



Cost-Return Budgets — Irrigated Crops

Department of Agricultural Economics



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Each KSU Farm Management Irrigated Crop Cost-Return Budget Guide utilizes specific input values and rates for seed, insecticide, herbicide, and fertilizer based on a given yield level. This KSU Farm Management Guide outlines the specific values and rates used for each of the irrigated crop budgets. Producers often have multiple insecticide and herbicide options available to them. In this case the insecticide and herbicide values in "bold" type were used in the KSU budgets. Producers should use their own values, based on production and tillage practices, when completing the blank column for their farm.

Each irrigated crop guide provides budget information for three different yield levels. Input values and rates used in those budgets vary by yield levels as outlined in this guide. Fertilizer and seed rates are based on the expected yield level plus 10 percent. Yield levels vary for a number of reasons including soil type or land quality, weather, input levels, and management.

MF-590 Flood Irrigated Wheat

MF-583 Center Pivot Irrigated Wheat

Item	Yield Levels		
	I	II	III
Yield	43 bu.	57 bu.	70 bu.
Seed (15,000 seeds/lb)	75 lbs	90 lbs	120 lbs
Insecticide	\$0.00	\$0.00	\$0.00
Herbicide	\$4.90	\$4.90	\$4.90
0.75 pt 2, 4-D 4 lb/gal LV Ester			
@ \$15.44/gal = \$1.45			
+ Application Cost/A = \$3.45			
Fertilizer			
Nitrogen	75 lbs	99 lbs	121 lbs
Phosphate	24 lbs	32 lbs	39 lbs

MF-580 Flood Irrigated Grain Sorghum

MF-582 Center Pivot Irrigated Grain Sorghum

Item	Yield Levels		
	I	II	III
Yield	87 bu.	96 bu.	105 bu.
Seed (15,000 seeds/lb)	6 lbs	6.5 lbs	6.5 lbs
Insecticide	\$9.36	\$9.36	\$9.36
Greenbug — Treatment needed about 50% of the time.			
0.5 lb a i/A Lorsban 4E			
@ \$42.22/gal = \$5.28			
+ Application Cost/A (aerial) = \$4.08			
Herbicide	\$23.99	\$23.99	\$23.99
2 qts Bicep II Magnum* (PRE)			
@ \$41.08/gal = \$20.54			
+ Application Cost/A = \$3.45			
Followed by cultivation or			
2 pts Marksman (POST)			
@ \$29.28/gal = \$7.32			
+ Application Cost/A = \$3.45			
Fertilizer			
Nitrogen	100 lbs	111 lbs	121 lbs
Phosphate	39 lbs	43 lbs	48 lbs

*Requires Concep treated seed

MF-999 Center Pivot Irrigated Dry Edible Beans

Item	Yield Levels		
	I	II	III
Yield (lbs)	1,500	2,000	2,500
Seed	60 lbs	60 lbs	60 lbs
Insecticide	\$0.00	\$0.00	\$0.00
Fungicide	\$37.09	\$37.09	\$37.09
Blights — Treat about 50% of the time.			
4 pts/A Champ @ \$31.46/gal = \$15.73			
+ Application Cost/A (aerial) = \$4.08			
As preventative			
2 applications 14 days apart			
2 pts/A Champ @ \$31.46/gal = \$15.73			
+ Application Cost/A (aerial) = \$8.16			
Rust — Treat about 70% of the time.			
2 pts/A Bravo Weather Stik @ \$52.80/gal = \$13.20			
+ Application Cost/A (aerial) = \$4.08			
Herbicide	\$18.48	\$18.48	\$18.48
2 pts Eptam @ \$34.76/gal = \$8.69			
1.5 pts Sonolan @ \$33.83/gal = \$6.34			
+ Application Cost/A = \$3.45			
Followed by cultivation, if needed.			
Fertilizer			
Nitrogen	53 lbs	71 lbs	89 lbs
Phosphate	21 lbs	28 lbs	35 lbs

MF-1000 Center Pivot Irrigated Short-Season Corn

Item	Yield Levels		
	I	II	III
Yield	128 bu.	153 bu.	179 bu.
Seeds	36,000	36,000	36,000
Insecticide	\$13.48	\$13.48	\$13.48
Corn Borer — Southwestern and European Corn Borer—One application is needed most years, but sometimes two applications are necessary.*			
0.025 lb a i/A Warrior @ \$376.17/gal = \$9.40			
+ Application Cost/A (aerial) = \$4.08			
*Planting Bt corn eliminates the Warrior treatment.			
Technology fee for Bt corn = \$0.32/1,000 seeds which results in a cost of \$11.52/acre.			
However, keep in mind that there are limits on the percentage of acreage that should be planted to Bt corn. Refer to current EPA guidelines.			
Short-season corn should be rotated with other crops to avoid problems with corn rootworms			
Herbicide	\$39.56	\$39.56	\$39.56
2 qts Bicep II Magnum (PRE) @ \$41.08/gal = \$20.54			
+ Application Cost/A = \$3.45			
Followed by 1 oz Spirit @ \$10.43/oz = \$10.43			
+ Application Cost/A = \$3.45			
or 0.33 oz Accent (POST) @ \$33.71/oz = \$11.12			
+ Adjuvants @ \$1.00			
+ Application Cost/A = \$3.45			
Fertilizer			
Nitrogen	152 lbs	181 lbs	212 lbs
Phosphate	55 lbs	66 lbs	77 lbs

MF-800 Center Pivot Irrigated Oil Type Sunflowers MF-938 Center Pivot Irrigated Confectionary Sunflowers

Item	Yield Levels		
	I	II	III
Yield			
Oil (lbs)	1,800	2,200	2,600
Confectionary (lbs)	1,700	2,100	2,500
Seeds			
Oil-Type	23,400	23,400	23,400
Confectionary	17,600	17,600	17,600
*Insecticide	\$26.87	\$26.87	\$26.87
Sunflower Head Moth — Generally two applications are needed for control on sunflowers planted before the middle of June.			
2 app. 0.025 lb a i/A Warrior 1 EC			
@ \$376.17/gal = \$18.81			
+ Application Cost/A			
(2 app. aerial) = \$8.16			
Herbicide	\$10.25	\$10.25	\$10.25
2 pts/A Treflan (PPI) @ \$27.21/gal = \$6.80			
+ Application Cost/A = \$3.45			
Followed by cultivation.			
Fertilizer			
Oil-Type			
Nitrogen	85 lbs	104 lbs	123 lbs
Phosphate	33 lbs	41 lbs	48 lbs
Confection			
Nitrogen	80 lbs	99 lbs	119 lbs
Phosphate	32 lbs	39 lbs	46 lbs

*Only one application on oil-type sunflowers.

MF-581 Flood Irrigated Corn Silage **MF-589 Center Pivot Irrigated Corn Silage**

Item	Yield Levels		
	I	II	III
Yield	21.6 tons	25.9 tons	30.2 tons
Seeds	28,000	32,000	36,000
Insecticide	\$30.01	\$30.01	\$30.01
Soil Insecticide — Generally recommended for control of rootworms in continuous corn. A seed treatment may be all that is necessary in first-year corn.			
Range in price from:			
6 ozs/1,000 ft (30" rows) Thimet 20G			
@ \$2.53/lb = \$16.53			
8 ozs/1,000 ft (30" rows) Counter 15G			
@ \$2.24/lb = \$19.51			
Seed Treatment			
diazinon or diazinon-lindane			
seed treatment: \$0.75 to \$1.00			
Corn Borer — Southwestern and European Corn Borer—One application is needed most years, but sometimes two applications are necessary.*			
Range in price from:			
0.025 lb a i/A Warrior @ \$376.17/gal = \$9.40			
1 lb a i/A Furadan 4F @ \$72.67/gal = \$18.17			
+ Application Cost/A (aerial) = \$4.08			
* Planting Bt corn eliminates the Warrior or Furadan treatment. Technology fee for Bt corn = \$0.32/1,000 seeds which results in a cost of about \$9-\$12/acre. However, keep in mind that there are limits on the percentage of acreage that should be planted to Bt corn. Refer to current EPA guidelines.			
Spider Mites — Generally not considered as much of a problem on silage corn as on corn grown for grain. Can justify treatment in heavy mite years.			
Range in price from:			
0.5 lb a i/A Di-Syston 8 @ \$82.87/gal = \$5.18			
2.25 pts Comite II @ \$56.15/gal = \$15.79			
+ Application Cost/A (aerial) = \$4.08			
0.08 lb a i/A Capture 2EC			
@ \$402.67/gal = \$16.11			
+ Application Cost/A (aerial) = \$4.08			
Herbicide	\$23.99	\$23.99	\$23.99
2 qts Bicep II Magnum (PRE) @ \$41.08/gal = \$20.54			
+ Application Cost/A = \$3.45			
Fertilizer*			
Nitrogen	207 lbs	247 lbs	287 lbs
Phosphate	82 lbs	98 lbs	115 lbs

*Fertilizer levels for corn silage are higher than for corn because of higher removal rates.

MF-998 Center Pivot Irrigated Forage Sorghum Silage

Item	Yield Levels		
	I	II	III
Yield	19.4 tons	23.3 tons	27.2 tons
Seed	15 lbs	17.5 lbs	17.5 lbs
Insecticide	\$9.36	\$9.36	\$9.36
Greenbug — Treatment needed about 50% of the time.			
0.5 lb a i/A Lorsban 4E			
@ \$42.22/gal = \$5.28			
+ Application Cost/A (aerial) = \$4.08			
Herbicide	\$23.99	\$23.99	\$23.99
2 qts Bicep II Magnum* (PRE)			
@ \$41.08/gal = \$20.54			
+ Application Cost/A = \$3.45			
Fertilizer			
Nitrogen	184 lbs	221 lbs	259 lbs
Phosphate	73 lbs	88 lbs	103 lbs

*Requires Concep treated seed.

MF-584 Center Pivot Irrigated Alfalfa

Item	Yield Levels		
	I	II	III
Yield	4.8 tons	6.2 tons	7.5 tons
Seed	15 lbs	15 lbs	15 lbs
Insecticide	\$12.57	\$12.57	\$12.57
Alfalfa Weevil — Some treatment is needed almost every year.			
0.25 lb a i/A Furadan 4F* @ \$72.67/gal = \$4.54			
0.5 lb a i/A Furadan 4F* @ \$72.67/gal = \$9.08			
1 lb a i/A Furadan 4F* @ \$72.67/gal = \$18.17			
+ Application Cost \$3.49 for ground			
or \$4.08 for aerial			
*Many chemicals are labeled and recommended for alfalfa weevil control. Furadan is used in this example because it covers the extremes in cost variation. Rates or chemicals selected will vary depending on the timing and/or severity of the weevil infestation.			
Herbicide	\$19.43	\$19.43	\$19.43
1 qt Velpar @ \$63.92/gal = \$15.98			
or 2 qts Treflan @ \$27.21/gal = \$13.61			
+ Application Cost/A = \$3.45			
Fertilizer			
Phosphate (Annually)	78 lbs	102 lbs	125 lbs

Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned.

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