Name: _____

ECON 337
Agricultural Marketing
Spring 2016

Exam II
Due Tuesday, May 3, at 11:45am

Answer each of the following questions by circling True or False (1 point each).

1. True   False   A cattle buyer offering a forward contract for delivery stands basis risk.

2. True   False   Shrink must be considered when selling fed cattle on a carcass weight basis.

3. True   False   A marketing plan is an outline of price, date, and quantity objectives used to generate a huge return given existing market conditions.

4. True   False   Price discovery is the broad forces of supply and demand establishing a market clearing price for a commodity.

5. True   False   An indication of a change in demand for chicken is consumers buying more chicken at lower prices.

6. True   False   A call is in-the-money when the market price of the underlying commodity futures contract is above the strike price.

7. True   False   Livestock price cycles refer to multi-year trends in prices that result from patterns in inventory changes while livestock price seasonality refers to price trends within a year.

8. True   False   Buyers of a Livestock Gross Margin (LGM) insurance policy for fed cattle will receive a payment if live cattle, feeder cattle, and corn prices all decrease.

9. True   False   Finding a market for lower end cuts (e.g., flank, skirt, top blade, ground, etc.) can be a challenge when direct marketing meat.

10. True   False   Both dressing percentage and cut yield are important considerations when direct marketing meat.

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

11. The actual net price from hedging is different than the expected net price if
    a. futures prices changed from the initial level.
    b. cash prices increased.
    c. the basis didn't behave as expected.
    d. cash prices decreased.

12. 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.

13. The supply of lamb can be influenced by all of the following factors except
    a. average carcass weight of lambs slaughtered.
    b. volume of lamb in cold storage.
    c. availability of competing meat and poultry products.
    d. imports and exports of lambs.
    e. increasing lambs per litter.

14. The demand for lamb can be influenced by all of the following factors except
    a. availability and price of competing meat and poultry products.
    b. projections of the number of lambs to be slaughtered.
    c. the disposable income of consumers.
    d. consumer tastes and preferences for lamb.

15. What kind of estimates are included in USDA's quarterly Hogs and Pigs Reports?
    a. Hog inventories broken down by breeding stock and market hogs, and with market hogs reported by weight groupings.
    b. Sows farrowing, pigs per litter, and pig crop by quarters for prior months.
    c. Estimates of sow farrowing intentions for the next six-month period.
    d. All of the above.

16. The primary reason for hedging with a futures contract is
    a. because futures prices are always higher.
    b. to assume risk in hopes of making a profit.
    c. to forecast prices in the future.
    d. to obtain protection against adverse price changes.

17. Exercising, reselling, or expiration are the choices you have
    a. after developing a marketing plan.
    b. after purchasing a put or call option.
    c. after forward contracting.
    d. after taking a position in the futures market.

The following questions are based on these assumptions: (a) Initial margin is $1,200 for one 40,000-pound lean hog futures contract, (b) Maintenance margin is $800, (c) Sell lean hog futures contract at $75.00 per cwt.

18. How much margin money does your broker call for if the market rises by $0.50 per cwt?
    a. $200   b. $400   c. $0   d. $1

19. What is the level of your margin account if the market rises by $0.50 per cwt?
    a. $1,400   b. $1,000   c. $800   d. $1,199

20. What is the total you have deposited in the margin account if the market rises from $75.00 to $76.50?
    a. $1,200   b. $600   c. $1,300   d. $1,800

21. The market rises from $75.00 per cwt to $76.50 per cwt and then later declines back to $75.00 per cwt, and you close out your account. How much margin money will you receive from your broker less brokerage fees?
    a. $800   b. $1,800   c. $0   d. $1,000

22. The market stayed at $76.50 per cwt when you bought your contract back. How much margin money would you receive back less brokerage fees?
    a. $1,200   b. $1,800   c. $0   d. $1,000

23. If the market rose from $75 per cwt to $76.50 per cwt and later declined to $70.00 per cwt at which time you bought your contract back. How much money would you receive from the broker less brokerage fees?
    a. $4800 margin deposit - $1,000 loss on transaction = $3800
    b. $1,200 margin deposit + $1,000 gain on transaction = $2,200
    c. $800 maintenance margin + $1,200 gain on transaction = $2,000
    d. $1,800 margin deposit + $2,000 gain on transaction = $3,800

24. If you had bought a contract at $75.00 per cwt and the market rose to $77.00 per cwt, how much margin would your broker call for?
    a. $800   b. $1,200   c. $0   d. $1,000

25. If you had bought a contract at $75.00 per cwt and the market fell to $70.00 per cwt, how much money would you owe your broker if you sold the contract at that point?

a. $2,000 drop in contract equity less $1,200 initial margin = $800

b. $4,000 drop in contract equity less $2,200 margin deposits = $1,800

c. $2,000 drop in contract equity less $800 maintenance margin = $1200

d. $1200 initial margin + $800 maintenance margin - $2,000 drop in contract equity = $0

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

26. (5 points) What are the primary responsibilities of a producer in a production contract poultry arrangement? Why are producers attracted to this type of arrangement?

27. (5 points) Explain in words and graphically the difference between an increase in demand and an increase in quantity demanded. Describe three factors that could lead to an increase in the demand for pork.

28. (5 points) You work for a beef processor that offers carcass merit pricing (grid pricing) to feedyards. You are becoming concerned that you are not getting enough well-marbled cattle. Describe adjustments you could make to your grid to attract more well-marbled cattle.

29. (5 points) In terms of competition, how would you classify the cow-calf industry? How does this relate to the fact that the cow-calf industry tends to "bid away its own profits"?

30. (8 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?

31. (7 points) Cattle cycles occur in large part because of the biological nature of production. Explain why cattle prices often rise in the short-run and decrease in the long-run during the expansion phase.

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

32. (5 points) Below is a basis table for 700-800-pound feeder steers in Iowa, by month from 2009 to 2015. Use the 3-year average basis, in combination with the futures settlements provided below to make a price prediction for 700-800-pound feeder steers in Iowa for November 2016 and December 2016. Show your work.

Table 2. Combined Iowa auction feeder cattle basis, 2009-2015 for 700-800 lb. no. 1 steers ($/cwt.)

Market Period	Contract For Basis	3-yr Avg Futures	2009 Basis	2010 Basis	2011 Basis	2012 Basis	2013 Basis	2014 Basis	2015 Basis	3-yr Avg Basis	Std Dev
January	January	178.58	1.41	0.86	1.06	2.05	-0.02	4.65	10.54	5.06	6.61
February	March	171.50	1.61	1.33	1.78	0.54	-1.86	5.16	16.63	6.64	8.26
March	March	175.11	3.38	1.80	1.55	4.47	2.23	3.78	9.74	5.25	4.02
April	April	177.75	3.29	3.70	4.12	3.28	0.54	6.31	14.11	6.98	6.74
May	May	181.19	4.05	6.13	4.37	4.31	4.25	7.54	11.42	7.74	5.23
June	August	191.61	3.39	6.36	1.24	-0.48	-2.37	0.26	17.18	5.02	8.34
July	August	193.21	5.48	4.67	2.66	-4.36	-4.91	12.03	17.80	8.30	11.40
August	August	195.04	2.90	5.34	5.55	2.02	2.37	10.61	8.63	7.20	4.82
September	September	194.68	4.76	3.32	1.93	2.74	7.47	8.94	12.32	9.58	4.63
October	October	197.74	4.05	6.18	1.48	4.76	8.44	11.51	10.26	10.07	5.56
November	November	191.96	1.14	-0.23	2.09	1.58	3.85	6.39	1.46	3.90	6.17
December	January	182.31	2.68	0.79	0.79	-1.90	3.48	12.98	0.67	5.71	5.83

Feeder Cattle Futures Settlements

Month	Open	High	Low	Last	Change	Settle	Estimated Volume	Prior Day Open Interest
APR 16	146.000	146.625	145.625	146.450	+.550	146.575	768	2,922
MAY 16	143.900	145.400	143.650	145.125	+1.925	145.175	2,263	11,151
AUG 16	144.250	145.550	143.750	145.050	+1.775	145.025	4,017	19,634
SEP 16	143.450	144.775	143.425	144.525	+1.800	144.500	583	4,746
OCT 16	143.250	144.075	142.625A	143.625	+1.650	143.725	570	3,236
NOV 16	138.375	139.700	138.325A	139.325B	+1.650	139.350	140	2,502
JAN 17	134.725	135.750	134.550A	135.550	+1.775	135.550	22	290
MAR 17	135.000	135.000	135.000	135.000	+1.925	135.000	1	41
Total							8,364	44,522

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33. (10 points) A packer buyer is looking at a pen of cattle that they believe will grade 70% Choice, 70% CAB, 20% Prime, and 10% Select. They also think there are 20% yield grade 4, 20% yield grade 1 or 2, and 15% will have carcasses that are over 1,050 pounds. They have the following packer grid information (all in $/cwt of carcass weight).

Base: Choice, Yield Grade 3 = $209.00   Yield Grade 4 = -$15.00
Prime = $8.00   Yield Grade 1 & 2 = $4.00
Select = -$2.00   Carcasses > 1,050 pounds = -$15.00
CAB = $5.00

The feedlot operator wants a flat "in-the-meat" bid. How much should the packer buyer bid for the cattle? <u>Show your work.</u>

34. Consider the following two examples where cattle weigh 1,350 pounds and a feedlot operator is considering whether to market the cattle today at $211.00/cwt on a carcass weight basis or wait for two weeks to market. The cattle are expected to gain 4.00 pounds/day and marginal feed:gain is 8.00. The feedlot operator expects the base price and average grade premium to remain the same. In scenario #1 feed prices are $160/ton and in scenario #2 feed prices are $320/ton. The opportunity cost of space is $2.17 per head.

a. (5 points) Calculate the expected change in return in $/head from selling at a later date. Note: you will need to make the calculations for A through E first, i.e., all the _____ cells.

		Scenario #1		Scenario #2	
		Live	Carcass	Live	Carcass
Current Weight of Animals		1,350		1,350	
Number of Days		14		14	
Expected Average Daily Gain		4.00		4.00	
Expected Added Gain, lbs	A	_____		_____	
Percent Yield			62.5%		62.5%
Expected Market Weight, lbs	D	_____	_____	_____	_____
Current Base Price ($/cwt)	B	_____	$211.00	_____	$211.00
Expected Price Change ($/cwt)	F	$0.00	$0.00	$0.00	$0.00
Change in Packer Premium ($/cwt)	E	$0.00	$0.00	$0.00	$0.00
Price Per Pound of Feed		$0.0800		$0.1600	
Expected Feed Efficiency		8.00		8.00	
Added Feed Cost Per Head, $		_____		_____	
Opportunity Cost of Space		$2.17		$2.17	
Cost of Added Weight, $		_____		_____	
Cost of Added Weight ($/cwt)	C	_____	_____	_____	_____

Change in Return Analysis   (A*(B-C)+D*(E+F))/100 = Change in Return

Expected Change in Return from
Selling at Later Date ($/head)   _____   _____

a. (5 points) Explain what the feedlot operator's decision should be under scenario #1 and under scenario #2. Use the decision rule regarding marginal cost and marginal revenue in your explanation.