



## Agribusiness Management Series

# Oklahoma Wheat Stocker Purchase Planner

**Eric A. DeVuyst**

Associate Professor  
Farm Management and Production Management

**Francis Epplin**

Professor, Agriculture Business and Commercial Agriculture

**Derrell Peel**

Professor and Extension Economist, Livestock Marketing

**Karen Taylor**

Department of Agricultural Economics

**Gerald Horn**

Professor, Beef Cattle Nutrition and Management

**David Lalman**

Professor, Beef Cattle

The Oklahoma Wheat Stocker Purchase Planner was developed to assist wheat stocker producers project economic profitability of their wheat stocker enterprises. With user-supplied data, the program projects returns from various purchase weights of stocker calves. The program is a joint project of the Departments of Agricultural Economics and Animal Science at Oklahoma State University. The program can be downloaded from: [www.beefextension.com](http://www.beefextension.com) (click on "Stocker" and then "Software").

This software is programmed in MS Excel 2007. Substantial loss of functionality, run-time errors and calculation errors will likely occur if it is run in MS Excel 2003 or earlier versions of Excel. So, its use in MS Excel 2003 or previous versions is not recommended. 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.

### Data input

Only cells with a yellow background and black text are changeable. All other cells are calculated automatically by the program, are not accessible to the user, and have a light blue or green background.

The program has five sections accessed by the tabs at the bottom of the screen. The tabs are labeled **Producer Info**, **Cattle type**, **Steers**, **Heifers**, and **Results**. Another tab "**Feed cost of Gain**" can be accessed through a macro on the "**Steers**" and "**Heifers**" tabs.

Oklahoma Cooperative Extension Fact Sheets are also available on our website at: <http://osufacts.okstate.edu>

### Producer Info

The first section (see Table 1) allows the user to enter a scenario name ("DEMO") in the table below and the date of the scenario. Clicking on the location cell will produce a pop-up menu that allows the producer to choose a set of auction market prices, either Oklahoma City or Combined Oklahoma auctions. These prices are stored in a hidden tab and can be updated from an OSU website.

To update prices, first connect to the internet. Then open the spreadsheet. Click on "**UPDATE PRICE DATA.**" If asked if you want to proceed, click "OK." Note, if your internet connect is slow, this may take several minutes. The screen may flash several times as files and tabs are opened and closed.

Next enter the expected purchase date of stockers and an operating note interest rate.

NAME	DEMO	
Date	July 2, 2009	
What location's price data do you want to use?	Oklahoma City	
The current price data is dated as	July 2, 2009	
Do you want to update price data?		
Expected purchase date	1-Nov	
Interest rate	%	6.00%

Table 1. "Producer Info" tab.

### Cattle type

The user first must select a lightest and heaviest weight that will be considered for purchase (see Table 2). For both cells, a pop-up menu asked the producer to select a weight. Weights from 300 to 800 pounds, in 50 pound increments, can be considered. Next, the user selects the gender(s) to be considered.

Purchase prices for stockers can be generated by clicking the "Generate prices" button on the top of the page. Note, the user should update prices as described in the **Producer Info**

Table 2. "Cattle type" tab.

Weight range	Lightest weight		Heaviest weight	
	300	800	Steers and Heifers	
Gender			Steers	Heifers
Purchase weight (lbs)	Weight range		Steers	Heifers
	300	350	120.00	120.00
	350	400	121.74	118.00
	400	450	112.40	101.42
	450	500	110.68	96.49
	500	550	107.27	97.81
	550	600	105.03	94.98
	600	650	102.59	95.96
	650	700	100.58	95.42
	700	750	101.24	92.74
	750	800	96.45	89.50
			ADG in receiving program	Steers
		Days in receiving program	Steers	Heifers
		ADG in receiving program	Steers	Heifers
		Days grazing wheat	Steers	Heifers
		ADG grazing wheat	Steers	Heifers
		Percent death loss	Steers	Heifers
		Stocking density (head/acre)	Steers	Heifers

Table 3. "Steers" tab.

		Steers									
Purchase weight (lbs)		325	375	425	475	525	575	625	675	725	775
Veterinary cost	\$/head	20.00	19.00	19.00	38.00	17.00	16.00	14.00	12.00	12.00	12.00
Marketing cost	\$/head	11.00	12.00	13.00	14.00	15.00	16.00	16.50	16.50	17.00	18.00
Other costs per month	\$/head	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Feed cost of gain	\$/lb	0.45	0.46	0.48	0.50	0.53	0.57	0.62	0.64	0.66	0.68
Sales date		26-Mar	26-Mar	26-Mar	26-Mar	26-Mar	26-Mar	26-Mar	2-Mar	2-Mar	2-Mar

		Wheat Stocker Enterprise Budget									
		Steers									
Purchase weight (lbs)		325	375	425	475	525	575	625	675	725	775
Revenue											
Sales weight	lbs/head	579	639	708	768	837	887	932	941	991	1041
Sales price	\$/cwt	118.51	111.99	104.24	97.46	89.66	84.01	78.98	77.94	72.29	66.64
Gross Revenue	\$/head	686.20	715.60	737.99	748.46	750.45	745.16	735.70	733.19	716.19	693.53
Expense per head sold											
Purchase	\$/head	390.00	456.54	477.29	525.71	563.19	603.91	641.20	678.93	733.96	747.52
Cost of gain	\$/head	114.30	121.44	135.84	146.50	165.36	177.84	190.03	170.05	175.36	180.68
Vet, Marketing and Other	\$/head	33.00	33.00	34.00	34.00	34.00	34.00	32.50	30.50	31.00	32.00
Interest expense	\$/head	11.05	12.72	13.40	14.68	15.80	16.92	17.94	15.50	16.65	16.98
Total Expense	\$/head	548.35	623.71	660.53	720.90	778.35	832.67	881.67	894.97	956.98	977.18
Net Return	\$/head	137.85	91.89	77.46	27.57	-27.90	-87.51	-145.97	-161.78	-240.78	-283.65
Net Return after death loss	\$/head	124.13	77.58	63.44	13.35	-41.41	-100.18	-157.74	-172.05	-249.38	-290.59
Breakeven Price	\$/head	96.64	99.60	95.1	95.68	94.70	95.50	96.19	96.49	97.77	94.85
Net Return per acre	\$/acre	115.16	110.83	105.73	26.69	-82.81	-250.44	-364.92	-404.46	-802.61	-945.51

section above before using the "Generate prices" feature. If the data file is missing historical prices for some gender-weight combinations, the program will prompt the user to manually enter these prices. Generated prices can be manually overwritten by typing the expected purchase price in the appropriate cell.

Next, the user must enter information on days in a receiving programming, days grazing wheat, expected rates of gain, death loss and stocking rates. Note, to copy cell's value downward to end of its column: 1) enter the value to copy and press enter; 2) return to the cell with the arrow keys or with the mouse; and 3) double left click on the cell. Its value will copy down to the end of the entry fields.

### Steers and Heifers

If the user selects "Steers" or "Both" in the gender cell on the **Cattle type** tab, a tab labeled "**Steers**" will be visible. (Otherwise, this tab is hidden.) Similarly for **Heifers**, the tab is only visible if "Heifers" or "Both" was selected in the gender cell.

The **Steers** and **Heifers** tabs (as in Table 3) are identical in appearance and date entry requirements. The discussion below applies to both tabs.

The **Steers** (or **Heifers**) tab is divided into two tables. The top table requires the user to enter veterinary, production and marketing costs. A detailed sub-table can be used to enter "**Feed cost of gain**" by clicking on any cell in the "**Feed cost of gain**" row and then simultaneously pressing "ctrl-t" (See Table 4). The results from the "**Feed cost of gain**" sub-table can be transferred back to the **Steers** (or **Heifers**) tab by clicking on the "Return to Steers" button (or "Return to Heifers" button).

### Results

The result tab reports three results. First, the highest returns per head and the associated purchase weight are reported by gender. Second, the highest returns per acre and the associated purchase weight are reported by gender. Third, the lowest breakeven price is reported by gender.

For producers that rent wheat pasture, the appropriate decision aid is likely the purchase weight and gender with the highest returns per head. For producers that own wheat pasture, the appropriate decision aid is likely the purchase weight and gender with the highest returns per acre. For very risk-averse producers, the purchase weight and gender with the lowest breakeven price might be advisable.

**Table 4. Feed cost of gain.**

Feed Cost of Gain Analysis				Steers									
				325 lbs	375 lbs	425 lbs	475 lbs	525 lbs	575 lbs	625 lbs	675 lbs	725 lbs	775 lbs
<b>Receiving Program Expenses</b>													
Hay	\$/ton	\$80	lb/day	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Supplement	\$/ton	\$400	lb/day	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Mineral	\$/ton	\$300	oz/day	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Feed cost during receiving \$/head				\$36.21	\$36.21	\$36.21	\$36.21	\$36.21	\$36.21	\$36.21	\$16.90	\$16.90	\$16.90
Transport to pasture				\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00
Other receiving costs				\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25
<b>Total receiving program expenses</b>				\$38.46	\$38.46	\$38.46	\$38.46	\$38.46	\$38.46	\$38.46	\$19.15	\$19.15	\$19.15
<b>Expenses during grazing</b>													
Pasture rent	\$/cwt/month	\$7.00		\$31.64	\$35.49	\$39.66	\$43.51	\$47.67	\$51.17	\$54.48	\$56.55	\$60.05	\$63.55
Supplement	\$/ton	\$400	oz/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mineral	\$/ton	\$300	oz fed/day	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Feed & pasture during grazing \$/head				\$32.11	\$35.96	\$40.12	\$43.97	\$48.14	\$51.64	\$54.96	\$57.02	\$60.52	\$64.02
Implant cost (\$/head)				\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25	\$1.25
Freight (\$/head)				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Labor (\$/head/day)				\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Equipment and machinery (\$/head)				\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
Management fee (\$/head)													
Other													
<b>Total grazing expenses</b>				\$36.46	\$40.31	\$44.47	\$48.32	\$52.49	\$55.99	\$59.30	\$61.37	\$64.87	\$68.37
<b>Total Expenses</b>				\$74.92	\$78.77	\$82.93	\$86.78	\$90.95	\$94.45	\$97.76	\$80.52	\$84.01	\$87.52
<b>Expected weight gain (lbs)</b>				254.0	264.0	283.0	293.0	312.0	312.0	306.5	265.7	265.7	265.7
<b>Cost of gain excluding vet, marketing, and other expenses (\$/lbs)</b>				\$0.29	\$0.30	\$0.29	\$0.30	\$0.29	\$0.30	\$0.32	\$0.30	\$0.32	\$0.33

**Table 5. Results.**

	Steers		Heifers	
	Purchase \$	weight	Purchase \$	weight
Highest Return (\$/hd)	97.92	325	75.66	375
Highest Return (\$/acre)	109.51	375	91.83	375
Lowest breakeven (\$/cwt)	94.84	525	86.55	475

**For more information contact:**

Eric DeVuyst, Oklahoma State University, 530 Ag. Hall, Stillwater, OK 74078-6026. 405-744-6166. eric.devuyst@okstate.edu.

Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, gender, age, religion, disability, or status as a veteran in any of its policies, practices, or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 20 cents per copy. 0909 GH