

Kansas State University

Using Excel Spreadsheets
Hillsboro Middle School
Computer Lab - Rm 257
Hillsboro, Kansas



Using Excel for:
• Budgeting and Enterprise Analysis
• Calculating Breakevens
• Determining Equitable Lease Arrangements

As Well as:
• Tips and Tricks for Using Excel
• Other Decision Tools on AgManager.info

Kansas State University
Department of Agricultural Economics

Using Excel Spreadsheets

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www.AgManager.info



Purpose of the workshop:

- Use Excel to create a crop budget with supporting input sheet
- Calculate breakeven per acre and per bushel.
- Learn some tips that make using Excel easier and simpler.
- Apply what has been learned in using the KSU-Lease spreadsheet decision tool.
- Introduce a few other decision tools on AgManager. Info.

ITEM	Wheat	Maize	Soybeans	Sunflower
Interest rate				6.00% Yr
Seeding cost (\$/a, seeds, etc)	100	4.67	140	
Seed price, \$/bu	\$1.15	\$3.25	\$5.35	
Fertilizer				
0-20-0	0.0	0.0	0.0	\$0.300 /bu
0-10-10	0.0	0.0	0.0	\$0.450 /bu
P	0.0	0.0	0.0	\$0.450 /bu
K	0.0	0.0	0.0	\$0.450 /bu
Lime	300.0	300.0	300.0	\$0.010 /bu
Herbicide				
Fluazifop	0.5			\$17.02 /bu
Glyphosate		1.0		\$10.00 /bu
Roundup		2.0		\$6.20 /bu
Allylthio		3.0		\$5.11 /bu
Atrazine		1.5		\$0.44 /bu
Roundup Blended		2.0		\$6.20 /bu
Insecticide / Fungicide				
Headline	0			\$1.10 /bu
Seedbox treatment				\$1.00 /bu
Irrigation water, \$/acre inch	\$1.75			
Irrigation repairs, \$/acre inch	\$0.33			
Drying cost, \$/bu (bu, cost, etc)	\$0.00	\$0.00	\$0.00	

Using Excel Spreadsheets

	Wheat	Maize	Soybeans	Total	Per Acre
Planned acres of each crop	800.0	800.0	800.0	1,600.0	
CROP SYSTEMS					
A. Yield per acre	52.0	88.0	54.0		
B. Price per bushel	\$5.50	\$4.50	\$11.00	\$10.00	\$10.00
C. Net government payments	\$14.50	\$14.50	\$14.50	\$23.25	\$14.50
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous Income	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Net returns (A x B) + C + D + E	\$300.10	\$441.00	\$300.10	\$1,041.20	\$650.75
COSTS PER ACRE					
1. Seed	\$16.00	\$14.54	\$57.00	\$117.54	\$73.46
2. Herbicide	6.25	34.21	14.50	25.96	16.24
3. Insecticide / Fungicide	27.00	0.00	0.00	27.00	16.88
4. Fertilizer and Lime	50.00	47.00	19.50	116.50	72.81
5. Crop Consulting	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0	0.00
7. Drying	0.00	0.00	0.00	0	0.00
8. Miscellaneous	6.25	6.25	6.25	18.75	11.72
9. Machinery Expense	103.51	84.14	65.00	152.65	95.27
10. Non-machinery Labor	11.00	11.00	11.00	33.00	20.63
11. Irrigation	0.00	0.00	0.00	0	0.00
12. Land Change / Rent	0.00	0.00	0.00	0.00	0.00
13. SUB-TOTAL	\$284.95	\$272.42	\$238.52	\$795.89	\$497.36
14. Interest on 1/2 Round Cost	0.00	0.25	0.11	0.36	0.23
15. TOTAL COSTS	\$284.95	\$272.67	\$238.63	\$796.25	\$497.59
16. RETURNS OVER COSTS (F - H)	\$15.20	\$168.33	\$61.50	\$245.03	\$153.16
17. TOTAL COST/BUSHT (H/A)	\$5.29	\$3.10	\$4.42		



Spreadsheets

Replace calculator/worksheets

Very useful for ...

- Budgeting (“what if analysis”)
- Data storage/analysis
- Financial/production reports
- Anything numbers oriented

Advantage: numerical visualization

TABLE 1. Production Inputs Used for Budgets

ITEM	Wheat	Milo	Soybeans	\$/unit
Interest rate				6.00% /yr
Seeding rate (lbs, seeds, etc)	100	4.67	140	
Seed price, \$/unit	\$0.16	\$3.20	\$0.59	
Fertilizer:				
82-0-0	0.0	62.0	0.0	\$0.300 /lb
N (dry/liquid)	69.0	12.0	0.0	\$0.460 /lb
P	32.0	41.0	31.0	\$0.460 /lb
K	0.0	0.0	0.0	\$0.420 /lb
Lime	500.0	500.0	500.0	\$0.010 /lb
Herbicide				
Finsep	0.3			\$17.62 /oz
+ Surfactant	1			\$1.00 /ac
Bicop II Magnum		1.6		\$10.92 /qt
Buctril + Atrazine		2		\$6.30 /qt
Glyphosate		32	64	\$0.11 /oz
+ Ammonium Sulfate		1.5	3.5	\$0.44 /lb
Roundup Weather Max			22	\$0.29 /oz
Insecticide / Fungicide				
Headline	9			\$3.10 /oz
Seedbox treatment				\$1.00 /ac
Irrigation water, inches/acre				\$3.75 /in
Irrigation repairs, \$/acre-inch				\$0.33 /in
Drying cost, \$/unit (bu, cwt, etc)	\$0.00	\$0.00	\$0.00	

User-inputs are blue.

Formulas and text are black.

TABLE 1. Production Inputs Used for Budgets

ITEM	Wheat	Milo	Soybeans	\$/unit
Interest rate				6.00% /yr
Seeding rate (lbs, seeds, etc)	100	4.67	140	
Seed price, \$/unit	\$0.16	\$3.20	\$0.59	
Fertilizer:				
82-0-0	0.0	62.0	0.0	\$0.300 /lb
N (dry/liquid)	69.0	12.0	0.0	\$0.450 /lb
P	32.0	41.0	31.0	\$0.460 /lb
K	0.0	0.0	0.0	\$0.420 /lb
Lime	500.0	500.0	500.0	\$0.010 /lb
Herbicide				
Finsep	0.3			\$17.62 /oz
+ Surfactant	1			\$1.00 /ac
Bicop II Magnum		1.6		\$10.92 /qt
Buctril + Atrazine		2		\$6.30 /qt
Glyphosate		32	64	\$0.11 /oz
+ Ammonium Sulfate		1.5	3.5	\$0.44 /lb
Roundup Weather Max			22	\$0.29 /oz
Insecticide / Fungicide				
Headline	9			\$3.10 /oz
Seedbox treatment				\$1.00 /ac
Irrigation water, inches/acre				\$3.75 /in
Irrigation repairs, \$/acre-inch				\$0.33 /in
Drying cost, \$/unit (bu, cwt, etc)	\$0.00	\$0.00	\$0.00	

Note this is the "Inputs" sheet or tab.

Numbers from this sheet will be used in the "Budget" sheet.

Change sheet names with "right-click" then "Rename"

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS

Crop/System	Total	Per Acre
Planted acres of each crop		
INCOME PER ACRE		
A. Yield per acre		
B. Price per unit		
C. Net government payments		
D. Indemnity payments		
E. Miscellaneous income		
F. Returns/acre (A x B) + C + D + E		
COSTS PER ACRE		
1. Seed		
2. Herbicide		
3. Insecticide / Fungicide		
4. Fertilizer and Lime		
5. Crop Consulting		
6. Crop Insurance		
7. Drying		
8. Miscellaneous		
9. Machinery Expense		
10. Non-machinery Labor		
11. Irrigation		
12. Land Charge / Rent		
G. SUB TOTAL		
13. Interest on 1/2 Nonland Costs		
H. TOTAL COSTS		
I. RETURNS OVER COSTS (F - H)		
J. TOTAL COSTS/UNIT (H/A)		

The labels (text) have already been entered.

Enter formulas to calculate the "Total" and "Per Acre" columns.

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS

Crop/System	Wheat	Milo	Soybeans	Total	Per Acre
Planted acres of each crop	800.0	400.0	400.0	1,600.0	
INCOME PER ACRE					
A. Yield per acre	52.0	88.0	34.0		
B. Price per unit	\$5.50	\$4.50	\$11.00	\$536,800	\$335.50
C. Net government payments	\$14.16	\$14.16	\$14.16	\$27,656	\$14.16
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Returns/acre (A x B) + C + D + E	\$300.16	\$410.16	\$388.16	\$559,456	\$349.66
COSTS PER ACRE					
1. Seed	\$16.00	\$14.94	\$82.60	\$51,818	\$32.39
2. Herbicide	6.29	34.23	14.95	24,703	15.44
3. Insecticide / Fungicide	27.90	0.00	0.00	22,320	13.95
4. Fertilizer and Lime	50.77	47.86	19.26	67,464	42.17
5. Crop Consulting	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0	0.00
7. Drying	0.00	0.00	0.00	0	0.00
8. Miscellaneous	6.25	6.25	6.25	10,000	6.25
9. Machinery Expense	101.74	94.14	69.46	146,830	91.77
10. Non-machinery Labor	11.00	11.00	11.00	17,600	11.00
11. Irrigation	0.00	0.00	0.00	0	0.00
12. Land Charge / Rent	65.00	65.00	65.00	104,000	65.00
G. SUB TOTAL	\$284.95	\$273.42	\$268.52	\$444,735	\$277.96
13. Interest on 1/2 Nonland Costs	6.60	6.25	6.11	10,222	6.39
H. TOTAL COSTS	\$291.54	\$279.68	\$274.63	\$454,957	\$284.35
I. RETURNS OVER COSTS (F - H)	\$8.62	\$130.48	\$113.53	\$104,499	\$65.31
J. TOTAL COSTS/UNIT (H/A)	\$5.61	\$3.10	\$8.00		

Blue cells are numbers. Black cells are formulas

Formulas bringing values from "Input" sheet.

Formulas to calculate the total returns and costs.

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS					
Crop/System	Wheat	Milo	Soybeans	Total	Per Acre
Planted acres of each crop	800.0	400.0	400.0	1,600.0	--
INCOME PER ACRE					
A. Yield per acre	52.0	88.0	34.0	--	--
B. Price per unit	\$5.50	\$4.50	\$11.00	\$536,800	\$335.50
C. Net government payments	\$14.16	\$14.16	\$14.16	\$22,656	\$14.16
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Returns/acre (A x B) + C + D + E	\$300.16	\$410.16	\$388.16	\$559,456	\$349.66
COSTS PER ACRE					
1. Seed	\$16.00	\$14.94	\$82.60	\$51,818	\$32.39
2. Herbicide	6.29	34.23	14.95	24,703	15.44
3. Insecticide / Fungicide	27.90	0.00	0.00	22,320	13.95
4. Fertilizer and Lime	50.77	47.86	19.26	67,464	42.17
5. Crop Consulting	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0	0.00
7. Drying	0.00	0.00	0.00	0	0.00
8. Miscellaneous	6.25	6.25	6.25	10,000	6.25
9. Machinery Expense	101.74	94.14	69.46	146,830	91.77
10. Non-machinery Labor	11.00	11.00	11.00	17,600	11.00
11. Irrigation	0.00	0.00	0.00	0	0.00
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G. SUB TOTAL	\$284.95	\$273.42	\$268.52	\$444,735	\$277.96
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H. TOTAL COSTS	\$291.54	\$279.68	\$274.63	\$454,957	\$284.35
I. RETURNS OVER COSTS (F - H)	\$8.62	\$130.48	\$113.53	\$104,499	\$65.31
J. TOTAL COSTS/UNIT (H/A)	\$5.61	\$3.18	\$8.08	--	--

Formula to calculate the interest on 1/2 of non-land costs.

Formulas to calculate returns over costs and total costs per unit.

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS					
Crop/System	Wheat	Milo	Soybeans	Total	Per Acre
Planted acres of each crop	800.0	400.0	400.0	1,600.0	--
INCOME PER ACRE					
A. Yield per acre	52.0	88.0	34.0	--	--
B. Price per unit	\$5.50	\$4.50	\$11.00	\$536,800	\$335.50
C. Net government payments	\$14.16	\$14.16	\$14.16	\$22,656	\$14.16
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Returns/acre (A x B) + C + D + E	\$300.16	\$410.16	\$388.16	\$559,456	\$349.66
COSTS PER ACRE					
1. Seed	\$16.00	\$14.94	\$82.60	\$51,818	\$32.39
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4. Fertilizer and Lime	50.77	47.86	19.26	67,464	42.17
5. Crop Consulting	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0	0.00
7. Drying	0.00	0.00	0.00	0	0.00
8. Miscellaneous	6.25	6.25	6.25	10,000	6.25
9. Machinery Expense	101.74	94.14	69.46	146,830	91.77
10. Non-machinery Labor	11.00	11.00	11.00	17,600	11.00
11. Irrigation	0.00	0.00	0.00	0	0.00
12. Land Charge / Rent	65.00	65.00	65.00	104,000	65.00
G. SUB TOTAL	\$284.95	\$273.42	\$268.52	\$444,735	\$277.96
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J. TOTAL COSTS/UNIT (H/A)	\$5.61	\$3.18	\$8.08	--	--

All done.

Not bad

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS					
Crop/System	Wheat	Milo	Soybeans	Total	Per Acre
Planted acres of each crop	800.0	400.0	400.0	1,600.0	--
INCOME PER ACRE					
A. Yield per acre	52.0	88.0	34.0	--	--
B. Price per unit	\$5.50	\$4.50	\$11.00	\$536,800	\$335.50
C. Net government payments	\$14.16	\$14.16	\$14.16	\$22,656	\$14.16
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0	\$0.00
F. Returns/acre (A x B) + C + D + E	\$300.16	\$410.16	\$388.16	\$559,456	\$349.66
COSTS PER ACRE					
1. Seed	\$16.00	\$14.94	\$82.60	\$51,818	\$32.39
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4. Fertilizer and Lime	50.77	47.86	19.26	67,464	42.17
5. Crop Consulting	0.00	0.00	0.00	0	0.00
6. Crop Insurance	0.00	0.00	0.00	0	0.00
7. Drying	0.00	0.00	0.00	0	0.00
8. Miscellaneous	6.25	6.25	6.25	10,000	6.25
9. Machinery Expense	101.74	94.14	69.46	146,830	91.77
10. Non-machinery Labor	11.00	11.00	11.00	17,600	11.00
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J. TOTAL COSTS/UNIT (H/A)	\$5.61	\$3.18	\$8.08	--	--

Tips and Help

- There is always a better way – use what works
- No numbers in formulas
- Save/rename files (saving files off web)
- Multiple ways to do things
keyboard vs. mouse

Tips and Help

- “Right-click” – can do a lot
- Absolute vs. relative (use “\$”)
- Copy vs. move
- Search and Replace



K-State Research and Extension

Tips and Help

- Formatting – how important is it?
- Documenting your procedures in the spreadsheet
 - Text in cell, cell comment, color, etc.
- Organizing data
 - Rows vs. columns
 - Multiple tabs and files



K-State Research and Extension

Questions?



NORTH CENTRAL
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K-State Research and Extension



Kansas State
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Department of Agricultural Economics



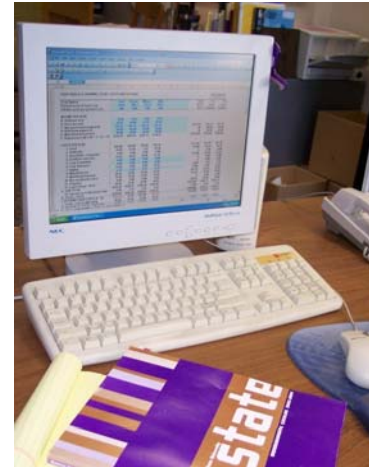
Using KSU-Lease.xls



KSU-Lease.xls

- A what-if spreadsheet to analyze rents
- Delineates relative contributions
- Allows considering cash vs. crop-share
 - Can deal with a risk premium
- Very flexible; can handle
 - Net share leases
 - Fixed bushel rents
 - Cash transfers
- Important purpose is to allow people to move beyond traditional leases when they need to change (and to analyze impact of cash rent)

Using “*KSU-Lease.xls*” to determine equitable crop share and cash leases ...



Information/data required:

1. Crop rotation/mix
2. Income information
3. Production inputs
4. Machinery costs
5. Land value
6. Irrigation equipment
-
7. Contributor of input
8. Risk adjustment

Sources of data ...

- Crop budgets are designed to follow KSU Farm Management Guides (available on www.AgManager.info) and thus these budgets are often a good “first start” at inputs
- Machinery costs are based on custom rates approach (as opposed to investment per acre)
- Generally suggest using “average” data as opposed to farm-specific data, but this will depend on situation

Level of complexity ...

- *KSU-Lease* is extremely flexible and can be used to generate leases with terms that are quite simple to extremely complex
- For example equitable percentages for ...
 - net share lease (i.e., no inputs shared)
 - fertilizer shared equitably (i.e., same % as income)
 - fertilizer shared equitably, herbicides shared in some other proportion
 - different inputs shared differently for each crop
 - combination of crop share and cash rent

Microsoft Excel - KSU-Lease.xls

KSU Lease.xls ----- A spreadsheet budgeting program to determine equitable crop share and cash lease rental arrangements.

Version -- 10.17.10

INPUTS vs. CALCULATED VALUES

In the Crop budgets, Shares, and Lease budgets sheets all blue numbers are inputs and all black numbers are calculated from these inputs. The spreadsheet automatically recalculates every time an additional input is entered. Thus, it is important to wait until all data have been entered and reviewed before interpreting any of the calculated results (i.e., black numbers).

DESCRIPTION OF INPUTS

The paper titled KSU-Lease.pdf serves as a "users guide" and provides a brief overview of this spreadsheet. Also, several of the input cells (i.e., blue numbers) have a red diamond in the upper right hand corner of the cell. By moving your mouse cursor over this diamond, a brief description of the input will be displayed on the screen.

COMPANION PUBLICATIONS

This spreadsheet was developed as a decision-aid tool based on the principles of equitable leases outlined in several publications that can be found on the K-State Ag Econ departmental website (www.agecon.ksu.edu). Additionally, the budget format of this spreadsheet was designed to follow that of the K-State Farm Management Guide crop budgets, which are also available on the Ag Econ website, so they can also be a useful resource when analyzing leasing alternatives.

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AG MANAGER.INFO

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Various tabs

Intro / Crop budgets / Shares / Lease budgets / Flex1 / Flex2 / Irr energy costs / Notes /

Microsoft Excel - KSU-Lease.xls

CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS

Link to KSU Farm Management Guides (crop budgets) | Print budgets

Crop/System	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Total	Per	Per
Planted acres of each crop	40.0	20.0	15.0	15.0	10.0	0.0	100.0	Acres	Acres
Tillable acres per planted acre	1.00	1.00	1.00	1.00	1.00	0.00	100.0	Planted	Tillable
INCOME PER ACRE									
A. Yield per acre	45.0	45.0	80.0	27.0	90.0	20.0	---	---	---
B. Price per unit	\$6.50	\$6.50	\$4.25	\$10.50	\$4.50	\$10.50	\$30,953	---	\$309.53
C. Net government payments	\$15.35	\$15.35	\$15.35	\$15.35	\$15.35	\$0.00	\$1,535	\$15.35	\$15.35
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	\$0.00	\$0.00
F. Returns/acre ((A x B) + C + D + E)	\$307.85	\$307.85	\$355.35	\$298.85	\$420.35	\$210.00	\$32,488	\$324.87	\$324.88
COSTS PER ACRE									
1. Seed	\$16.00	\$12.00	\$9.60	\$79.65	\$60.48	\$94.40	\$2,824	\$28.24	\$28.24
2. Herbicide	3.19	6.63	20.10	8.32	24.47	9.64	931	9.31	9.31
3. Insecticide / Fungicide	16.50	16.50	0.00	0.00	1.00	0.00	1,000	10.00	10.00
4. Fertilizer and Lime	54.80	42.45	51.41	16.04	57.74	9.20	4,630	46.30	46.30
5. Crop Consulting	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
6. Crop Insurance	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
7. Drying	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
8. Miscellaneous	6.00	6.00	6.00	6.00	6.00	6.00	600	6.00	6.00
9. Machinery Expense	107.84	107.84	107.39	61.38	107.22	55.06	10,074	100.74	100.74
10. Non-machinery Labor	10.40	10.40	10.40	10.40	10.40	6.50	1,040	10.40	10.40
11. Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
12. Land Charge / Rent	65.00	65.00	65.00	65.00	65.00	0.00	6,500	65.00	65.00
G. SUB TOTAL	\$279.72	\$266.82	\$269.90	\$246.79	\$332.32	\$180.80	\$27,599	\$275.99	\$275.99
13. Interest on 1/2 Nonland Costs	6.57	6.09	6.21	5.97	8.55	6.02	653	6.53	6.53
H. TOTAL COSTS	\$286.29	\$272.91	\$276.11	\$252.76	\$340.87	\$186.82	\$28,252	\$282.52	\$282.52
I. RETURNS OVER COSTS (F - H)	\$21.56	\$34.94	\$79.24	\$46.09	\$79.48	\$23.18	\$4,236	\$42.36	\$42.36
J. TOTAL COSTS/UNIT (H/A)	\$6.36	\$6.06	\$3.45	\$9.36	\$3.79	\$9.34	---	---	---
K. RETURN TO TOTAL COST ((I+13)/G)	10.06%	15.38%	31.66%	21.10%	26.49%	16.15%	14.99%	14.99%	14.99%

Intro / Crop budgets / Shares / Lease budgets / Flex1 / Flex2 / Irr energy costs / Notes /

Microsoft Excel - KSU-Lease.xls

Alternative yield and price scenarios...

Yield scenarios to consider	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Use
Used in analysis above	45	45	80	27	90	20	1
Expected yields	45	45	80	27	90	20	1 (base)
High yield scenario	60	60	115	40	135	35	0
Low yield scenario	30	30	60	20	70	12	0
Slightly above budget	48	48	85	33	100	25	0
Slightly below budget	42	42	73	25	85	15	0

Price scenarios to consider	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Use (Y=1, X=0)
Used in analysis above	\$6.50	\$6.50	\$4.25	\$10.50	\$4.50	\$10.50	1
Current forward bids (10-15-10)	\$6.50	\$6.50	\$4.25	\$10.50	\$4.50	\$10.50	1 (base)
High price scenario	\$7.50	\$7.50	\$5.00	\$12.00	\$5.25	\$12.00	0
Low price scenario	\$4.50	\$4.50	\$3.00	\$8.50	\$3.25	\$8.50	0
Slightly above budget	\$6.75	\$6.75	\$4.50	\$10.75	\$4.75	\$10.75	0
Slightly below budget	\$6.00	\$6.00	\$4.00	\$10.00	\$4.25	\$10.00	0

Machinery cost adjustment (percent of values entered in Table 2)

100.0%

Yield and price scenarios to used in analysis are "picked" by entering values in column K.

Previously entered machinery costs can be proportionately adjusted by changing value in cell K131.

Intro / Crop budgets / Shares / Lease budgets / Flex1 / Flex2 / Irr energy costs / Notes /

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CROP BUDGETS SHOWING TOTAL COSTS AND RETURNS

Link to KSU Farm Management Guides (crop budgets) | Print budgets

Crop/System	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Total	Per	Per
Planted acres of each crop	40.0	20.0	15.0	15.0	10.0	0.0	100.0	Acres	Acres
Tillable acres per planted acre	1.00	1.00	1.00	1.00	1.00	0.00	100.0	Planted	Tillable
INCOME PER ACRE									
A. Yield per acre	45.0	45.0	80.0	27.0	90.0	20.0	---	---	---
B. Price per unit	\$6.50	\$6.50	\$4.25	\$10.50	\$4.50	\$10.50	\$30,953	---	\$309.53
C. Net government payments	\$15.35	\$15.35	\$15.35	\$15.35	\$15.35	\$0.00	\$1,535	---	\$15.35
D. Indemnity payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	---	\$0.00
E. Miscellaneous income	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0	---	\$0.00
F. Returns/acre ((A x B) + C + D + E)	\$307.85	\$307.85	\$355.35	\$298.85	\$420.35	\$210.00	\$32,488	---	\$324.88
COSTS PER ACRE									
1. Seed	\$16.00	\$12.00	\$9.60	\$79.65	\$60.48	\$94.40	\$2,824	\$28.24	\$28.24
2. Herbicide	3.19	6.63	20.10	8.32	24.47	9.64	931	9.31	9.31
3. Insecticide / Fungicide	16.50	16.50	0.00	0.00	1.00	0.00	1,000	10.00	10.00
4. Fertilizer and Lime	54.80	42.45	51.41	16.04	57.74	9.20	4,630	46.30	46.30
5. Crop Consulting	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
6. Crop Insurance	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
7. Drying	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
8. Miscellaneous	6.00	6.00	6.00	6.00	6.00	6.00	600	6.00	6.00
9. Machinery Expense	107.84	107.84	107.39	61.38	107.22	55.06	10,074	100.74	100.74
10. Non-machinery Labor	10.40	10.40	10.40	10.40	10.40	6.50	1,040	10.40	10.40
11. Irrigation	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00
12. Land Charge / Rent	65.00	65.00	65.00	65.00	65.00	0.00	6,500	65.00	65.00
G. SUB TOTAL	\$279.72	\$266.82	\$269.90	\$246.79	\$332.32	\$180.80	\$27,599	\$275.99	\$275.99
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Intro / Crop budgets / Shares / Lease budgets / Flex1 / Flex2 / Irr energy costs / Notes /

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Landowner =====> Average landowner, South Central KS, 555-987-6543
 Operator =====> Average farmer, South Central KS, 555-123-4567
 Basis for equitable share calculations: For the entire rotation (L4 = 0), Crop-by-crop (L4 = 1) L4 ==> 0

OPERATOR'S share of production inputs (enter -100% if equitably shared)

Crop/System	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Total
Planted acres	40.0	20.0	15.0	15.0	10.0	0.0	100.0
Seed	100%	100%	100%	100%	100%	100%	
Fertilizer:							
82-0-0	-100%	-100%	-100%	-100%	-100%	-100%	
N (dry/liquid)	-100%	-100%	-100%	-100%	-100%	-100%	
P	-100%	-100%	-100%	-100%	-100%	-100%	
K	-100%	-100%	-100%	-100%	-100%	-100%	
Lime	0%	0%	0%	0%	0%	0%	
Herbicide							
Ally	-100%	-100%	-100%	-100%	-100%	-100%	
+ Banvel	-100%	-100%	-100%	-100%	-100%	-100%	
Clean	-100%	-100%	-100%	-100%	-100%	-100%	
Bicep II Magnum	-100%	-100%	-100%	-100%	-100%	-100%	
Atrazine 4L + crop oil	-100%	-100%	-100%	-100%	-100%	-100%	
Glyphosate	-100%	-100%	-100%	-100%	-100%	-100%	
+ Ammonium Sulfate	-100%	-100%	-100%	-100%	-100%	-100%	
xxx							
xxx							
xxx							
Insecticide / Fungicide							
Headline	-100%	-100%	-100%	-100%	-100%	-100%	
Seedbox treatment	100%	100%	100%	100%	100%	100%	
xxx							
xxx							
Crop consulting	100%	100%	100%	100%	100%	100%	
Crop insurance	-100%	-100%	-100%	-100%	-100%	-100%	
Drying cost	-100%	-100%	-100%	-100%	-100%	-100%	
Operator's equitable share (OS%)	66.0%	65.3%	63.7%	67.9%	72.0%	99.2%	66.6%

Print operator's shares

Entering a number between 0-100% (or -100% to let the spreadsheet determine share) by crop and by input provides flexibility to handle most any situation.

Microsoft Excel - KSU-Lease.xls

Crop/System	Wht-R	Wht-C	Sorghum	Soybean	Corn	DC SB	Total
Planted acres	40.0	20.0	15.0	15.0	10.0	0.0	100.0
OPERATOR'S share of machinery, labor, irrigation, and land (enter -100% if shared equitably)							
Drill/Plant	100%	100%	100%	100%	100%	100%	
Tillage and Chemical Applications:							
Chisel	100%	100%	100%	100%	100%	100%	
Disk	100%	100%	100%	100%	100%	100%	
Field cultivate	100%	100%	100%	100%	100%	100%	
Cultivate with sidedress	100%	100%	100%	100%	100%	100%	
Anhydrous application	100%	100%	100%	100%	100%	100%	
Fertilizer application	100%	100%	100%	100%	100%	100%	
Herbicide application	-100%	-100%	-100%	-100%	-100%	-100%	
Insecticide/fungicide application	-100%	-100%	-100%	-100%	-100%	-100%	
Harvest							
Harvest	100%	100%	100%	100%	100%	100%	
Hauling	100%	100%	100%	100%	100%	100%	
Miscellaneous	80%	80%	80%	80%	80%	80%	
Non-machinery labor	100%	100%	100%	100%	100%	100%	
Irrigation expenses							
Labor	100%	100%	100%	100%	100%	100%	
Fuel and oil	100%	100%	100%	100%	100%	100%	
Repair and maintenance	100%	100%	100%	100%	100%	100%	
Irrigation investment							
Well, pump and gearhead	100%	100%	100%	100%	100%	100%	
Motor	100%	100%	100%	100%	100%	100%	
Irrigation system	100%	100%	100%	100%	100%	100%	
Land	0%	0%	0%	0%	0%	0%	
Cash payment to landowner, \$/acre	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0
Operator's equitable share (OS%)	66.0%	65.3%	63.7%	67.9%	72.0%	99.2%	66.6%
Landowner's equitable share (LS%)	34.0%	34.7%	36.3%	32.1%	28.0%	0.8%	33.4%

Kansas State UNIVERSITY
 Department of Agricultural Economics

Use KSU-Lease.xls

1. Make budgets fit your situation.
2. Determine yield and price scenario to use
3. Evaluate the profit, based on budgets
4. Fill in appropriate shares (0-100%, or -100%)
5. Determine an equitable share rent
6. Determine the equivalent cash rent
7. Evaluate flexible cash rent if desired

AG MANAGER.INFO
 Kansas State Research & Extension
 www.agmanager.info

Useful Tools on AgManager.info

- * Kevin Dhuyvetter and others
- * Excel and Browser-based Flash Files
- * Most popular:
 KSU Option Strategies, KSU-Lease, GPS-Guidance
- * Others (about 60 total tools):
 Machinery tools: combine, sprayer, GPS guidance
 Fertilizer calculator
 Economics of spraying field crops
 CRP Decisions
 KSU-Landbuy

AgManager.info Decision-Making Tools - Windows Internet Explorer

http://www.agmanager.info/Tools/default.asp

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AG MANAGER.INFO
Division of Agricultural Economics

Home / Decision Tools

AgManager.info Decision Tools

POLICY & RISK MANAGEMENT | CROP PRODUCTION ECONOMICS | MACHINERY | LAND LEASING & PURCHASE | LIVESTOCK | MISCELLANEOUS

Some of these files require the Adobe Flash Player. To download or to update your Flash software, please click [HERE](#), or go to: <http://www.adobe.com/flashplayer>

Title	Author	Excel	Corresponding Paper (PDF)	Web Dashboard	Audio (MP3) or Video (WMV)
POLICY and RISK MANAGEMENT DECISION TOOLS					
KSU ACRE.xls (2010)	Dumler	Download			
KSU-OptionStrategies	Chuyvetter	Download			
AGR-Lite	Llewellyn and Barnaby	Download	Download	View	
CRP Decision Tool	Herbel, Jones	Download	Download		
Kansas Grain Price Spread-Transportation Returns	O'Brien	View			
InsuranceSim	Kastens, Chuyvetter, and Barnaby	Download	Download		
CROP PRODUCTION ECONOMICS DECISION TOOLS					
Guidance & Section Control Profit Calculator	Chuyvetter, et al.	Download	Dashboard Excel Tool	View	WMV (Dashboard) WMV (Excel)
KSU-GPSguidance	Kastens, Chuyvetter, and Kastens	Download			
Economics of Spraying Field Crops	Chuyvetter, Jardine	Download		View	
KSU-FertCalc.xls	Chuyvetter, Kastens	Download		View	
KSU-CRP HAYorGRAZE.xls	Taylor, Chuyvetter, Kastens	Download	Download	View	
KSU Irrigation Energy Cost	Chuyvetter, Dumler	Download		View	
GrainSeasonalCash.xls	Chuyvetter	Download			
Farm Management Guides-Crops(2009).xls	Chuyvetter, et al.	Download			

http://www.agmanager.info/marketing/decisions/KSU-OptionStrategies.xls - Windows Internet Explorer

http://www.agmanager.info/marketing/decisions/KSU-OptionStrategies.xls

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Google

http://www.agmanager.info/marketing/decisions/KSU...

Comparison of Futures and Options Market Strategies

Buying or selling (buy=1, sell=2) ?
 Futures price at time of trade \$11.81
 Expected basis -\$1.20
 Interval for futures price change to consider \$0.50

Strategy	Cash	Hedge	Put	Call
Futures (buy=1, sell=2)	2			2
Put option strike 1			\$11.80	
Premium			\$0.67	
Buy=1, Sell=2			1	
Number bought/sold			1	
Put option strike 2				1
Premium				
Buy=1, Sell=2				1
Number bought/sold				1
Call option strike 1				\$12.40
Premium				\$0.69
Buy=1, Sell=2				1
Number bought/sold				1
Call option strike 2				
Premium				
Buy=1, Sell=2				1
Number bought/sold				1
Commission to buy AND sell futures, \$/unit (bu, cwt)			\$0.015	
Option commission to buy OR sell an option, \$/unit			\$0.009	
Total premium paid	\$0.000	\$0.000	\$0.870	\$0.680
Total premium received	\$0.000	\$0.000	\$0.000	\$0.000
Total commission	\$0.000	\$0.015	\$0.009	\$0.024
Net cost per unit	\$0.000	\$0.015	\$0.879	\$0.704

Futures and Options Gain/Loss

Futures Prices	Cash	Hedge	Put	Hedge & Call
\$9.31	\$0.00	\$2.49	\$1.11	\$1.80
\$9.81	\$0.00	\$1.99	\$1.11	\$1.30
\$10.31	\$0.00	\$1.49	\$0.61	\$0.80
\$10.81	\$0.00	\$0.99	\$0.11	\$0.30
\$11.31	\$0.00	\$0.49	\$0.39	-\$0.20
\$11.81	\$0.00	-\$0.02	-\$0.68	-\$0.70
\$12.31	\$0.00	-\$0.52	-\$0.68	-\$1.20
\$12.81	\$0.00	-\$1.02	-\$0.68	-\$1.31
\$13.31	\$0.00	-\$1.52	-\$0.68	-\$1.31
\$13.81	\$0.00	-\$2.02	-\$0.68	-\$1.31
\$14.31	\$0.00	-\$2.52	-\$0.68	-\$1.31

Expected Net Selling Price

Futures Prices	Cash	Hedge	Put	Hedge & Call
\$9.31	\$8.11	\$10.59	\$9.71	\$9.90
\$9.81	\$8.61	\$10.59	\$9.71	\$9.90
\$10.31	\$9.11	\$10.59	\$9.71	\$9.90
\$10.81	\$9.61	\$10.59	\$9.71	\$9.90
\$11.31	\$10.11	\$10.59	\$9.71	\$9.90
\$11.81	\$10.61	\$10.59	\$9.71	\$9.90
\$12.31	\$11.11	\$10.59	\$10.23	\$9.90
\$12.81	\$11.61	\$10.59	\$10.73	\$10.30
\$13.31	\$12.11	\$10.59	\$11.23	\$10.80
\$13.81	\$12.61	\$10.59	\$11.73	\$11.30
\$14.31	\$13.11	\$10.59	\$12.23	\$11.80

KSU-GPSguidance [Compatibility Mode] - Microsoft Excel

Home Insert Page Layout Formulas Data Review View Developer Acrobat

KSU-GPSguidance.xls -- A spreadsheet program to analyze the economics of machine guidance and section control investment.

Version -- 9.16.10

Print Information

BACKGROUND INFORMATION

This spreadsheet examines:

- 1) machine operation cost relative to field size and shape
- 2) economics of guidance technology in the context of overlap, which impacts:
 - a) machine usage per land acre (i.e., overlapping of machine operations)
 - b) crop input usage per land acre (i.e., overlap of inputs applied), which impacts:
 - i) cost of crop inputs
 - ii) reduced yield revenue associated with crop input overlap on headlands
- 3) economics of boom/machine section control

Typical uses would involve crop spraying, planting, tillage, etc. Dollar valued calculations generally are on a per "applied" acre basis. A 3,000 acre field sprayed three times in a year results in 9,000 applied acres for the year. Per-applied acre values are brought back to an implied investment per applied acre via simple amortization (no salvage value of technology is considered). To derive how much you can invest in a given technology you will need to consider applied acres per year. But, if you use the same technology for different machine operations, you might also need to add results from multiple runs of this spreadsheet, where a separate machine operation is associated with a separate spreadsheet run. Finally, notice that a "covered" acre is something different than an applied acre. In particular, an acre that is doubled-up on for inputs or machine coverage results in 2 covered acres, but, it would still be only 1 applied acre.

The user inputs information for a field of interest, which is compared to four stylized fields. One of the five fields (user field and four stylized fields) must be used as the custom rate benchmark. All four stylized fields have the same acreage and can be made the same acreage as the user-defined field if user desires.

INPUTS vs. CALCULATED VALUES

In the *Analysis* sheet all blue numbers are inputs and all other numbers are calculated from these inputs. The spreadsheet automatically recalculates every time an additional input is entered. Thus, it is important to wait until all data have been entered and reviewed before interpreting any of the calculated results (i.e., black numbers).

AgManager.info: Interactive Crop Basis Tool - Windows Internet Explorer

http://www.agmanager.info/marketing/basis/tools/default.asp

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AG MANAGER.INFO
Division of Agricultural Economics

Home / Crops / Marketing / Basis Report / Tools

Interactive Crop Basis Tool:

Enter the required information

1 Location: (For available locations, click [HERE](#))
 City: _____ State: _____ Zip: _____
 OR

2 Commodity: Select a commodity
 Corn

3 Year: Select a Year
 *Hold Ctrl to make multiple selections
 Average of Last 3 Years (A)
 Average of Last 5 Years (B)
 2011
 2010
 2009

4 Generate Report:
 Create Chart OR Create Table

Database updated: Thursday, December 23, 2010

Department of Agricultural Economics | K-State Research & Extension | College of Agriculture | Kansas State University

KSU Option Strategies – Inputs and output

http://www.agmanager.info/marketing/basis/maps/archives/2010/December/4/basismaps.asp?image=Bas - Windows Internet Explorer

http://www.agmanager.info/marketing/basis/maps/archives/2010/December/4/basismaps.asp?image=Basiscorn201044.jpg

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Crops: Basis & Basis Deviation Maps

Corn Basis, 12-22-2010
Basis = Cash Price - Nearby Futures Price

CBT Dec
Futures
Price: \$5.39

\$/Bushel

■	.16
■	-.39
■	-.43
■	-.44
■	-.47
■	-.50
■	-.54
■	-.59
■	-.64
■	-.74

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Basis maps are a spatial representation of crop basis in Kansas, Nebraska, Missouri, Oklahoma, and parts of Colorado and Texas (depending upon crop). Basis is calculated by subtracting the nearby futures price from the cash price. Basis deviation maps show the difference between current basis and the average of the three previous years for the same week. Maps are updated monthly using cash and futures prices from the third Wednesday of the month.

THANK YOU!
QUESTIONS?

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