Econ 235 – Section I  
Agricultural Firms, Markets, and Prices  
Homework Number 1  

Do by 09/27/2007 at 12:40 pm.

Late policy: The late homework assignment will receive a 25 percent discount penalty per each day late.

Name: ________________________________

Question 1. True or false.

a) The farmers can use the futures markets to reduce production risk for example weather risk.

b) Buyer and seller of the same futures contract can both gain.

c) The basis is the difference between cash price and spot price.

d) The seller of an option is known as the ‘underwriter’.

e) European options are not traded outside of Continental Europe.

f) In the grain market, as the maturity of contract approaches the difference between the cash price and future price decreases.

g) Basis varies from location to location.

h) Basis is always positive.

i) Speculators are harmful for future markets.

j) You sold a December lean hog futures contract. You can remove the obligation by buying a February lean hog contract.
Question 2.

a) Draw the yield curve of European call option in wheat markets. The price of option is $0.30 bushel. The strike price is $4.00 bushel. Show the area where the option is out of money, at the money and in the money in picture.

b) Draw the yield curve of European put option in wheat markets. The price of option is $0.20 bushel. The strike price is $3.50 bushel. Show the area where the option is out of money, at the money and in the money in picture.

c) Draw a line to show how basis changes as the future contract approaches maturity in grain markets.

d) You need to maintain a margin to be allowed to take a position in the futures market. Explain the concept of margin and find the maintenance margin for corn and soybean contract in CBOT.
Question 3.
a/ What kind of future contracts is available for live cattle in CME? Give a few examples?

b) Explain the concept of basis. Explain why the basis varies from location to location?

c/ For grain, future prices and cash prices evolves with the same pattern. This is not the case for live cattle explain why with a few examples?
Question 4.

David Lyon is producing wheat in southern France close to Toulouse. He is planning to reduce the price risk by using futures market. The cash price of wheat might be high or low in next August after wheat harvest. The local cash price in next August can be $3.25 per bushel, 3.50 per bushel or 3.75 per bushel. The size of future the contract is 5000 bushels. The commission is $100 per contract. David can sell the contract today at price 3.70 per bushel for next August. David is not going to deliver his wheat. He is planning to offset the contract and sell his wheat to local cash market. Calculate David’s hedge price (net price) of wheat per bushel in all three outcomes. Calculate also the net returns of the contract in all three outcomes.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Local cash price in August</th>
<th>Buying back price of contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3.25</td>
<td>3.45</td>
</tr>
<tr>
<td>2nd</td>
<td>3.50</td>
<td>3.70</td>
</tr>
<tr>
<td>3rd</td>
<td>3.75</td>
<td>3.95</td>
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