

Cucumber (High Tunnel) Planning Budget

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

Table 1. Missouri high tunnel cucumber budget.

	Unit	Quantity	Price per unit	Dollars per 2,000 square feet	Dollars per square foot	Your estimate
Income						
Cucumbers	pound	2,160	2.24	4,838.40	2.42	
Total income				4,838.40	2.42	
Operating costs						
Seeds	each	1	35.92	35.92	0.02	
Growing media	each	2	18.69	37.38	0.02	
Pots	each	1	24.35	24.35	0.01	
Soil Test	each	1	15.00	15.00	0.01	
Fertilizer	total	7	11.06	77.45	0.04	
Insecticide	total	1	129.14	129.14	0.06	
Drip Tape	feet	400	0.06	24.00	0.01	
Plastic mulch	feet	400	0.06	24.00	0.01	
String	each	1	62.30	62.30	0.03	
Labor	hour	92	18.00	1,656.00	0.83	
Boxes and other supplies	each	87	2.20	191.40	0.10	
Marketing	percent of sales	4,838	10.00	483.84	0.24	
Miscellaneous	total			0.00	0.00	
Operating interest	percent	7.75		35.66	0.02	
Total operating costs				2,796.44	1.40	
Ownership costs						
High tunnel building use	month	2	145.46	290.92	0.15	
Total ownership costs				290.92	0.15	
Total costs				3,087.37	1.54	
Income over operating costs				2,041.96	1.02	
Income over total costs				1,751.03	0.88	

Note: Totals may not sum due to rounding.

Table 2. Capital investments used in Missouri high tunnel cucumber budget (dollars).

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 cucumber budget, income over total costs (dollars).

Percent change	Sale price per pound	Yield per 2,000 square feet (pounds)						
		1,512	1,728	1,944	2,160	2,376	2,592	2,808
15% less	1.90	−209	203	614	1,025	1,437	1,848	2,259
10% less	2.02	−39	396	832	1,267	1,703	2,138	2,574
5% less	2.13	130	590	1,049	1,509	1,969	2,428	2,888
Base level	2.24	300	783	1,267	1,751	2,235	2,719	3,203
5% more	2.35	469	977	1,485	1,993	2,501	3,009	3,517
10% more	2.46	638	1,170	1,703	2,235	2,767	3,299	3,832
15% more	2.58	808	1,364	1,920	2,477	3,033	3,590	4,146

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