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# Crop Planting Decisions for 2008 – An Initial Analysis

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# CORNHUSKER ECONOMICS

October 31, 2007

University of Nebraska–Lincoln Extension

Institute of Agriculture & Natural Resources  
Department of Agricultural Economics  
<http://www.agecon.unl.edu/Cornhuskereconomics.html>

## Crop Planting Decisions for 2008 – An Initial Analysis

Market Report	Yr Ago	4 Wks Ago	10/26/07
<b><u>Livestock and Products,</u></b>			
<b><u>Weekly Average</u></b>			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.....	\$89.16	\$95.25	\$92.27
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.....	116.85	124.77	117.62
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.....	108.79	121.44	114.29
Choice Boxed Beef, 600-750 lb. Carcass.....	147.66	146.68	143.66
Western Corn Belt Base Hog Price Carcass, Negotiated.....	61.09	57.56	55.14
Feeder Pigs, National Direct 50 lbs, FOB.....	54.01	50.32	48.73
Pork Carcass Cutout, 185 lb. Carcass, 51-52% Lean.....	66.45	62.36	60.40
Slaughter Lambs, Ch. & Pr., Heavy, Woolled, South Dakota, Direct.....	*	98.50	*
National Carcass Lamb Cutout, FOB.....	250.77	259.65	264.88
<b><u>Crops,</u></b>			
<b><u>Daily Spot Prices</u></b>			
Wheat, No. 1, H.W. Imperial, bu.....	4.84	8.35	7.38
Corn, No. 2, Yellow Omaha, bu.....	3.07	3.29	3.43
Soybeans, No. 1, Yellow Omaha, bu.....	6.14	8.97	9.22
Grain Sorghum, No. 2, Yellow Dorchester, cwt.....	4.91	5.71	6.41
Oats, No. 2, Heavy Minneapolis, MN, bu.....	2.53	2.77	*
<b><u>Hay</u></b>			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.....	153.00	135.00	155.00
Alfalfa, Large Rounds, Good Platte Valley, ton.....	87.50	87.50	97.50
Grass Hay, Large Rounds, Good Northeast Nebraska, ton.....	82.50	*	*
* No market.			

Prices tend to be the driving factor when considering which crops to plant and how many acres to plant. Deciding what to plant in 2008 could be even more complicated than this year, the decision being compounded by the fact that wheat is at record high price levels. To analyze breakeven prices for the three major commodities we can use crop budgets of expected costs.

At this point, the costs to consider in calculating breakevens are the variable or operating costs. The fixed or ownership costs of depreciation and interest on investment are sunk costs and will not change in the short-run. The variable costs considered in this analysis are the costs of the machinery field operations including labor, fuel and lube, and machinery repairs; the costs of materials and supplies used in the production of the crops including fertilizers, herbicides, insecticides, seed and custom costs; and interest on the operating costs. The interest rate used was 6 percent, with the interest being calculated for 8 months, assuming the input costs will be tied up an average of 8 months before the crop is sold.

Costs could change dramatically before next spring, depending on the supply of inputs and the competitive demand for them. Our calculations are based on the base enterprise budgets produced by the University of Nebraska–Lincoln Department of Agricultural Economics in 2006, and can be found at the following website:

<http://www.ianrpubs.unl.edu/eublic/live/ec872/build/ec872.pdf>

Fuel and lubrication costs were increased 37.5 percent from the 2006 budgets, based on the current price of diesel. Chemical and repair costs were increased 10 percent and seed costs were increased 33 percent. Anhydrous was priced at \$.30 per pound of nitrogen. This is based on a recent survey of a sample of supplies from across the state.

The analysis looks at a number of different analysis scenarios. The average yields and the Total Variable Costs or TVC (the costs considered to calculate the breakevens) are given for each scenario and the second table in each section shows the breakeven prices between the crops.



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**1. C.P. Irrigated with Crop Rotation including Wheat as an Alternative.** This assumes crops are grown in rotation as opposed to the same crop being repeated in subsequent years on the same field.

	YIELDS (BU/AC)	TVC	CORN	SOYBEANS	WHEAT
Corn	190	\$316.38	\$2.50	\$4.84	\$4.54
Soybeans	58	\$122.03	\$3.00	\$6.48	\$5.73
Wheat	80	\$204.65	\$3.50	\$8.11	\$6.92
			\$4.00	\$9.75	\$8.10
			\$4.50	\$11.39	\$9.29

These results show, for example, if corn is \$3.00, soybeans will be more profitable if the price is greater than \$6.48 per bushel, and wheat will be more profitable if it is greater than \$5.73 per bushel.

**2. C.P. Irrigated with Corn after Corn**

The expected corn yield was penalized about 9 percent, or reduced to 175 bushels per acre. The soybean and wheat yields were left unchanged from the first scenario, as it was assumed they will be grown in a rotation situation so no yield penalty was applied. The breakeven prices are in Table 3. In this case if corn is \$3.00 per bushel, the breakevens for soybeans and wheat are reduced to \$4.68 and \$4.43, respectively.

	CORN	SOYBEANS	WHEAT
	\$2.50	\$3.18	\$3.34
	\$3.00	\$4.68	\$4.43
	\$3.50	\$6.19	\$5.52
	\$4.00	\$7.70	\$6.62
	\$4.50	\$9.21	\$7.71

**3. Dryland with Crop Rotation**

	BU/ACRE	TVC	CORN	SOYBEANS	WHEAT
Corn	100	\$176.57	\$2.50	\$3.52	\$4.82
Soybeans	40	\$67.42	\$3.00	\$4.77	\$6.25
Wheat	35	\$95.40	\$3.50	\$6.02	\$7.68
			\$4.00	\$7.27	\$9.11
			\$4.50	\$8.52	\$10.54

For the dryland situation, the breakeven for soybeans and wheat with corn at \$3.00 are \$4.77 and \$6.25 respectively.

**4. Dryland with Corn after Corn.**

	BU/ACRE	TVC
Corn	95	\$220.05
Soybeans	40	\$67.42
Wheat	35	\$95.40

In this scenario, the corn yield was reduced from 100 bushels to 95 bushels per acre. The result was that for corn at \$3.00 per bushel, the breakeven prices for soybeans and wheat were reduced to \$3.31 and \$4.58 respectively.

**5. Destroy Wheat Next Spring and Plant Corn or Soybeans**

At this point, the grain stocks situation and anticipated plantings of wheat point to continued strong wheat prices into the 2008 crop year. If, and that's a big if at this point, wheat prices were to drop would it be profitable to destroy the wheat

crop and plant corn or soybeans? In this situation the alternative crop, corn or soybeans, would have to "recover" the sunk costs already in the wheat such as the seed and the planting costs and the additional costs of destroying the wheat. Here are a few comparisons: For dryland rotation situations and for the yields we assumed, the breakeven prices for wheat at \$4.00 are about \$2.25 for corn and about \$3.00 for soybeans. If wheat is destroyed, the breakevens increase to about \$2.65 for corn and \$3.30 for soybeans. For irrigated rotation situations and \$4.00 wheat, the corn breakeven increases from about \$2.25 to about \$2.55 if wheat is destroyed, and the soybean breakeven increases from about \$4.00 to \$4.80 per bushel.

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