Economics 5030
Agricultural Marketing and Price Analysis
Example Futures and Options Problems

Wheat Example

Current Situation

		July Wheat Options		
Date	March 1	Strike	Put	Call
Current Cash	$4.20/bu	$3.80	$.10	
July Wheat Futures	$4.00/bu	$3.90	$.16	
Expected June Basis	-$.10/bu	$4.00	$.24	$.22
Expected Production	15,000 bu	$4.10		$.14
Expected Harvest	June 25	$4.20		$.09

Questions

How many contracts would you need to purchase to be fully hedged? _____

If you placed a hedge using July futures, what is your expected net sale price? _____

If you established a minimum price using the options, what would be your expected minimum price for a $3.90 Put? _____

Based on the information contained in the situation, do you thing prices will move higher/lower? Why _____
_____

Scenario 1 Assume that there is a good growing season and that on June 28 you sell wheat for $3.50 per bushel to your local elevator and that July Wheat Future are at $3.65 per bushel. Show the results of a Futures hedge.

Date	Cash	Futures	Basis
1-Mar			
28-Jun			

NSP =

Scenario 2 Assume that there is a poor growing season and that on June 28 you sell wheat for $4.60 per bushel to your local elevator and that July Wheat Future are at $4.70 per bushel. Show the results of a Futures hedge.

Date	Cash	Futures	Basis
1-Mar			
28-Jun			

NSP =

Scenario 3 Assume that there is a good growing season and that on June 28 you sell wheat for $3.50 per bushel to your local elevator and that July Wheat Future are at $3.65 per bushel. Show the results of Purchasing a $3.90 July Put (Assume 0 time value on June 28)

Date	Cash	Options	Basis
1-Mar			
28-Jun			

NSP =

Scenario 4 Assume that there is a poor growing season and that on June 28 you sell wheat for $4.60 per bushel to your local elevator and that July Wheat Future are at $4.70 per bushel. Show the results of Purchasing a $3.90 July Put (Assume 0 time value on June 28)

Date	Cash	Options	Basis
1-Mar			
28-Jun			

NSP =

Feeder Cattle Example

Current Situation
You purchase 200 steer calves on Apr 15, with your tax refund. They weigh 650 pounds and you pay $1.10 per lb (110/cwt). You expect to have them on summer grass until September 15. They should then weigh 875 lbs. You expect your total cost per head for the summer to be $100.

		September Feeder Cattle Options		
Date	Apr 15	Strike	Put	Call
Current Cash 875 lb steer	$102/cwt	$106	$1.75	
Sept FC Futures	$110/cwt	$108	$2.25	
Expected Sept Basis	-$8/cwt	$110	$3.00	$3.05
Expected Production (2 die)	173,250 lbs	$112		$2.28
Expected Sale	Sept 15	$114		$1.70

Questions
What is your expected break-even selling price (the $100 includes death loss)? _____

How many contracts would you need to purchase to about 2/3 hedged? _____

If you placed a hedge using Sept futures, what is your expected net sale price? _____

If you established a minimum price using the options, what would be your expected minimum price for a $106 Put? _____

Based on the information contained in the situation, do you thing prices will move higher/lower? Why _____
_____

Scenario 1 Assume that your calves gain as expected but the market has declined. On Sept 15 you sell your feeder cattle for $95 per cwt to an order buyer and that Sept. FC Futures are at $100 per cwt. Show the results of a Futures hedge.

Date	Cash	Futures	Basis
15-Apr			
15-Sep			

NSP =

Scenario 2 Assume that your calves gain as expected but the market has increased. On Sept 15 you sell your feeder cattle for $110 per cwt to an order buyer and that Sept. FC Futures are at $118 per cwt. Show the results of a Futures hedge.

Date	Cash	Futures	Basis
15-Apr			
15-Sep			

NSP =

Scenario 3 Assume that your calves gain as expected but the market has declined. On Sept 15 you sell your feeder cattle for $95 per cwt to an order buyer and that Sept. FC Futures are at $100 per cwt. Show the results of purchasing a 106 Put option (assume 0 time value on Sept 15).

Date	Cash	Options	Basis
15-Apr			
15-Sep			

NSP =

Scenario 4 Assume that your calves gain as expected but the market has increased. On Sept 15 you sell your feeder cattle for $110 per cwt to an order buyer and that Sept. FC Futures are at $118 per cwt. Show the results of purchasing a 106 Put option (assume 0 time value on Sept 15).

Date	Cash	Options	Basis
15-Apr			
15-Sep			

NSP =

Scenario 5 Assume that you are a feedlot operator that is wanting to purchase yearlings steers coming off of grass in September. It is April and you are concerned about higher prices so you place a long hedge on the cattle. On Sept 15 your order buyer buys feeder cattle for $110 per cwt and Sept. FC Futures are at $118 per cwt. Show the results of a long hedge position.

Date	Cash	Futures	Basis
15-Apr			
15-Sep			

NPP =

Scenario 6 Assume that you are a feedlot operator that is wanting to purchase yearlings steers coming off of grass in September. It is April and you are concerned about higher prices so you purchase a $112 Call option. On Sept 15 your order buyer buys feeder cattle for $110 per cwt and Sept. FC Futures are at $118 per cwt. Show the results of a purchasing the $112 Call (Assume 0 time value in the Call on Sept. 15).

Date	Cash	Options	Basis
15-Apr			
15-Sep			

NPP =

Scenario 7 Assume that you are a feedlot operator that is wanting to purchase yearlings steers coming off of grass in September. It is April and you are concerned about higher prices so you purchase a $112 Call option. On Sept 15 your order buyer buys feeder cattle for $95 per cwt and Sept. FC Futures are at $100 per cwt. Show the results of a purchasing the $112 Call (Assume 0 time value in the Call on Sept. 15).

Date	Cash	Options	Basis
15-Apr			
15-Sep			

NPP =