Take-Home Final Exam  
Econ 338 C  
Spring 2003  

To be turned in to Room 468 Heady Hall (in box on counter) on or before  
May 8, 2003  
(Each question counts as 2 points)

True or False
1. The change in the basis under July futures from harvest time to late spring is the gross return for storage for that time period _______

2. Historical records show that there is a 50% chance that December corn futures contract prices will rise from winter and spring to _______ harvest time.

3. The Loan Deficiency Payment (LDP) is always the amount that the cash price is below the CCC loan rate. _______

4. Hedge-to-Arrive (Futures only) contracts lock in the futures price but not the basis. _______

5. A different grain marketing strategy may be needed for farms with a high yield risk than for those in areas with lower yield risk. _______

6. Counter-party risk in grain contracts is the risk that the company you doing are business with will not fulfill their contractual obligations. _______

7. The cash-flow breakeven price is calculated by dividing the total cash-flow costs per acre for producing the crop (after deducting government payments) by the expected yield per acre. _______

8. Crop-share renting of land offers producers greater flexibility in marketing grain than cash-renting of land. _______

9. When determining the effective hedge price, the two main items to subtract from the initial futures price are (1) the basis under the relevant futures contract when the hedge is lifted and (2) brokerage fees. _______

10. It is almost always better to use the Marketing Loan to take advantage of the low CCC interest rate rather than taking the LDP at harvest. _______

11. When a grain producer buys call options, he/she has a profit if futures prices rise sharply. _______
12. When a person sells a soybean option, his/her maximum potential gain is the initial premium received.

13. When a person buys a corn call option, his/her maximum potential gain is known.

14. If a grain producer buys a put option to market the crop, the transaction establishes a price floor.

15. If a grain producer buys a put option to market grain, it allows him/her to benefit if prices increase later in the year.

16. China is a major market for U.S. soybeans.

17. The basis under July futures has a definite seasonal pattern.

18. Seasonal grain contracts concentrate a producer’s sales in the time period when prices have a strong tendency to be at their highest levels.

19. Seasonal grain contracts provide a specific known sale price at the time the farmer enters into the contract.

20. CCC Marketing Loans typically provide a farmer with a much lower interest rate than would be available at a commercial bank.

Fill in the blanks

1. Purchasing a put option gives the buyer the __________ but not the __________ to ________ ________ ________ ________.

2. Purchasing a call option gives the buyer the __________ but not the __________ to ________ ________ ________ ________.

3. A synthetic put involves selling futures and __________ __________ (what kind?) options.

4. The purposes of a synthetic put are to ________ ________ ________ and ________ ________ ________ ________ ________.

5. Elevators are offering “New Generation” grain contracts because of pressure to ________ ________ ________ ________ ________ ________.

6. Premium-offer contracts involve sale of ________ options.

7. The incentive for farmers to use Premium Offer contracts is to gain a ________ over ________ ________ prices.
8. Marketing needs and appropriate marketing strategies are strongly influenced by what two individual farm factors? ____________________ and ________________.

9. The three key variables in a grain farmer’s profit equation are ____________, ____________, and ____________.

10. Selling corn or soybeans before harvest at prices below the loan rate is high risk because the _____ and ________________ cannot be locked in at the same time the grain is sold.

11. The three components of grain price risk are ____________, ____________, and ____________.

12. Crop Revenue Coverage Insurance insures ____________ per acre.

13. Crop Revenue Coverage Insurance provides ____________ if new-crop futures prices rise from late winter before harvest to harvest time.

14. Price-later contracts are marketing tools that leave exposure to ____________ in case of an elevator bankruptcy. They are called ____________-sale contracts because the farmer no longer owns the grain.

15. The basis is the difference between the ____________ price and the price of a ________________ ________________ ________________.

Multiple Choice- one correct answer

1. When a grain producer buys call options, he/she (a) establishes a floor on the selling price of the grain, (b) establishes a market position similar to a forward contract, (c) retains the right to benefit from higher prices if the futures market rises substantially.

2. The net worth risk ratio measures (a) the break-even price that must be received from the crop to cover costs, (b) the price per bushel at which 10% of the equity in the grain enterprise is lost, (c) the maximum dollars per acre which can be lost in any one year before a predetermined percentage of the equity is lost.

3. CRC insurance is a tool that (a) insures net revenue per acre, (b) always protects against lower prices, (c) is an important potential companion tool for pre-harvest grain sales.

4. A synthetic put is (a) a simultaneous sale of futures contracts and purchase of a call option in the same contract month, (b) a simultaneous sale of futures contracts and sale of a call option in the same contract month, (c) a simultaneous sale of futures contracts and purchase of a put option in the same month.

5. A synthetic put is designed to (a) establish a price floor while retaining the opportunity to gain if prices rise sharply, (b) generate additional income to help pay the brokerage cost from selling futures contracts.
6. A University of Illinois evaluation of grain market advisory services shows that (a) all advisory services have consistently provided their customers with a higher price than the average price received by farmers for the marketing year, (b) 3 out of 36 advisory services were able to beat the farmer benchmark price every year, (c) 5 out of 36 advisory services were able to beat the farmer benchmark price every year, (d) there is little variation in performance from one advisory service to another.

7. A University of Illinois evaluation of grain market advisory services shows that (a) most individual market advisory services are able to beat the farmer benchmark price by about the same amount each year or (b) their performance varies substantially from year to year.

8. New-crop corn and soybean futures prices in the winter and spring before harvest since the mid-1970s have been above harvest-time prices (a) much more often than below harvest-time prices, (b) below harvest-time prices much more often than above harvest-time prices, (c) above and below harvest-time prices with about equal frequency.

9. If the corn basis under July futures is –68 at harvest and –34 in early June, (a) the market is discouraging farmers from storing, (b) signaling that cash prices will be higher in the spring, (c) offering a significant return for hedging & storing grain.

10. An important starting point in developing an individual farmer’s marketing plans for the coming marketing year is (a) watching commodity price charts, (b) estimating the number of bushels needing to be sold, (c) estimating the break-even cash-flow cost per bushel.

**Complete the calculations**

1. Calculate the net returns for hedging and storing from harvest to late January and to late May with the following information:

   Cash price: $1.84
   Mid-Oct. Dec. futures price: $2.20
   Mid-Oct. July futures price: $2.30
   Expected basis under July futures in late January: -$0.38
   Expected basis under July futures in late May: -$0.27
   Storage costs to late January: $0.10
   Storage costs to late May: $0.16

   Show your calculations.
2. Calculate the effective December futures hedge price from the following information:

December corn futures sold in January before harvest at $2.48 per bushel.
December futures at harvest time: $2.15 per bushel.
Forward contract price in January before harvest: $2.10 per bushel
Cash price at harvest: $1.80 per bushel
Brokerage fee: $0.01 per bushel
Expected harvest basis under December when futures were sold: -$0.36 per bushel

Effective hedge price: $________/bu.

3. Use the following information to determine the price needed to cover cash-flow costs of production for the following producer:

Total cash-flow costs per acre excluding family living: $290
Total cash-flow costs per acre including family living: 330
Normal yield 145 bu./A.

$_____ /Bu.

Should family living be included as a cost of production? _______ Yes _______ No.

4. What key cost item explains why a young farmer may not want to pattern her/his marketing strategies after those of an older, established farmer in the neighborhood.

______________________________.

5. Given the following information from the peak of the harvest season, calculate what the market is willing to pay farmers to store their corn crop until late spring:

<table>
<thead>
<tr>
<th>Situation</th>
<th>December futures price</th>
<th>July futures price</th>
<th>Local cash corn price</th>
<th>Expected basis under July in May</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situation I</td>
<td>$2.35</td>
<td>2.48</td>
<td>2.00</td>
<td>-0.31</td>
</tr>
<tr>
<td>Situation II</td>
<td>1.98</td>
<td>2.20</td>
<td>1.55</td>
<td>-0.34</td>
</tr>
</tbody>
</table>

Show your calculations
Extra Credit to offset other wrong answers on other questions or lower grades on earlier assignments (2 points each):
A.) List four “new generation” grain contracts:

1. _______________________________________________
2. _______________________________________________
3. _______________________________________________
4. _______________________________________________

B.) List three functions that need to be performed by the grain marketing system (2 points each)

1. _______________________________________________
2. _______________________________________________
3. _______________________________________________

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