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KANSAS FARM MANAGEMENT & MARKETING HANDBOOK

KSU Farm Management Guide MF-941

Cost-Return Budgets–Irrigated Crops

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Each KSU Farm Management Irrigated Crop Cost-Return Budget Guide utilizes specific input values and/or rates for seed, insecticide, herbicide, and fertilizer based on a given yield level. This KSU Farm Management Guide outlines these specific values and/or rates used with each irrigated crop guide. For certain guides, insecticide and herbicide values in "bold" type were used. Producers should use their values, based on production and tillage practices, when completing the blank column for their own farm.

Each irrigated crop guide provides budget information for three different yield levels. Input values and/or rates used in those budgets vary by yield levels as outlined in this guide. Yield levels vary for a number of reasons such as soil type/land quality, weather, input levels, and management. The three yield levels included in the irrigated crop guides reflect yield variability due to input levels and management as opposed to land quality.

MF-590 Flood Irrigated Wheat
MF-583 Center Pivot Irrigated Wheat

	Yield Levels		
Item	**I**	**II**	**III**
Yield	45 bu.	55 bu.	65 bu.
Seed			
(900,000 million seeds)	60 lbs		
(1.125 million seeds)		75 lbs	
(1.35 million seeds)			90 lbs
Insecticide	$0.00	$0.00	$0.00
Herbicide	$4.49	$4.49	$4.49
0.75 pt 2, 4-D 4 lb/gal LV Ester			
@ $16.40/gal = $1.54			
+ Application Cost/A = $2.95			
Fertilizer			
Nitrogen	70 lbs	70 lbs	70 lbs
Phosphate	30 lbs	30 lbs	30 lbs

MF-580 Flood Irrigated Grain Sorghum
MF-582 Center Pivot Irrigated Grain Sorghum

	Yield Levels		
Item	**I**	**II**	**III**
Yield	85 bu.	110 bu.	135 bu.
Seed			
(75,000 seeds	5 lbs		
(90,000 seeds)		6 lbs	
(90,000 seeds)			6 lbs
Insecticide	$10.01	$10.01	$10.01
Range	$0-$10.01		
Greenbug* (Treatment needed about 50% of the time).			
½ lb a i/A Lorsban 4E			
@ $49.70/gal = $6.21			
+ Application Cost/A (aerial) = $3.80			
*The need for spraying can be greatly reduced by using resistant hybrids, either biotype E or I depending on predominant species in the area.			
Herbicide	$20.30	$20.30	$20.30
2 qts Bicep 6L** (PRE)			
@ $34.70/gal = **$17.35**			
+ Application Cost/A = **$2.95**			
Followed by cultivation or			
2 pts Marksman (POST)			
@ $26.60/gal = $6.65			
+ Application Cost/A = $2.95			
Fertilizer			
Nitrogen	110 lbs	110 lbs	130 lbs
Phosphate	40 lbs	40 lbs	40 lbs

**Requires concep treated seed.

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MF-577 Flood Irrigated Soybeans
MF-586 Center Pivot Irrigated Soybeans

Item	Yield Levels I	II	III
Yield	40 bu.	50 bu.	60 bu.
Seed			
(135,000 seeds) Rowed	45 lbs		
(150,000 seeds)		50 lbs	
(150,000 seeds)			50 lbs
(165,000 seeds) Drilled	55 lbs		
(180,000 seeds)		60 lbs	
(200,000 seeds)			67 lbs
Insecticide	$0.00	$0.00	$0.00
Herbicide	$26.68	$26.68	$26.68
2.3 pts Tri-Scept (PPI) @ $82.55/gal = **$23.73** + Application Cost/A = **$2.95** Followed by cultivation or 2 pts Galaxy (POST) @ $58.05/gal = $14.51 + Application Cost/A = $2.95 + Adjuvants @ $0.50			
Fertilizer			
Phosphate	40 lbs	40 lbs	40 lbs

MF-999 Center Pivot Irrigated Dry Edible Beans

Item	Yield Levels I	II	III
Yield	15 cwt.	20 cwt.	25 cwt.
Seed	60 lbs	60 lbs	60 lbs
Insecticide	$0.00	$0.00	$0.00
Fungicide	$36.90	$36.90	$36.90
Blights (treat about 50% of the time) 4 pts/A Champ @ $3.90/pt = **$15.60** + Application Cost/A (aerial) = **$3.80** as preventative 2 applications 14 days apart 2 pts/A Champ @ $3.90/pt = $15.60 + Application Cost/A (aerial) = $7.60			
Rust (treat about 70% of the time) 2 pts/A Bravo 720 @ $6.85/pt = **$13.70** + Application Cost/A (aerial) = **$3.80**			
Herbicide	$19.79	$19.79	$19.79
2 pts Eptam @ $28.30/gal = $10.61 1.5 pts Sonolan @ $33.25/gal = $6.23 + Application Cost/A = $2.95 Followed by cultivation, if needed.			
Fertilizer			
Nitrogen	50 lbs	50 lbs	60 lbs
Phosphate	40 lbs	40 lbs	40 lbs

MF-578 Flood Irrigated Corn
MF-585 Center Pivot Irrigated Corn
MF-969 Ridge-Till Flood Irrigated Corn*

Item	Yield Levels I	II	III
Yield	160 bu.	190 bu.	220 bu.
Seed	28,000	32,000	36,000
Insecticide	$53.38	$53.38	$53.38
Range	$0.75-$58.04		
Soil Insecticide** Range in price from: 6 ozs/1,000 ft (30" rows) Thimet 20G @ $2.00/lb = **$13.07** 8 ozs/1,000 ft (30" rows) Counter 15G @ $1.85/lb = $16.12			
Seed Treatment diazinon or diazinon-lindane seed treatment: $0.75 to $1.00			
**Soil insecticide is generally recommended in continuous corn, however a seed treatment may be all that is required in first year corn.			
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 @ $311.20/gal = $7.78 1 lb a i/A Furadan 4F @ $65.80/gal = **$16.45** + Application Cost/A (aerial) = **$3.80**			
Spider Mites (Some type of spider mite treatment is generally needed in southwest Kansas. There are three options for controlling spider mites. Using Comite early to prevent late season mite problems, using a Miticide such as Di-Syston alone or in a tank mix with a corn borer insecticide, or using Capture alone to control both mites and corn borers.) Range in price from: 0.5 lb a i/A Di-Syston 8 @ $70.40/gal = $4.40 2.25 pts/A Comite II @ $57.80/gal = **$16.26** + Application Cost/A (aerial) = **$3.80** 0.08 lb a i/A Capture 2EC @ $516.70/gal = $20.67			
Herbicide	$20.30	$20.30	$20.30
2 qts Bicep 6L (PRE) @ $34.70/gal = **$17.35** + Application Cost/A = **$2.95** Followed by 0.38 oz Beacon @ $24.05/oz = $9.14 + Application Cost/A = $2.95 or 0.33 oz Accent (POST) @ $26.35/oz = $8.70 + Application Cost/A = $2.95 + Adjuvants @ $0.50			
Fertilizer			
Nitrogen	190 lbs	190 lbs	200 lbs
Phosphate	45 lbs	45 lbs	45 lbs

*Herbicide is reduced by one-third.

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MF-1000 Center Pivot Irrigated Short Season Corn

Item	Yield Levels I	II	III
Yield	120 bu.	160 bu.	200 bu.
Seed	36,000	36,000	36,000
Insecticide	$20.25	$20.25	$20.25
Corn Borer (Southwestern and European Corn Borer—one application is needed most years, but sometimes two applications are necessary.)			
1 lb a i/A Furdan 4F @ $65.80/gal = $16.45			
+ Application Cost/A (aerial) = $3.80			
Herbicide	$32.45	$32.45	$32.45
2 qts Bicep 6L (PRE) @ $34.70/gal = **$17.35**			
+ Application Cost/A = **$2.95**			
Followed by 0.38 oz Beacon @ $25.05/oz = $9.14			
+ Application Cost/A = $2.95			
or 0.33 oz Accent (POST) @ $26.35/oz = **$8.70**			
+ Application Cost/A = **$2.95** + Adjuvants @ **$0.50**			
Fertilizer			
Nitrogen	150 lbs	150 lbs	200 lbs
Phosphate	40 lbs	40 lbs	40 lbs

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

Item	Yield Levels I	II	III
Yield			
Oil (lbs)	1,800	2,200	2,600
Confectionary (lbs)	1,700	2,100	2,500
Seed			
Confectionary	17,600	17,600	17,600
Oil-Type	23,400	23,400	23,400
*Insecticide	$24.53	$24.53	$24.53
Sunflower Head Moth (Generally two applications are needed for control on sunflowers planted before the middle of June.)			
2 app. 0.04 lb a i/A Asana XL 0.66 @ $139.65/gal = $16.93			
+ Application Cost/A (2 app. aerial) = $7.60			
Herbicide	$11.43	$11.43	$11.43
2 pts/A Treflan (PPI) @ $33.90/gal = $8.48			
+ Application Cost/A = $2.95			
Followed by cultivation			
Fertilizer			
Nitrogen	80 lbs	80 lbs	100 lbs
Phosphate	40 lbs	40 lbs	40 lbs

*Only one application on oil-type sunflowers.

MF-996 Center Pivot Irrigated Popcorn

Item	Yield Levels I	II	III
Yield	3,800 lbs	4,300 lbs	4,800 lbs
Seed	33,000	33,000	36,000
Insecticide	$53.38	$53.38	$53.38
Range	$0.75-$68.19		
Rootworm (soil insecticide is generally recommended in continuous corn, however a seed treatment may be all that is required in first year corn.			
Soil Insecticide			
Range in price from:			
6 ozs/1,000 ft (30" rows) Dyfonate II 20G @ $2.00/lb = **$13.07**			
8 ozs/1,000 ft (30" rows) Counter 15G @ $1.85/lb = $16.12			
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 @ $311.20/gal = $7.78			
1 lb a i/A Furadan 4F @ $65.80/gal = **$16.45**			
+ Application Cost/A (aerial) = **$3.80**			
Spider Mites (Some type of spider mite treatment is generally needed in southwest Kansas. There are three options for controlling spider mites. Using Comite early to prevent late season mite problems, using a Miticide such as Di-Syston alone or in a tank mix with a corn borer insecticide, or using Capture alone to control both mites and corn borers.)			
Range in price from:			
0.5 lb a i/A Di-Syston 8 @ $70.40/Gal = $4.40			
2.25 pts Comite II @ $57.80/gal = **$16.26**			
+ Application Cost/A (aerial) = **$3.80**			
0.08 lb a i/A Capture 2EC @ $516.70/Gal = $20.67			
Earworm (Not currently a major problem in southwest Kansas, but if infestation occurs may need to treat every 3-4 days for 2-3 weeks (4-7 treatments).)			
0.03 lb a i/A Asana 0.66 @ $139.65/gal = $6.35			
+ Application Cost/A (aerial) = $3.80			
Herbicide	$20.30	$20.30	$20.30
2 qts Bicep 6L (PRE) @ $34.70/gal = **$17.35**			
+ Application Cost/A = **$2.95**			
Followed by cultivation or			
2 pts Buctril @ $55.50/gal = $13.88			
+ Application Cost/A = $2.95			
Fertilizer			
Nitrogen	165 lbs	165 lbs	180 lbs
Phosphate	40 lbs	40 lbs	40 lbs

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

Item	Yield Levels I	II	III
Yield	15 tons	20 tons	25 tons
Seed	28,000	32,000	36,000
Insecticide	$33.32	$33.32	$33.32
Range	$0.75-$58.04		
Soil Insecticide*			
Range in price from:			
6 ozs/1,000 ft (30" rows) Thimet 20G @ $2.00/lb = **$13.07**			
8 ozs/1,000 ft (30" rows) Counter 15G @ $1.85/lb = $16.12			
Seed Treatment			
diazinon or diazinon-lindane seed treatment: $0.75 to $1.00			
*Soil insecticide is generally recommended in continuous corn, however a seed treatment may be all that is required in first year corn.			
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 @ $311.20/gal = $7.78			
1 lb a i/A Furadan 4F @ $65.80/gal = **$16.45**			
+ Application Cost/A (aerial) = **$3.80**			
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 @ $70.40/Gal = $4.40			
2.25 pts Comite II @ $57.80/gal = $16.26			
+ Application Cost/A (aerial) = $3.80			
0.08 lb a i/A Capture 2EC @ $516.70/Gal = $20.67			
Herbicide	$20.30	$20.30	$20.30
2 qts Bicep 6L (PRE) @ $34.70/gal = $17.35			
+ Application Cost/A = $2.95			
Fertilizer			
Nitrogen	180 lbs	180 lbs	200 lbs
Phosphate	45 lbs	45 lbs	45 lbs

MF-998 Center Pivot Irrigated Sorghum Silage

Item	Yield Levels I	II	III
Yield	12 tons	16 tons	20 tons
Seed	15 lbs	17.5 lbs	17.5 lbs
Insecticide	$10.01	$10.01	$10.01
Range	$0-$10.01		
Greenbug* (Treatment needed about 50% of the time).			
0.5 lb a i/A Lorsban 4E @ $49.70/gal = $6.21			
+ Application Cost/A (aerial) = $3.80			
*The need for spraying can be greatly reduced by using a biotype E resistant sorghum.			
Herbicide	$20.30	$20.30	$20.30
2 qts Bicep 6L** (PRE) @ $34.70/gal = $17.35			
+ Application Cost/A = $2.95			
Fertilizer			
Nitrogen	120 lbs	120 lbs	160 lbs
Phosphate	40 lbs	40 lbs	40 lbs

**Requires concep treated seed.

MF-584 Center Pivot Irrigated Alfalfa

Item	Yield Levels I	II	III
Yield	3.5 tons	5.0 tons	6.5 tons
Seed	15 lbs	15 lbs	15 lbs
Insecticide	$11.25	$11.25	$11.25
Range	$7.14-$20.25		
Alfalfa Weevil (Some treatment is needed almost every year.)			
1/4 lb a i/A Furadan 4F* @ $65.80/gal. = $4.11			
1/2 lb a i/A Furadan 4F* @ $65.80/gal. = **$8.22**			
1 lb a i/A Furadan 4F* @ $65.80/gal. = $16.45			
+ Application Cost **$3.03** for ground or $3.80 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	$17.35	$17.35	$17.35
1 qt Velpar @ $57.60/gal = **$14.40**			
or 2 qts Treflan @ $33.90/gal = $16.95			
+ Application Cost/A = **$2.95**			
Fertilizer			
Phosphate (Annually)	80 lbs	80 lbs	80 lbs

KSU KANSAS STATE UNIVERSITY

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