

Broccoli Planning Budget

Using this budget, farmers can estimate the costs and returns for raising broccoli. Table 1 presents estimates for Missouri based on price forecasts in January 2025. The budget assumes broccoli is grown on 1 acre with drip irrigation and sold wholesale. Capital investments and a sensitivity analysis are summarized in Tables 2 and 3. Use the “Your estimate” column to plan your broccoli operation’s costs and returns.

Table 1. Missouri broccoli budget.

	Unit	Quantity	Price per unit	Dollars per acre	Your estimate
Income					
Broccoli	half-bushel boxes	900	15.49	13,941.00	
Total income				13,941.00	
Operating costs					
Plants (container)	thousands	14	39.95	560.42	
Fertilizer and lime	pound	1,415	0.14	205.00	
Herbicide	pint	1.5	3.56	5.34	
Insecticide	ounce	27	5.11	137.86	
Fungicide	pint	4.5	4.00	18.00	
Drip tape	roll	1.2	80.31	96.37	
Black plastic	roll	1.8	179.95	323.91	
Packaging boxes	each	900	1.35	1,215.00	
Ice and cooling	each	900	0.25	225.00	
Labor	hour	174.85	18.00	3,147.23	
Machinery fuel/repair/maintenance	acre			259.61	
Irrigation water	acre inch				
Irrigation fuel and oil	hour	90	0.49	44.10	
Irrigation repair/maintenance	acre			271.16	
Marketing	percent of sales	13,941	10.00	1,394.10	
Interest on operating capital	percent	6	7.75	306.25	
Total operating costs				8,209.34	
Ownership costs					
Land	acre			185.00	
Machinery	acre			142.92	
Irrigation system	acre			251.16	
Total ownership costs				579.08	
Total costs				8,788.42	
Income over operating costs				5,731.66	
Return to land and labor				9,063.88	
Income over total costs				5,152.58	

Note: Totals may not sum due to rounding.

Developed by
Peter Zimmer, Program Leader, Farm-Level Analysis for FAPRI; and **Mallory Rahe**, Associate Professor, Agricultural Business and Policy

Table 2. Capital machinery investments used in Missouri broccoli budget.

Item	Power unit	Passes	Labor (hours per pass)	Operating costs (dollars per pass)	Ownership costs (dollars per pass)
Chisel plow (9-foot)	2WD 75 hp	1	0.22	6.12	2.76
Disk harrow (10-foot)	2WD 75 hp	2	0.20	12.02	3.68
Fert-cyclone spin (750-pound)	2WD 75 hp	1	0.08	1.93	0.83
Disk + incorporate (10-foot)	2WD 75 hp	1	0.21	7.44	3.70
Planter/Water wheel (2-row)	2WD 75 hp	1	1.47	44.15	20.38
Cultivate + app ins (4-row)	2WD 75 hp	1	0.19	5.35	2.53
Sprayer air blast (16-foot, 100-gallon)	2WD 75 hp	4	0.25	39.60	24.46
Cultivate + sidedress (4-row)	2WD 75 hp	1	0.19	10.31	6.81
Trailer – vegetables (16-foot)	2WD 75 hp	1	0.09	1.87	0.71
Total cost			7.34	207.15	88.22

Table 3 provides annual profitability expectations (returns over total costs) under varying yield and price scenarios in full production and holding all costs constant.

Table 3. Sensitivity analysis for Missouri broccoli budget, income over total costs (dollars).

Percent change	Sale price per half-bushel	Yield per acre (half-bushel)						
		630	720	810	900	990	1,080	1,170
15% less	13.17	–494	691	1,876	3,061	4,246	5,431	6,616
10% less	13.94	–6	1,249	2,504	3,758	5,013	6,268	7,523
5% less	14.72	482	1,807	3,131	4,456	5,780	7,104	8,429
Base level	15.49	970	2,364	3,758	5,153	6,547	7,941	9,335
5% more	16.26	1,458	2,922	4,386	5,850	7,313	8,777	10,241
10% more	17.04	1,946	3,480	5,013	6,547	8,080	9,614	11,147
15% more	17.81	2,434	4,037	5,641	7,244	8,847	10,450	12,053

The budget presented here aggregates costs for some inputs. Farmers can find additional details and customize this budget to match their own operation by using the [Broccoli Planning Budget workbook \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/broccoli-budget.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/broccoli-budget.xlsx).

This work is supported by the U.S. Department of Agriculture's (USDA) Farm Service Agency through project award number FSA23CPT0012862. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.



Check out the complete collection of Missouri crop and livestock enterprise budgets at muext.us/MissouriAgBudgets