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Agribusiness Management Series

Oklahoma Canola Systems vs. Continuous Wheat Budget Comparison

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The Oklahoma Canola Systems vs. Continuous Wheat Budget Comparison was developed to assist producers project returns from canola systems in comparison to continuous wheat. The program is a joint project of the Department of Agricultural Economics and the Department of Plant and Soil Sciences at Oklahoma State University. The program can be downloaded from: http://www.agecon.okstate.edu/faculty/publications.asp (Author: DeVuyst; Type: Spreadsheet).

The program will work best in MS Excel 2007, but will also run on MS Excel 2003, if the user has downloaded and installed conversion software from Microsoft. Some loss of functionality may be observed in MS Excel 2003. For the program to function properly, the user must allow the macro features of MS Excel. In MS Excel 2007, the user is prompted with a warning just below the button bar that macros have been disabled. Click on the warning and enable macros. In MS Excel 2003, the user must change the security level to medium or low to enable macros.

Table 1 data requirements

Table 1.

Scenario name	Comparison System	Roundup-Ready Canola-Wheat-Wheat	
	Load Defaults	Wheat defaults	Canola defaults

Cells in yellow allow for user input. Cells in green or blue are either display or calculated cells. Green and blue cells are protected to prevent users from accidentally overwriting equations.

The top table of the program allows users to enter a description of the scenario to be evaluated and the current date. These cells are optional. The user also specifies the canola system to be considered. Either conventional canola or Roundup-Ready canola systems can be analyzed.

The first table also allows the user to load defaults on yields, prices, and input use and prices for wheat and canola rotations. These defaults were developed by OSU canola researchers. Since these values will vary by location and producer, they should be used to guide the user in developing budgets. Location and producer specific values should be entered when available.

Table 2 data requirements

As in Table 1, user-supplied data are entered into yellow-shaded cells. The top of Table 2 requires the user to specify units of measurement for wheat (except in unusual cases, bushels) and canola (usually pounds or bushels), prices for wheat and canola, and expected yields for both crops. Note: wheat yield may vary by cropping system/rotation.

On left side of the middle of Table 2, inputs are listed. The cells labeled as seed, fuel, lubrication, financing and harvest costs cannot be changed. Other inputs labels can be defined by users.

To help organize user-entered inputs, the defaults are listed in three blocks: fertilizers, herbicides, other pesticides and crop insurance. The user must supply the purchase prices of each input. For each crop and system, the user must enter the quantity of each input entered in the left-hand column.

Interpreting results

The results on the bottom of Table 2 report "cash returns" or returns to land, labor, machinery, overhead and management. The budgets include fuel, lube, repair, harvest costs, fertilizer, herbicide, insecticide, and fungicide application. Since the same machines may be used to till and plant, unlisted machinery costs are not likely to be substantially different across systems. However, at least initially, canola will require an investment in learning how to grow the crop. This additional cost for management is not included in the canola budget. The wheat budgets are for grain-only rather than for dual-purpose wheat. To evaluate dual-purpose wheat, the budgets could be modified by adjusting the levels of wheat yield, nitrogen and seed, and including the net value of grazing. In preliminary comparisons, a canola plus two years of dual-purpose wheat rotation generates more expected net returns than three years of continuous dual-purpose wheat.

Table 2.

Revenue	Unit of measure	Price Per unit	Production System: Continuous Wheat — WHEAT Yield	Continuous Wheat — WHEAT Revenue	Roundup-Ready Canola-Wheat-Wheat — WHEAT Yield	Roundup-Ready Canola-Wheat-Wheat — WHEAT Revenue	Roundup-Ready Canola-Wheat-Wheat — CANOLA Yield	Roundup-Ready Canola-Wheat-Wheat — CANOLA Revenue
Production			Yield	Revenue	Yield	Revenue	Yield	Revenue
Wheat	bu	$5.00	40	$200.00	43	$215.00	Xxx	xxx
Canola	lb	$0.150	xxx	xxx	xxx	xxx	1800	$270.00
Gross Returns	acre		$200.00	$233.33				
"Cash" Costs			Quantity	Cost	Quantity	Cost	Quantity	Cost
Wheat Seed	bu	$5.00	1	$ 15.00	1	$ 15.00	xxx	xxx
RR Canola Seed + Fees + Treatment	lb	$5.25	xxx	xxx	xxx	xxx	5	$26.25
Anhydrous Ammonia (82-0-0)	lb	$0.20	68	$ 13.60	76	$ 15.20	0	$ –
Fertilizer Application	acre	$12.00	1	$ 12.00	1	$ 12.00	0	$ –
Urea (46-0--0)	lb	$0.19	0	$ –	0	$ –	143	$27.17
DAP (18-46-0)	lb	$0.210	50	$ 10.50	50	$ 10.50	50	$10.50
Sulfur (0-0-0-90S)	lb	$0.40	0	$ –	0	$ –	5	$2.00
Fertilizer Application	acre	$4.00	1	$4.00	1	$4.00	2	$8.00
Herbicide (broadleaf)	acre	$ 5.00	1	$5.00	1	$5.00	0	$ –
Herbicide (grass)	acre	$16.00	1	$16.00	1	$16.00	0	$ –
Herbicide Select®	oz	$0.92	0	$ –	0	$ –	0	$ –
Herbicide Assure II®	oz	$1.15	0	$ –	0	$ –	0	$ –
Crop Oil Concentrate	Acre	$1.00	0	$ –	0	$ –	0	$ –
Roundup PowerMax	oz	$0.48	0	$ –	0	$ –	36	$17.28
Herbicide Additive (ams)	lb	$0.125	0	$ –	0	$ –	2	$0.25
Herbicide Application	acre	$4.00	2	$8.00	2	$ 8.00	2	$8.00
Prosper FX®	acre	$6.00	0	$ –	0	$ –	0	$ –
Insecticide dimethoate	pint	$5.38	0.75	$4.04	0.75	$4.04	0	$ –
Warrior® Fall (1 of 3 yrs)	oz	$2.45	0	$ –	0	$ –	1	$2.45
Insecticide (e.g. Warrior®) Spring	oz	$2.45	0	$ –	0	$ –	3	$7.35
Foliar Fungicide (1 of 3 years)	acre	$12.50	0.33	$4.13	0.33	$4.13	0	$ –
Aerial Pesticide Application	acre	$5.00	1.33	$6.65	1.33	$6.65	1.33	$6.65
Wheat Crop Insurance	acre	$6.70	1	$6.70	1	$6.70	xxx	xxx
Canola Crop Insurance	acre	$12.50	xxx	xxx	xxx	xxx	1	$12.50
Fuel	gal	$2.00	4.92	$9.84	4.92	$9.84	4.92	$9.84
Lube	acre	$1.48	1	$1.48	1	$1.48	1	$1.48
Repair	acre	$7.12	1	$7.12	1	$7.12	1	$7.12
Operating loan interest rate	%	7.00%	$62.03	$4.34	$62.83	$4.40	73.42	$5.14
Wheat Custom Harvest & Hauling								
Base Charge	acre	$16.00	1	$16.00	1	$16.00	xxx	xxx
Excess for > 20 bu/a	bu	$0.23	20	$4.60	23	$5.29	xxx	xxx
Hauling	bu	$0.23	40	$9.20	43	$9.89	xxx	xxx
Canola Custom Harvest & Hauling								
Swathing or Pushing	acre	$12.00	xxx	xxx	xxx	xxx	1	$12.00
Combining	acre	$16.00	xxx	xxx	xxx	xxx	1	$16.00
Excess for > 20 bu/a	bu	$0.23	xxx	xxx	xxx	xxx	16	$3.68
Hauling	bu	$0.23	xxx	xxx	xxx	xxx	36	$8.28
Total "Cash" Costs	acre	$158.19	$161.23	$191.94				
Net Returns to Land, Machinery Fixed Costs, Labor, Overhead and Management	acre		$41.81 per acre Continuous Wheat		$61.87 per acre Roundup-Ready Canola-Wheat-Wheat			

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