

Head Lettuce (High Tunnel) Planning Budget

Using this budget, farmers can estimate the costs and returns for raising lettuce in a high tunnel. Table 1 presents estimates for Missouri based on price forecasts in January 2025. The budget assumes head lettuce is grown in a 2,000-square-foot high tunnel system under trickle 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 high tunnel lettuce operation’s costs and returns.

Table 1. Missouri high tunnel head lettuce budget

	Unit	Quantity	Price per unit	Dollars per 2,000 square feet	Dollars per square foot	Your estimate
Income						
Lettuce	head	1,300	1.87	2,431.00	1.22	
Total income				2,431.00	1.22	
Operating costs						
Seeds	thousand	3	7.09	21.27	0.01	
Growing media	each	2	18.86	37.72	0.02	
Pots	each	1	24.35	24.35	0.01	
Soil Test	each					
Fertilizer	cubic yard	6	5.78	34.68	0.02	
Insecticide	total	1	27.13	27.13	0.01	
Drip Tape	feet	400	0.06	24.00	0.01	
Plastic mulch	feet	400	0.06	24.00	0.01	
Row cover	square feet	2,000	0.06	120.00	0.06	
Hoops	each	75	0.49	36.75	0.02	
Labor	hour	49	18.00	882.00	0.44	
Packaging	each	55	4.05	222.55	0.11	
Marketing	percent of sales	2,431	10.00	243.10	0.12	
Miscellaneous	total			0.00	0.00	
Operating interest	percent	7.75		21.31	0.01	
Total operating costs				1,774.18	0.89	
Ownership costs						
High tunnel building use	month	2	145.46	290.92	0.15	
Total ownership costs				290.92	0.15	
Total costs				2,065.11	1.03	
Income over operating costs				656.82	0.33	
Income over total costs				365.89	0.18	

Note: Totals may not sum due to rounding.

Developed by
Peter Zimmer, Program Leader, Farm-Level Analysis for FAPRI; and **Ryan Milhollin**, Assistant Professor, Agricultural Business and Policy

Table 2. Capital investments used in Missouri high tunnel lettuce budget.

Component	Labor (dollars)	Machinery (dollars)	Materials (dollars)	Total (dollars)	Useful life (years)	10-year cost (dollars)
Site evaluation and soil preparation	393.30	86.06	0.00	479.36	10	479.36
Trenching and laying water pipes	17.85	0.00	133.35	151.19	10	151.19
Inserting poles and setting posts	356.89	196.20	281.62	834.72	10	834.72
Assembling the frame	356.89	0.00	9,399.23	9,756.12	10	9,756.12
Treating and setting baseboards	118.96	0.00	159.53	278.50	10	278.50
End and sidewall installation	594.82	0.00	449.37	1,044.20	10	1,044.20
Pulling plastic	118.96	0.00	874.74	993.71	3	3,312.36
Channel lock installation	29.74	0.00	0.00	29.74	10	29.74
Shutter vents	0.00	0.00	816.07	816.07	10	816.07
Trellis purlin installation	178.45	0.00	295.09	473.54	10	473.54
Electrical	146.52	0.00	0.00	146.52	10	146.52
Miscellaneous hardware and tools	0.00	0.00	133.35	133.35	10	133.35
Total cost	2,312.40	282.27	12,542.36	15,137.03		17,455.68
Cost per square foot	1.16	0.14	6.27	7.57		8.73

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 high tunnel lettuce budget, income over total costs (dollars).

Percent change	Sale price per head	Yield per 2,000 square feet (heads)						
		910	1,040	1,170	1,300	1,430	1,560	1,690
15% less	1.59	–619	–412	–205	1	208	415	621
10% less	1.68	–534	–315	–96	123	342	560	779
5% less	1.78	–448	–218	13	244	475	706	937
Base level	1.87	–363	–120	123	366	609	852	1,095
5% more	1.96	–278	–23	232	487	743	998	1,253
10% more	2.06	–193	74	342	609	876	1,144	1,411
15% more	2.15	–108	171	451	731	1,010	1,290	1,569

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 [Head Lettuce High Tunnel Planning Budget workbook \(XLSX\)](https://extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/ht-lettuce-budget.xlsx) (extension.missouri.edu/media/wysiwyg/Extensiondata/Pro/AgBusinessPolicyExtension/Docs/ht-lettuce-budget.xlsx).

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