

Homework #3: Price Projections, Farm Financials, Etc.

Due 4/30/2009

15 points possible + 2 bonus points

Late assignments are docked 10% of the point total per (school) day overdue.

Long answer (please show your work where possible):

1. (3 points) Name 3 sources of crop outlook information.

USDA, private sector market analysis firms, land grant universities, commodity organizations, etc.

2. (5 points) Given the data below, compute a 14-day Relative Strength Index for Dec. 2009 corn.

Date	Futures Price	Change	Up	Down
4/1/2009	4.2725			
4/2/2009	4.3375	0.065	0.065	0.00
4/3/2009	4.355	0.0175	0.0175	0.00
4/6/2009	4.3675	0.0125	0.0125	0.00
4/7/2009	4.275	-0.0925	0.00	0.0925
4/8/2009	4.2775	0.0025	0.0025	0.00
4/9/2009	4.2175	-0.06	0.00	0.06
4/13/2009	4.1925	-0.025	0.00	0.025
4/14/2009	4.2475	0.055	0.055	0.00
4/15/2009	4.1525	-0.095	0.00	0.095
4/16/2009	4.1675	0.015	0.015	0.00
4/17/2009	4.07	-0.0975	0.00	0.0975
4/20/2009	3.9875	-0.0825	0.00	0.0825
4/21/2009	4.035	0.0475	0.0475	0.00
4/22/2009	4.0325	-0.0025	0.00	0.0025
Average			0.0154	0.0325

$$\begin{aligned}
 \text{RSI} &= (\text{Up average} / (\text{Up average} + \text{Down average})) * 100 \\
 &= (0.0154 / (0.0154 + 0.0325)) * 100 \\
 &= (0.0154 / 0.0479) * 100 \\
 &= 32.15
 \end{aligned}$$

3. (4 points) Given the data below, compute your per-bushel soybean cash flow costs as a cash renter and as a land owner. Your average yield was 55 bushels per acre.

	\$ per acre
Machinery Costs	55.80
Seed, Chemicals, and Fertilizer	202.85
Labor	26.95
Land	205.00

Total Costs with Land Rent = \$490.60/acre

Total Costs w/o Land Rent = \$285.60

Cash Flow Costs for Cash Renter = \$490.60/acre / 55 bu./acre = \$8.92/bu.

Cash Flow Costs for Land Owner = \$285.60/acre / 55 bu./acre = \$5.19/bu.

4. (3 points) What is the current ratio and the debt-to-asset ratio for the farm outlined below?

Current Assets	\$413,000	Current Liabilities	\$240,000
Checking and savings accounts	\$15,000	Accounts payable	\$22,500
Crops held for sale/feed	\$240,000	Farm taxes due	\$0
Investment in growing crops	\$25,000	Current notes and credit lines	\$175,000
Commercial feed on hand	\$35,000	Accrued interest - short	\$12,500
Prepaid expenses	\$26,000	- fixed	\$10,000
Market livestock	\$50,000		
Supplies on hand	\$12,000	Due in 12 months - fixed	\$20,000
Accounts receivable	\$10,000		
Fixed Assets	\$493,000	Fixed Liabilities	\$150,000
Unpaid coop. distributions	\$0	Notes and contracts, remainder	\$150,000
Breeding livestock	\$23,000		
Machinery & equipment	\$95,000		
Buildings/improvements	\$75,000		
Farmland	\$300,000		

Current Ratio = Current Assets/Current Liabilities
= \$413,000/\$240,000
= 1.72

Debt-to-Asset Ratio = Total Liabilities/Total Assets
= (\$240,000 + \$150,000) / (\$413,000 + \$493,000)
= \$390,000 / \$906,000
= 0.4305
= 43.05%

Bonus Question (2 points):

What is the FAPRI U.S. corn price projection for 2015?

\$4.15/bu.

Source:

http://www.fapri.missouri.edu/outreach/publications/2009/FAPRI_MU_Report_01_09.pdf

However, given that FAPRI lists years as “14/15” and “15/16”, I did give partial to full credit if you listed either the 2014 (“14/15”) or 2015 (“15/16”) price. Also, several of you found the U.S. corn FOB Gulf price (listed in \$ per metric ton) and I gave partial to full credit for that as well.