

Name: _____

Grain Market Short Course
Mid-Term Examination
(Due January 30, 2004)

Part I. Multiple Choice Questions: (Circle the letter associated with the best answer. Each question is worth 3 points.)

- 1) The higher the cash price is relative to futures:
 - a) The weaker the basis is.
 - b) The stronger the basis is.**
 - c) The better my storage opportunity.
 - d) None of the above.

- 2) Forward cash contracts have no basis risk.
 - a) True
 - b) False**

- 3) If I hedge soybeans I want to harvest next fall, and basis turns out to be stronger than I expected:
 - a) I will get a better price than I expected.**
 - b) I will get a worse price than I expected
 - c) Once you hedge, you always get exactly what you expected.
 - d) It depends on whether futures prices went up or down.

- 4) A delayed price contract gets rid of basis risk.
 - a) True
 - b) False**

- 5) If basis in my area is stronger than usual, and I decide to store soybeans, then:
 - a) I think the basis will improve.
 - b) I think soybeans are too cheap relative to corn.
 - c) I expect futures prices to rally higher.**
 - d) Local demand in my area is poor.

- 6) If the initial margin in my futures account is \$800, and the maintenance margin is \$700, I will have to make a margin call when:
 - a) Futures prices go up.
 - b) Futures prices go down.
 - c) My account balance falls below \$700.**
 - d) My account balance falls below 800.

- 7) I am a dairy producer. If I want to hedge corn I intend to purchase in April, I would:
- a) Sell a December futures contract.
 - b) **Buy a May futures contract.**
 - c) Buy a December futures contract.
 - d) Sell a May futures contract.
- 8) The current basis is $-\$.50$. In October the basis is usually $-\$.35$. If the current November futures price is $\$7$ per bushel and I hedge soybeans, I should expect to get ____ at harvest.
- a) $\$6.50$.
 - b) It depends on whether prices go up or down before harvest.
 - c) **$\$6.65$.**
 - d) There is not enough information to answer this question.
- 9) Prices for next year are easier to forecast than next year's basis levels.
- a) True
 - b) **False**
- 10) Basis contracts are less risky than forward cash contracts.
- a) True
 - b) **False**
- 11) The social function of a futures market is to:
- a) Make sure Fortenbery never has too much money in his pocket.
 - b) Insure that large speculators have a place to trade.
 - c) Make sure Cargill can make a profit exporting grain.
 - d) **Facilitate price discovery.**
- 12) A harvest basis which is weaker than normal provides an incentive to:
- a) Sell at harvest.
 - b) Buy futures contracts.
 - c) **Store grain.**
 - d) None of the above.
- 13) If I buy a corn futures contract for July delivery for $\$2.40$ per bushel, I have a legal obligation to accept delivery of corn in July at a warehouse on the Illinois river.
- a) **True**
 - b) False
- 14) A fixed futures or hedge to arrive contract has the same cash flow risk as hedging in the futures market.
- a) True
 - b) **False**

- 15) Basis is determined by:
- a) Cost of Transportation.
 - b) Local Competition.
 - c) Cost of Storage.
 - d) **All the above.**
- 16) If I expect to get \$7.40 from a hedge, and basis turns out 6 cents stronger than I expected, the actual price I get is:
- a) Once I hedge I will always get what I expect.
 - b) \$7.34
 - c) **\$7.46**
 - d) It depends on whether prices went up or down after I hedged.
- 17) Basis is usually weaker for someone buying grain from an elevator than for someone selling grain to an elevator.
- a) true
 - b) **false**
- 18) If I forward cash contract and then do not make a crop, the grain elevator can sue me for not fulfilling my delivery obligation.
- a) **true**
 - b) false
- 19) Storing grain is one of the less risky marketing strategies.
- a) True
 - b) **False**
- 20) Delayed price contracts are the same thing as storage, except the grain is stored at an elevator instead of on the farm.
- a) True
 - b) **False**

Part II. Use the information below to answer the following questions. Each question is worth 5 points. Write out any formulas you might use to insure partial credit should you make a math error.

It is currently February 15, 2004. You are growing corn that you expect to harvest on October 20. You have the following information about the markets:

- 1) The local elevator is offering a forward cash contract for October delivery at \$2.65/ bushel.
- 2) December futures for corn are trading for \$2.77 per bushel.
- 3) Futures for March of 2005 are trading for \$2.80 per bushel.
- 4) Basis in October last year was -\$0.31, and two years ago it was -\$0.28. Three years ago the October basis was -0.32.
- 5) Basis in February of the last three years was \$-.26, -\$0.24, and -\$0.28
- 6) It will cost you 3.5 cents per month to store corn after harvest.
- 7) The current basis is -\$0.15.

Questions:

- 1) Is the forward cash contract a good deal? Why?

Yes – It offers a stronger basis than I expect to occur at harvest

- 2) If you hedge today, and in October the December futures price is \$3.50 per bushel, and the cash price is \$3.10, will you be better off or worse off than you expected? Why?

Worse off – basis is weaker than I thought it would be

- 3) Based on the information available to you on February 15, 2004 does it look like you should store next fall's corn crop until February 2005? How much money per bushel would you expect to make or lose if you do?

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|---|---|
| <p>Dec. Futures \$2.77</p> <p>Exp. Oct. Basis <u>-\$0.30</u></p> <p>Exp. Oct. Cash \$2.47</p> | <p>March Futures \$2.80</p> <p>Exp. Feb. Basis <u>-\$0.26</u></p> <p>Exp. Feb. Cash \$2.54</p> <p style="text-align: right;"><u>-\$0.14</u> Storage Costs</p> <p style="text-align: right;">\$2.40</p> |
|---|---|

DON'T STORE

4) If I buy corn, and my basis is always 5 cents stronger than yours, what price would I expect to pay if I hedge my corn purchases for February 2005?

Your Exp. Feb. Basis = -\$0.26

If mine is 5 cents stronger, my Exp. Feb. Basis is -\$0.21

March Futures \$2.80

My Exp. Basis -\$0.21

My Exp. Price \$2.59

5) The initial margin requirement for corn is \$800. Maintenance margin is \$750. If you hedge today (February 15) and December corn is \$2.95 per bushel on May 1, how much money do you need to send your broker (it is a 5000 bushel contract)?

Sell when futures are \$2.77

If they go up to \$2.95, you have lost \$0.18 per bushel, times 5000 bushels = \$900. In order to get back to your initial margin you will have sent a total of \$900.

6) What information above is irrelevant to your marketing decision?

The current basis – you have nothing to sell today

7) I am a local cattle feeder, and I tell you I would like to buy your corn in February 2005 at a guaranteed price, rather than have you sell it to the elevator. How much should you charge me? Show how you determined the price.

You will charge me at least what you think you could get selling to an elevator. Your expected sales price to the elevator today is the current futures price adjusted for basis:

March Futures \$2.80

Exp. Feb. Basis -\$0.26

Exp. Feb Cash \$2.54 – You would not want to sell to me for less than \$2.54

8) If the basis in October ends up being -12 cents and you decide to store corn, what would you need to have happen to make money (be specific)?

The futures market would have to rally because basis is already stronger than I expect it to be anytime over the storage period.