Table 3. Feed requirements for dairy heifer planning budget for 2021.

| Birth to 6 months (90 to 400 pounds) | | Pre-weaning ration (90 to 180 pounds) | | Transition ration (180 to 235 pounds) | | Early growing ration (235 to 400 pounds) | |
|---------------------------------------|---------------|--|----------------------|--|----------------------|---|----------------------|
| Feed description | Cost per unit | Units | Dollars ¹ | Units | Dollars ¹ | Units | Dollars ¹ |
| Milk replacer, per pound | 1.275 | 50 | 63.75 | | | | |
| Calf starter, per pound | 0.150 | 100 | 15.00 | 100 | 15.00 | | |
| Alfalfa hay, per pound | 0.100 | 20 | 2.00 | 90 | 9.00 | 225 | 22.50 |
| Calf grower, per pound | 0.140 | | | 50 | 7.00 | 450 | 63.00 |
| Grass hay, per pound | 0.040 | | | | | 225 | 9.00 |
| Pasture, per animal unit month | 15.00 | | | | | 0.4 | 6.13 |
| Feed cost per period | | | 80.75 | | 31.00 | | 100.63 |
| Total feed costs ² | | | 213.95 | | | | |
| 6 to 12 months (400 to 725 pounds) | | Winter ration | | Spring/Fall ration | | Summer ration | |
| Feed description | Cost per unit | Units | Dollars ¹ | Units | Dollars ¹ | Units | Dollars ¹ |
| Corn gluten feed, per pound | 0.0863 | 525 | 45.28 | | | 270 | 23.29 |
| Corn, cracked, per pound | 0.0670 | 387 | 25.92 | 252 | 16.88 | 234 | 15.67 |
| Soybean hulls, per pound | 0.0750 | 263 | 19.69 | 360 | 27.00 | 270 | 20.25 |
| Grass hay, per pound | 0.0400 | 1,350 | 54.00 | | | | |
| Mineral, per pound | 0.5375 | 36 | 19.35 | 36 | 19.35 | 36 | 19.35 |
| Pasture, per animal unit month | 15.00 | | | 1.1 | 16.88 | 1.7 | 25.31 |
| Feed cost per period | | | 164.23 | | 80.10 | | 103.87 |
| Average total feed costs | | | 214.15 | | | | |
| 12 to 24 months (725 to 1,380 pounds) | | Winter ration | | Spring/Fall ration | | Summer ration | |
| Feed description | Cost per unit | Units | Dollars ¹ | Units | Dollars ¹ | Units | Dollars ¹ |
| Corn gluten feed, per pound | 0.0863 | 225 | 19.41 | | | 207 | 17.85 |
| Corn, cracked, per pound | 0.0670 | 135 | 9.04 | 90 | 6.03 | 117 | 7.83 |
| Soybean hulls, per pound | 0.0750 | 90 | 6.75 | 180 | 13.50 | 207 | 15.53 |
| Grass hay, per pound | 0.0400 | 1,710 | 68.40 | | | | |
| Mineral, per pound | 0.5375 | 18 | 9.68 | 18 | 9.68 | 18 | 9.68 |
| Pasture, per animal unit month | 15.00 | | | 2.1 | 31.58 | 3.2 | 47.36 |
| Feed cost per period | | | 113.29 | | 60.79 | | 98.25 |
| Average total feed costs ³ | | | 324.75 | | | | |

¹ Totals may not sum due to rounding.² Feed cost adjusted to account for death loss (4 percent).³ Feed cost adjusted to account for sale of yearling heifers (2.5 percent).

Farmers can also develop their own custom budget by using the Missouri Dairy Enterprise Tool (<https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/MODairyBudget.xlsx>). This spreadsheet allows users to develop cost and return estimates for dairy and heifer raising.



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