

Pasture Fence Construction Budget

Constructing new fencing can be a large cost for landowners and livestock producers. However, the peace of mind and security provided by new pasture perimeter fences, interior dividing fences and sound corral facilities can also be very valuable. There are many different methods and materials used to construct farm fencing. Each method varies widely in cost and ease of construction. This guide focuses on some common types of fences constructed across the midwestern United States. All prices and inputs reflect conditions as of January 2024 and were gathered from name-brand fencing supply companies when available. Labor estimates were provided by four fence contractors who requested to remain anonymous.

Perimeter fences

Perimeter fencing is the single largest fencing cost on many non-feedlot operations. Perimeter fences are typically built with woven wire, barbed wire, smooth high tensile wire, or some combination of the three. This guide will consider all these fence types, specifically 47-inch woven wire fence with a top barbed wire, 5-strand barbed wire fence and 6-strand non-electrified smooth high tensile fence. Tables 1, 2 and 3 outline the materials and labor needed for 1,320 feet of each of these respective fence types constructed on gently rolling terrain with one 20-foot-wide gate and one intermittent stream crossing. Table 4 compares the costs for each type.

Table 1. Woven wire fence construction budget (1,320 feet).

| Item | Type | Quantity | Units | Price | Total |
|--|-------------------------------|---------------------------------|-----------------|----------------------|-----------------------|
| Corner or anchor posts | 3.5-inch by 8-foot steel pipe | 7 | each | 52.00 | 364.00 |
| Corner and anchor post braces | steel pipe h-bracing | 3 | each | 67.84 | 203.52 |
| Concrete mix | pre-mixed cement | 29 | bags (80 lb.) | 5.70 | 165.30 |
| Gates | 20-foot pipe gate | 1 | each | 450.00 | 450.00 |
| Woven wire | 47-inch woven wire | 4 | rolls | 260.00 | 1,040.00 |
| Barbed wire | 4-point barbed wire | 1 | rolls | 130.00 | 130.00 |
| Line posts | 6-foot t-post | 132 | posts | 6.00 | 792.00 |
| Fastening hardware | t-post clips | 10 | bags (100 each) | 9.00 | 90.00 |
| Anchor post fasteners | pipe post wire clips | 1 | bags (100 each) | 20.00 | 20.00 |
| Hired labor | total | 44.1 | hours | 25.00 | 1,102.50 |
| Machinery and tools | cost per man-hour | 44.1 | man-hours | 20.00 | 882.00 |
| | | | | Project total | Total per foot |
| Labor and tool cost | | | | 1,984.50 | 1.50 |
| Material cost | | | | 3,254.82 | 2.47 |
| Total cost | | | | 5,239.32 | 3.97 |
| Adjusted total cost¹ | Compensation for terrain | 5% of calculated material costs | | 5,402.06 | 4.09 |

1. Adjusted total cost compensates for varying degrees of challenging terrain and construction conditions. The budget reflects construction costs on gently rolling terrain with few rocks and no intermittent stream crossings. Labor costs are not affected by the calculation.

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Table 2. 5-wire barbed wire fence construction budget (1,320 feet).

| Item | Type | Quantity | Units | Price | Total |
|--|-------------------------------|---------------------------------|-----------------|----------------------|-----------------------|
| Corner or anchor posts | 3.5-inch by 8-foot steel pipe | 7 | each | 52.00 | 364.00 |
| Corner and anchor post braces | steel pipe h-bracing | 3 | each | 67.84 | 203.52 |
| Concrete mix | pre-mixed cement | 29 | bags (80 lb.) | 5.70 | 165.30 |
| Gates | 20-foot pipe gate | 1 | each | 450.00 | 450.00 |
| Barbed wire | 4-point barbed wire | 5 | rolls | 130.00 | 650.00 |
| Line posts | 6-foot t-post | 132 | posts | 6.00 | 792.00 |
| Fastening hardware | t-post clips | 7 | bags (100 each) | 9.00 | 63.00 |
| Anchor post fasteners | pipe post wire clips | 1 | bags (100 each) | 20.00 | 20.00 |
| Hired labor | total | 41.0 | hours | 25.00 | 1,023.75 |
| Machinery and tools | cost per man-hour | 41.0 | man-hours | 20.00 | 819.00 |
| | | | | Project total | Total per foot |
| Labor and tool cost | | | | 1,824.75 | 1.40 |
| Material cost | | | | 2,707.82 | 2.02 |
| Total cost | | | | 4,550.57 | 3.45 |
| Adjusted total cost¹ | Compensation for terrain | 5% of calculated material costs | | 4,685.96 | 3.55 |

1. Adjusted total cost compensates for varying degrees of challenging terrain and construction conditions. The budget reflects construction costs on gently rolling terrain with few rocks and no intermittent stream crossings. Labor costs are not affected by the calculation.

Table 3. 6-wire high tensile fence construction budget (1,320 feet).

| Item | Type | Quantity | Units | Price | Total |
|--|-------------------------------|---------------------------------|-----------------|----------------------|-----------------------|
| Corner or anchor posts | 3.5-inch by 8-foot steel pipe | 7 | each | 52.00 | 364.00 |
| Corner and anchor post braces | steel pipe h-bracing | 3 | each | 67.84 | 203.52 |
| Concrete mix | pre-mixed cement | 29 | bags (80 lb.) | 5.70 | 165.30 |
| Gates | 20-foot pipe gate | 1 | each | 450.00 | 450.00 |
| High tensile wire | 12.5 gauge | 2 | rolls | 170.00 | 340.00 |
| Line posts | 6-foot t-post | 89 | posts | 6.00 | 534.00 |
| Fastening hardware | t-post clips | 6 | bags (100 each) | 9.00 | 54.00 |
| Anchor post fasteners | pipe post wire clips | 1 | bags (100 each) | 20.00 | 20.00 |
| Tensioners | ratchet style | 12 | each | 5.35 | 64.20 |
| Hired labor | total | 32.8 | hours | 25.00 | 820.31 |
| Machinery and tools | cost per man-hour | 32.8 | man-hours | 20.00 | 656.25 |
| | | | | Project total | Total per foot |
| Labor and tool cost | | | | 1,476.56 | 1.12 |
| Material cost | | | | 2,195.02 | 1.66 |
| Total cost | | | | 3,671.58 | 2.78 |
| Adjusted total cost¹ | Compensation for terrain | 5% of calculated material costs | | 3,781.33 | 2.86 |

1. Adjusted total cost compensates for varying degrees of challenging terrain and construction conditions. The budget reflects construction costs on gently rolling terrain with few rocks and no intermittent stream crossings. Labor costs are not affected by the calculation.

Table 4. Summary of construction costs for three pasture perimeter fence types.

| | Woven wire + barbed wire | Five-barbed wire | Six-wire high tensile |
|-------------------------|-----------------------------|---------------------|--------------------------|
| Labor and tool cost | 1,984.50 | 1,842.75 | 1,476.56 |
| Material cost | 3,254.82 | 2,707.82 | 2,195.02 |
| Total cost ¹ | 5,402.06 | 4,685.96 | 3,781.33 |
| Total cost per foot | 4.09 | 3.55 | 2.86 |

¹Total costs represent the “adjusted total cost” as reported in Tables 1 through 3. Therefore, the figures here do not sum.

Customizing fence construction budgets

The fence construction budgets presented in this guide can be customized with the [Pasture Fence Construction Cost spreadsheet tool \(XLSX\)](https://www.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/pasture-fence-construction-budget.xlsx) (extension .missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/pasture-fence-construction-budget.xlsx). Use the tool to customize material costs, labor rates or labor requirements. Using the tool, the type of materials used and the overall size of the project can also be changed to best fit user needs. Note that fence construction is a highly detailed task that is done differently from farm to farm and year to year and the model is not infinitely variable. Customizing

these budgets with the spreadsheet tool will provide a more accurate estimate for your project.

Electric interior divider fence

Electric interior fencing is a cost-effective solution to implement rotational grazing plans or to allow grazing of crop residues where permanent fencing is not present. A two-strand electrified fence with step-in fiberglass posts measuring 1,320 feet in length is budgeted in Table 5. Note that this fence is meant to be portable. The materials purchased for this fence can be used elsewhere on

the farm while livestock are not present in the original location.

Corral fencing

Corral fencing is an important consideration when building or remodeling existing feedlot or cattle-working facilities. Table 6 shows a sample budget for constructing 500 feet of corral fencing made with used 2 7/8-inch diameter drill stem posts and 1-inch sucker rod laterals with 2 3/8-inch drill stem top rail.

The construction methods used to build corral fencing can vary. Similarly, there can be differences in costs based on the choice and price of materials and in

Table 5. Electric interior fence construction budget (1,320 feet).

| Item | Type | Quantity | Units | Price | Total |
|--|----------------------------------|---------------------------------|------------|----------------------|-----------------------|
| Anchor posts | 5-inch by 7 ft. foot wood posts | 3 | each | 12.50 | 37.50 |
| Anchor post insulators | | 6 | insulators | 1.25 | 7.50 |
| Wire | Polywire | 2 | rolls | 68.00 | 136.00 |
| Line posts | 4-foot fiberglass step-ins | 40 | posts | 3.75 | 150.00 |
| Fastening hardware | no fastener needed | N/A | | | |
| Gates | wire with plastic handle | 1 | gate | 13.25 | 13.25 |
| Hired labor | total | 4.3 | hours | 25.00 | 97.35 |
| Machinery and tools | cost per man-hour | 4.3 | hours | 20.00 | 77.88 |
| Electrifying system | ground rods | 3 | each | 15.00 | 45.00 |
| | wire spools (reels) | 2 | each | 100.00 | 200.00 |
| | 110 volt fence charger (5 joule) | 1 | each | 260.00 | 260.00 |
| | | | | Project total | Total per foot |
| Labor and tool cost | | | | 175.23 | 0.13 |
| Material cost | | | | 849.25 | 0.64 |
| Total cost | | | | 1,024.48 | 0.78 |
| Adjusted total cost¹ | Compensation for terrain | 5% of calculated material costs | | 1,066.95 | 0.81 |

1. Adjusted total cost compensates for varying degrees of challenging terrain and construction conditions. The budget reflects construction costs on gently rolling terrain with few rocks and no intermittent stream crossings. Labor costs are not affected by the calculation.

Table 6. Corral fence construction budget (500 feet).

| Item | Type | Quantity | Units | Price | Total |
|----------------------------|-------------------------------|----------|------------------|----------------------|-----------------------|
| Corner or end posts | 3.5 in. by 8 ft. steel pipe | 6 | each | 52.00 | 312.00 |
| Line posts | 2 7/8 in. by 8 ft. steel pipe | 456 | feet of pipe | 2.50 | 1,140.00 |
| Concrete mix | pre-mixed cement | 34 | bags (80 lb.) | 5.70 | 173.04 |
| Fence materials | 3/4-inch sucker rod | 100 | 25 foot sticks | 12.00 | 1,200.00 |
| | 2 3/8-inch. steel pipe | 500 | feet of pipe | 1.98 | 990.00 |
| Gates | 12 ft. heavy-duty bull gates | 48 | total gate width | 25.00 | 1,200.00 |
| Hired labor | total | 105 | hours | 25.00 | 2,625.00 |
| Machinery and tools | cost per man-hour | 105 | man-hours | 20.00 | 2,100.00 |
| | | | | Project total | Total per foot |
| Labor and tool cost | | | | 4,725.00 | 9.45 |
| Material cost | | | | 5,035.40 | 10.07 |
| Total cost | | | | 9,760.40 | 19.52 |

the methods used to install the fence. It is difficult to approximate the cost of machinery used to build the fence and quantify the time saved through additional mechanization.

Limitations

Tables 1-6 represent rough cost estimates to build a stretch of fence. Conditions on your own land or operation could make your costs significantly different.

Labor rates can significantly change the cost of a fence construction project. They may vary if you are using a professional contractor, a hired general laborer or installing the fence yourself. The labor rate used in this guide represents a hired general laborer with a low to intermediate skill level in construction and equipment operation.

Most farm owners and operators have different definitions of a “good” fence. For this reason, the budgets above may not perfectly align with the owner’s expectations for a particular fence project.

In general, a straight, continuous stretch of fence is the cheapest to build. Each additional corner, anchor, gate, or stream crossing will add additional time and expense to a project. The budgets above assume a straight fence with few special features.

Summary

Fencing is an important capital investment for pasture-based livestock operations. As with other capital investments, knowing the costs before investing is important. By estimating fence construction costs prior to starting a project, farm owners and operators can make informed decisions about the most economical pasture layout for their operation.

University of Missouri Extension offers resources for fence law, fence system design and general fence construction information. Additional resources are linked below.

[Missouri Fencing and Boundary Laws](https://extension.missouri.edu/publications/g810)
(extension.missouri.edu/publications/g810)

[Selecting Wire Fencing Materials](https://extension.missouri.edu/publications/g1191)
(extension.missouri.edu/publications/g1191)

[Managed Grazing Systems and Fencing for Distribution of Beef](https://extension.missouri.edu/publications/eq379)
(extension.missouri.edu/publications/eq379)

[Dairy Grazing: Fence and Water Systems](https://extension.missouri.edu/publications/m190)
(extension.missouri.edu/publications/m190)