

Corn Silage Planning Budget for 2019

This budget presents information useful to farmers planning the production, financing and marketing of corn silage. Table 1 presents estimates for the 2019 crop year for corn silage production in northern, central and southwest Missouri. Assumptions were based on price conditions as of October 2018. Detailed prices and practices are summarized in Tables 2 and 3. The production practices used to develop these cost estimates are common in Missouri. Farmers are encouraged to modify this budget based on their circumstances.

Table 1. Missouri corn silage planning budget for 2019.

	Dollars per acre ¹	Your estimate
Income per acre		
Silage sales	720.00	
Other income	0.00	
Total income per acre	720.00	
Operating costs per acre		
Seed	66.63	
Fertilizer and soil amendments	147.70	
Crop protection chemicals	41.00	
Crop supplies, storage, and marketing	5.00	
Custom hire and rental	78.50	
Machinery fuel and irrigation energy	21.95	
Machinery repairs and maintenance	18.87	
Operator and hired labor	24.52	
Operating interest	12.12	
Total operating costs per acre	416.29	
Ownership costs per acre		
Farm business overhead	8.00	
Machinery overhead	21.20	
Machinery depreciation	34.04	
Real estate charge	147.00	
Total ownership costs per acre	210.24	
Total costs per acre	626.54	
Income over operating costs per acre		
	303.71	
Income over total costs per acre		
	93.46	
Operating costs per ton, as-is basis	23.13	
Ownership costs per ton, as-is basis	11.70	
Total costs per ton, as-is basis	34.83	

¹ Totals may not sum due to rounding.

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Table 2 shows input assumptions used to estimate the corn silage budget. Price estimates reflect harvest time prices. Costs or returns from storage or other marketing methods are not included. No income from government programs are added. Farm business overhead includes liability insurance, utilities, accounting, etc. Real estate charge is an estimated rental rate for above average land.

Table 2. Input assumptions used in corn silage planning budget for 2019.

Selected input quantities	Per acre	Selected input prices	Dollars per unit
Forage yield, tons, as-is basis	18	Corn silage market price, per ton	40.00
Seeding rate, corn	26,000	Seed, per 80,000 seed bag	205.00
Nitrogen rate, pounds	140	Nitrogen, per pound N	0.42
Phosphorus rate, pounds P ₂ O ₅	70	Phosphorus, per pound P ₂ O ₅	0.42
Potassium rate, pounds K ₂ O	165	Potassium, per pound K ₂ O	0.30
Lime rate, tons	0.5	Lime, per ton	20.00
Sum of allocated labor, hours	1.51	Skilled labor, per hour	18.00
		Farm diesel, per gallon	2.86

Table 3 details the field activities assumed in this budget and their machinery costs. Machinery costs were estimated using an economic engineering approach.

Table 3. Machinery assumptions used in corn silage planning budget for 2019, on a per acre basis.

Machine activity (not custom fieldwork)	Labor (hours)	Fuel (gallons)	Operating costs ¹ (dollars)	Ownership costs ² (dollars)	Total costs (dollars)	Trips across field
Field cultivator (18 ft); 160 MFWD	0.08	0.54	3.78	3.86	7.64	1
Row crop planter (12 row); 130 MFWD	0.07	0.41	4.12	7.14	11.25	1
Boom sprayer (90 ft); 105 2WD	0.04	0.21	2.35	3.35	5.70	2
Anhydrous applicator (21 feet); 160 MFWD	0.09	0.63	4.37	4.20	8.56	1
Silage chopper, 2 row (5 feet); 160 MFWD	0.73	5.11	40.33	31.41	71.74	1
Pickup truck		0.83	3.65	5.29	8.95	
Total³	1.01	7.73	58.59	55.24	113.84	6

¹ Machinery operating cost is the sum of fuel, repairs, maintenance, and the value of labor.

² Machinery ownership cost is the sum of machinery overhead and depreciation.

³ Totals may not sum due to rounding.

Abbreviations: 2WD = 2-wheel drive tractor; MFWD = modified front-wheel drive tractor

Farmers can also develop their own custom budget by using the Missouri Forage Budget Generator Tool (<http://crops.missouri.edu/economics/budgets/FBG.xlsm>). This spreadsheet tool allows users to develop a custom estimate for their costs and returns for growing corn silage and other forage crops in Missouri.