

Name: _____

Econ 337 Agricultural Marketing, Spring 2018

Exam I; March 27, 2018

Answer each of the following questions by circling True or False (2 points each).

1. True False Price determination is the broad forces of supply and demand establishing a market clearing price for a commodity.
2. True False An indication of a change in quantity demanded for pork is consumers buying more pork at lower prices.
3. True False A call option is in-the-money when the market price of the underlying commodity futures contract is above the strike price.
4. True False Hedgers have no use for the physical commodity and are attempting to profit from price movements.
5. True False Speculators are willing to make or take physical delivery because they are producers or users of the commodity.
6. True False A cattle feeder anticipating filling their feedlot in a few months, attempting to reduce price risk, would take a short position in the feeder cattle futures market.
7. True False Buyers of a Livestock Gross Margin (LGM) insurance policy for swine will always receive a payment if lean hog, corn, and soybean meal prices all decrease.
8. True False Livestock Risk Protection (LRP) insurance establishes a minimum expected selling price similar to buying a put option.
9. True False A cattle buyer offering a basis forward contract for delivery does not stand basis risk.
10. True False Livestock price seasonality refers to multi-year trends in prices that result from patterns in inventory changes while livestock price cycles refer to price trends within a year.
11. True False Forecasting basis is typically easier than forecasting the level of either cash prices or futures prices.

Multiple Choice: Circle the appropriate response for each statement or question (2 points each).

12. Which of the following is not an advantage of forward pricing?
- a. More stable returns
 - b. Avoiding large losses
 - c. Always hitting the market high
 - d. More predictable cash flow
 - e. Better access to credit
13. Buying a put option will always be a second best choice because
- a. a futures hedge pays better if prices fall
 - b. the cash market pays better if prices rise
 - c. buying a put option pays better at both low and high prices
 - d. both a and b
14. The primary reason for hedging with a futures contract is
- a. because futures prices are always higher
 - b. to obtain protection against adverse price changes
 - c. to assume risk in hopes of making a profit
 - d. to forecast prices in the future
15. The term “long” as it relates to futures trading
- a. refers to someone who has initially sold a futures contract
 - b. refers to someone who has initially bought a futures contract
 - c. refers to someone who has an obligation to make delivery
 - d. refers to someone who has an obligation to take delivery
 - e. a and c
 - f. b and d
16. The term “short” as it relates to futures trading
- a. refers to someone who has initially sold a futures contract
 - b. refers to someone who has initially bought a futures contract
 - c. refers to someone who has an obligation to make delivery
 - d. refers to someone who has an obligation to take delivery
 - e. a and c
 - f. b and d

17. The characteristic of a futures market and cash market price relationship that makes hedging feasible is
- their tendency to converge as the contract approaches maturity
 - basis is always constant throughout the life of the contract
 - losses in the cash market are offset by losses in the futures market
 - All of the above
18. The amount of the basis
- is most critical as the contract approaches maturity or the futures position is liquidated
 - is affected by local conditions, such as packer demand, plant closings, and local supply
 - is the same for livestock producers around the country
 - a and b
 - a and c
 - All of the above
 - None of the above
19. Option premiums
- are paid up front
 - are made up of intrinsic value and time value
 - are the cost of buying specific options
 - All of the above
 - None of the above
20. The adjustments that must be made to an option strike price to obtain an estimate of the net price floor or ceiling include
- the premium cost and the commission cost
 - the premium cost and the value of the underlying futures contract
 - the expected basis on the futures contract
 - a and c
 - b and c
21. An option premium's time value
- is determined by when it is purchased during the trading day
 - is determined by underlying futures price volatility and time to expiration
 - never changes during the life of an option
 - All of the above

22. An option premium's intrinsic value
- determines if it is in-the-money or out-of-the-money
 - is determined by the relationship between the strike price and the underlying futures price
 - exists for a "put" if the strike price is above the futures price
 - All of the above
23. The success or failure of a marketing plan will be determined by its
- price objectives
 - implementation
 - goals
 - None of the above
24. Some of the major advantages of centralized pricing (e.g., auction markets) are:
- full and immediate information, competitive bidding, equalization of market power
 - full and immediate information, competitive bidding, transaction costs
 - competitive bidding, equalization in market power, physical movement of product
 - full and immediate information, transaction costs, physical movement of product
25. What is an advantage to decentralized pricing (e.g., direct sales)?
- More skills and information needed
 - No assembly function
 - Higher search costs
 - None of the above
 - All of the above
26. What kind of estimates are included in USDA's monthly Cattle on Feed Reports?
- Number of cattle on feed in U.S. feedlots, number of cattle being placed in feedlots, and number being marketed for slaughter
 - Cash receipts from marketings of cattle and calves in the U.S., inshipments of cattle and calves shipped into states for feeding or breeding, and total live weight of cattle and calves marketed
 - Number of all cattle and calves in the U.S., number of beef cows that have calved, number of heifers for beef cow replacement, and the calf crop
 - All of the above
 - None of the above

Short answer: Provide a complete answer to 4 out of the following 6 questions. Questions 27, 28, 29, 30, 31, and 32. If you answer more than 4 questions, you will only be graded on the first 4.

27. (6 points) What purpose do margin accounts serve on futures positions?

28. (6 points) Briefly describe the futures trading day depicted by the bar chart below.

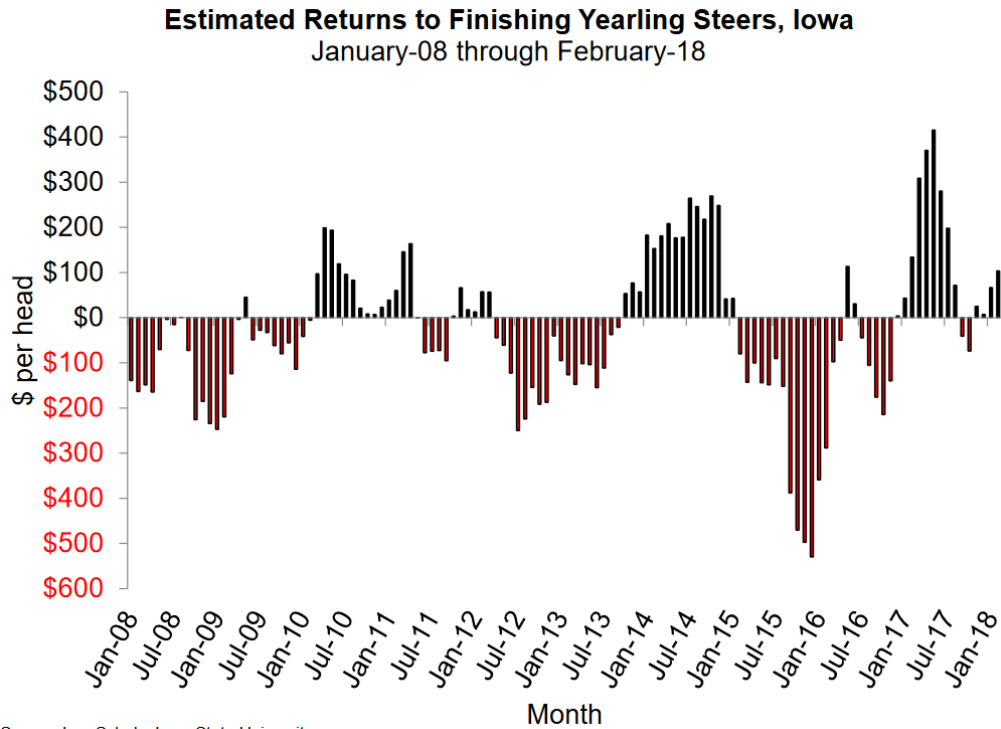


29. (6 points) How would an increase in the cheese price affect mailbox milk prices? Be sure to state which class of milk would be affected.

30. (6 points) When the Choice/Select price spread is very high and the yield grade 4 discount is very low, what signal is being sent to feedlots that market on a grid? Would you expect feedlots to respond by feeding cattle for a longer or shorter time period?

31. (6 points) What is formula pricing? Give an example of how it might apply to the hog sector, i.e., a producer selling a load of hogs. Why is the thinning cash (negotiated) trade a concern as it relates to formula pricing?

32. (6 points) During the Overview of the U.S. Livestock Production and Marketing System lecture, I showed you the chart below, which makes cattle finishing look unprofitable. Explain 2 reasons why this data may not accurately represent actual costs and returns for feedlots.



Calculations and Short Answer: Provide a complete answer to each of the following questions.

33. A winter backgrounding operator decided to hedge 800 pound feeder steers to be sold in March. He/she sold March futures at \$150.250 per cwt and expected basis to be \$7.100 per cwt for the quality of steers they will be selling. Assume brokerage commission is \$60/round turn or \$0.150 per cwt.

- i. (3 points) What price does the backgrunder think they have locked in for these steers come March?

In March, the backgrunder sells the steers for \$145.632 per cwt and closes his/her futures contract at a price of \$135.700 per cwt.

- ii. (3 points) What is the gain/loss on the futures position?

- iii. (3 points) What did basis turn out to be?

- iv. (5 points) What is the net selling price for the feeder steers? Is the expected selling price equal to the net selling price? If yes, why? If not, why not?

34. On page 11 is a historical basis table for live cattle in Iowa/Minnesota. Also included is a table of live cattle futures settlements on March 23, 2018.

i. (4 points) Describe the seasonal basis pattern for Iowa/Minnesota live cattle. In describing the seasonal pattern for basis you should note in which months basis is the widest or narrowest (weakest or strongest). In your explanation, be careful to account for when basis is positive and when it is negative. Using the 3-year average basis to describe would be appropriate.

ii. (2 points) Make a price prediction for live cattle in Iowa/Minnesota for April 2018 and May 2018.

iii. (4 points) You collect the following information from the Iowa/Minnesota Weekly Weighted Average Cattle Report for the Week Ending Sunday, 3/25/2018. Use the weighted average price reported here, in combination with a live cattle futures settlement price provided on page 11, to calculate the current basis level for Iowa/Minnesota live cattle. Given what you calculate for the current basis level, do you think April 2018 cash prices will be higher or lower than your price prediction you calculated in part ii?

LIVE FOB BASIS - Beef Breeds					
	Head	Weight	Wtd Avg	Price	Wtd Avg
	<u>Count</u>	<u>Range</u>	<u>Weight</u>	<u>Range</u>	<u>Price</u>
Steers	6,078	1,285-1,575	1,445	122.00-130.00	127.23

Table 1. Iowa/Southern Minnesota live cattle basis, 2011-2017 for 65-80 percent choice steers (\$/cwt.)

(Dollars/cwt.)											
Market Period	Contract for Basis	3-yr Avg Futures	2011 Basis	2012 Basis	2013 Basis	2014 Basis	2015 Basis	2016 Basis	2017 Basis	3-yr Avg Basis	Standard Deviation
January	February	136.79	-1.92	1.04	-4.60	2.07	4.62	-1.69	0.85	1.26	3.33
February	February	136.29	-1.81	-1.58	-3.29	0.86	3.43	-3.34	1.59	0.56	3.17
March	April	137.87	1.36	0.31	-1.88	4.57	4.93	-0.76	9.27	4.48	4.81
April	April	138.14	2.04	3.17	-0.28	4.05	2.63	0.25	4.64	2.51	2.42
May	June	133.62	3.32	4.74	4.75	8.41	6.69	4.24	9.92	6.95	4.75
June	June	132.38	3.17	3.35	2.25	4.60	-0.61	3.71	6.01	3.04	4.12
July	August	125.54	-0.43	-2.66	-0.82	5.23	1.44	5.07	2.51	3.01	2.07
August	August	123.87	-0.88	-2.01	0.96	2.41	0.58	0.97	1.94	1.16	2.02
September	October	117.42	-2.08	-2.48	-2.08	-0.16	-3.94	1.49	-1.77	-1.40	2.67
October	October	114.54	-1.64	-1.24	-0.87	-1.12	-6.54	-1.72	-1.05	-3.10	3.45
November	December	120.34	3.13	-0.93	-1.92	-0.70	-6.38	-1.05	-1.73	-3.05	3.07
December	December	117.87	3.19	-2.16	-0.71	-1.35	-4.93	0.78	0.93	-1.08	3.43

Live Cattle Futures Settlements: Friday, 23 Mar 2018

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
APR 18	118.425	118.425	115.750	115.950	-2.100	116.050	12,963	49,331
JUN 18	108.450	108.575	106.000	106.175	-2.200	106.200	31,707	159,664
AUG 18	106.500	106.525	104.300	104.825	-1.425	104.950	12,522	72,401
OCT 18	109.900	109.900	108.150	108.775	-975	108.925	7,364	41,944
DEC 18	113.500	113.525	111.900	112.500	-800	112.725	5,683	22,853
FEB 19	115.000	115.025	113.625	114.100A	-825	114.300	1,442	5,953
APR 19	114.750	115.450B	114.100	114.675	-475	114.850	496	2,453
JUN 19	108.800	109.725	108.400	109.200	-325	109.200	343	1,503
AUG 19	107.650	108.225B	107.150	107.875B	-325	107.875	17	114
Total							72,537	356,216

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