

Farm Business Management

Nebraska Career Development Event
Handbook and Rules for 2018-2021

1. PURPOSE

Students taking the Farm Business Management exam will recall basic tenants of farm business management, including terms, definitions, and current events. Students will examine management scenarios whereby they will be able to choose courses of action, quantify outcomes, and synergize information. The exam will cover basic knowledge as well as

more advanced applications meant to replicate management decisions on farms, ranches, and other ag production units.

2. OBJECTIVES

The questions are scenario based. There are four main topical areas that will include the following:

- a. Agricultural Finance & Accounting** Students will be asked to recall the differences between accounting types as well as the information needed to calculate financial ratios. Students will display their knowledge of compound interest and discounting as it applies to farm and ranch scenarios. Finally, students will compare different causes leading to presented financial scenarios and discern the best course of action. Related theories/topics may include:
 - i. Basic Accounting**
 - 1. Record Keeping (FRBM, CH 2)
 - 2. Accrual vs. Cash Accounting (FRBM, CH 2)
 - ii. Basic Finance**
 - 1. Compound interest (FRBM CH7)
 - 2. Discounting/Present Value analysis (FRBM CH 7)
 - 3. Ratio Analysis (FRBM, CH 3)
- b. Economics** Students will express their knowledge of markets, consumer and producer theory. This section will test student's ability to apply economic theories to common scenarios faced by ag producers. Students will predict market movements, production choices by applying theory to realistic applications. Related theories/topics may include:
 - i. Markets (ECON, CH 4)**
 - 1. Supply
 - 2. Demand
 - 3. Equilibrium
 - 4. Market Shifters (Determinants of Supply/Demand)
 - ii. Consumer Theory (ECON, CH 6)**
 - 1. Utility Maximization
 - 2. Preferences

- 3. Substitution Effect
 - 4. Opportunity Cost/Tradeoffs
 - iii. Producer Theory (ECON, CH 7-8)
 - 1. Profit Maximization
 - 2. Long Run Vs. Short Run Decision making
 - 3. Fixed costs (overhead) vs variable costs
 - 4. Inputs of Production
 - iv. Current Events
 - 1. Be aware of current events relating to Nebraska Agriculture based on state and regional news publications.
- c. **Management** Students will be able to translate management theory into everyday examples. They will memorize and recall different budgeting types. Finally, students will recall different types of management and be familiar with different risk mitigation strategies. Related theories/topics may include:
 - i. Business Management Theory
 - 1. Types of Business Organization (sole proprietorship, corporation, cooperatives) (FRBM, CH 9)
 - 2. Managing Employees
 - ii. Risk Management
 - 1. Types of Risk (such as financial, production, market)
 - 2. Risk Management Strategies for each type.
 - iii. Budgeting
 - 1. Cash Flow Budgets (FRBM, CH 4)
 - 2. Partial Budgets (FRBM, CH 4)
 - 3. Enterprise Budgets (FRBM, CH 4)
- d. **Basic Quantitative Problem Solving** Students will illustrate their quantitative problem solving skills by interpreting scenarios presented in a quantitative manner. In some cases, students will be able to convert word problems to numbers, and finally choose the best course of action based on the results of their numerical analysis. Related theories/topics may include:

- i. Break-even analysis (FRBM CH 5)
 - ii. Depreciation
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3. ELIGIBILITY

The Farm Business Management CDE is a non-qualifying event at the state level.

4. RECOMMENDED ATTIRE

Official FFA Dress is recommended for this event.

5. REQUIRED SUPPLIES AND EQUIPMENT

Each student must bring to the competition:

- Two #2 Pencils
 - Calculators may be used, so long as they do not include graphic capabilities (cell phones are not allowed)
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6. EVENT SCHEDULE

There are two sections based on districts. Each section will have a 1:45 time limit.

7. ANNUAL THEME

There is no theme or annual topic for this event.

8. EVENT FORMAT

A. Written exam

- a. The event exam is comprised of 75-100 multiple choice questions.
- b. Contestants have a 1:45 time limit to complete the event exam.
- c. No notes or reference materials may be used during the event exam.

B. Practicum

- a. There is no practicum for this event.
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9. SCORING

Team Individual Calculation	Score
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Total Individual Score Calculation

• Exam	80
Total Points Possible	80

Team Score Calculation	Score
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Total Team Score Calculation

• Total Individual Scores (4 participants x 100 possible points)	80
Total Points Possible	320

10. TIEBREAKER

- a. A tie will be broken based on questions predetermined by the superintendent.

11. RESOURCE MATERIALS

- Farm & Ranch Business Management, Deere & Co. - Deere Publishing Site CDE: 23-6120-0001
- Econ Micro, William McEachern, (Any Edition is Appropriate)Text - 4th Edition: ISBN - 978-1285423548, 3rd Edition: 3rd Edition: ISBN - 978-1111822217

12. PAST EXAMS

Refer to Appendix 1 and 2.

13. POST-CDE DEBRIEFING OPPORTUNITY

- There is no debriefing session available for this event.
 - All test materials will be turned in at the completion of the exam.
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APPENDIX

Appendix 1. Practice Exam

1. Which of the following are economic resources used in agricultural production?
 - a. Land
 - b. Labor
 - c. Capital
 - d. Entrepreneurial skill
 - e. All of the above

2. What state is directly south of Nebraska?
 - a. Iowa
 - b. Kansas
 - c. Minnesota
 - d. South Dakota

3. Which state in has the highest output (as measured in dollars) of total farm production?
 - a. Nebraska
 - b. Iowa
 - c. Illinois
 - d. Texas
 - e. California

4. Which of the following states has the highest farm output per person?
 - a. Nebraska
 - b. Iowa
 - c. Illinois
 - d. Texas
 - e. California

5. Which crop produces the most revenue for Nebraska farmers each year?
 - a. Corn
 - b. Soybeans
 - c. Wheat
 - d. Sunflowers

6. What is another name for a profit and loss statement?
 - a. Statement of Cash Flows
 - b. Enterprise Budget
 - c. Balance Sheet
 - d. Income statement

7. On a balance sheet, what must balance?
 - a. Expenses and revenues
 - b. Cash and Expenses
 - c. Assets and the total of liabilities and owners' equity
 - d. Revenue and liabilities

8. Which of the following is NOT a financial statement?
 - a. Partial Budget
 - b. Statement of cash flows
 - c. Balance Sheet
 - d. Income Statement

9. In Nebraska, during which season is corn typically harvested?
 - a. Spring
 - b. Summer
 - c. Fall
 - d. Winter

10. Which of the following is an asset?
 - a. The account balance at a farm supply store
 - b. Fence
 - c. The sale of corn
 - d. The net worth of the business

11. When should accounting transactions be recorded when using a cash accounting system?
 - a. Whenever an expense occurs
 - b. Whenever cash is exchanged
 - c. Whenever a revenue occurs
 - d. Whenever a check is written

12. In accounting, what does the “matching principle” try to match?
 - a. Cash and expenses
 - b. Revenue and expenses
 - c. Revenue and liabilities
 - d. Owners equity and assets

13. A farmer uses accrual accounting. At the end of the year he or she makes an entry to reflect the use of fertilizer purchased in a different accounting period. What type of entry is this?
 - a. An adjusting entry
 - b. A cash entry
 - c. A non-cash entry
 - d. A limited entry

14. How many acres are in one square mile?
 - a. 160
 - b. 320
 - c. 640
 - d. 1000

15. What is the main advantage of Cash accounting compared to accrual accounting?
 - a. Less income tax liability
 - b. Ease of use

- c. For use in management decision
- d. There is no advantage

16. It is possible for a farm or ranch to show positive profits on the income statement, but have a cash flow issue

- a. True
- b. False

17. What does the abbreviation “cwt” mean?

- a. Hundred weight
- b. Carat weight
- c. Cold weight
- d. Counter weight

18. Assume two farmers use identical production methods. The only difference is that one producer rents and the other is an owner, but has a mortgage. Which producer will show a higher profit?

- a. The renter
- b. The owner

19. See #18, which producer is likely to have greater cash flow?

- a. The renter
- b. The buyer

20. What type of cost has happened in the past, and cannot be recovered?

- a. Fixed
- b. Sunk
- c. Variable
- d. Direct

21. A farmer borrows \$200,000 for ten years to purchase a tractor. The loan is fully-amortizing, and the interest rate is 10%. How much interest is paid the first year?

- a. Under \$20,000
- b. \$20,000 exactly
- c. Over \$20,000
- d. Not enough information

22. A fully-amortizing loan is said to have equal “P and I” payments. What do P and I stand for?

- a. Product and interest
- b. Principal and interest
- c. Plums and iodine
- d. Party and independent

23. At the end of the loan presented in #21, what is the principal balance?

- a. \$0
- b. \$20,000
- c. \$100,000
- d. \$200,000

24. Production of commodity corn would embody which type of farming?
- Low-volume, high value production
 - High-volume, low margin production
 - Custom farming
 - Part-time production
25. Approximately what percentage of farms in the United States are considered part time?
- 5%
 - 10%
 - 15%
 - 50%
26. Which of the following would be considered a change in technology, as related to ag production?
- Farming more acres
 - Utilizing GPS services
 - Air-conditioned combines and tractor cabs
 - B and C
27. What term is used for the increased worldwide trade in agricultural products?
- Global expansion
 - Globalization
 - NAFTA
 - WTO
28. Which of the following is NOT a function of management?
- Controlling
 - Planning
 - Implementation
 - Profit-seeking
29. What type of resource is a shovel?
- Human
 - Manufactured
 - Natural
 - Tangible
30. A farmer borrows \$1,000,000 to purchase farmland. The loan term is 5 years, and the loan is structured as an "interest-only" loan. The interest rate is 12%. If the farmer is making monthly payments to the bank, approximately how much is he or she paying each month?
- \$100,000
 - \$120,000
 - \$10,000
 - \$12,000
31. AT the end of the loan in #20, what is the principal balance?
- \$0
 - \$1,000,000

- c. \$120,000
 - d. \$500,000
32. Over the past fifty years, what has happened to the size and number of farms?
- a. The number of producers and the average farm size have both increased
 - b. The number of producers has stayed the same, while the average farm size has doubled
 - c. There are fewer producers and the average farm size has increased
 - d. There are fewer producers and the average farm size has decreased
33. Which of the following is an example of a market?
- a. Little Susie's lemonade stand
 - b. Craigslist
 - c. Hy-Vee
 - d. All of the above
34. Variable Costs are those costs that:
- a. Change from one year to the next
 - b. Occur even if an enterprise is not carried out
 - c. Occur only in unusual cases
 - d. Increase or decrease in direct proportion to the number of units of output
35. Fixed costs that result from owning farm/ranch assets such as machinery include all but which of the following?
- a. Fuel
 - b. Depreciation
 - c. Insurance
 - d. Interest
36. The board of directors at "Little Susie's Lemonade Stand" decide to develop a website promoting their product. On the first page of the website they state, "Here at Little Susie's we aim to provide customers with thirst quenching, delicious lemonade at reasonable prices, sourced in the most responsible way possible." This is an example of:
- a. A mission statement
 - b. A vision statement
 - c. A profit Statement
 - d. A shareholder's guarantee
37. What is another term for a fixed cost?
- a. Indirect
 - b. Direct
 - c. Recoverable
 - d. Marginal
38. What does the "S" in SMART stand for, with regards to goal-setting?
- a. Smart
 - b. Silly
 - c. Specific
 - d. Strategic

39. Which product has the most elastic supply?
- Corn
 - Soybeans
 - Fresh Tomatoes
 - Fresh Salmon (fish)
40. Day to day management is also known as _____management
- tactical
 - operational
 - functional
 - Daily
41. What is the first step in the decision-making problem?
- Identify solutions
 - Identify and define the problem or scenario
 - Collect data
 - Make coffee
42. What entity was established following the 1983-1987 Farm Debt Crisis?
- The Farm Financial Standards Council
 - The Association of Agricultural Managers
 - The Farm Accounting Standards Board
 - The North American Free Trade Agreement
43. How can ag producers best help themselves obtain credit (bank loans)?
- Detailed record-keeping
 - Dressing Nicely
 - Proper Manners
 - Punctuality
44. What does IRS stand for?
- Independent Revenue Source
 - Internal Ratio Structures
 - Internal Revenue Service
 - I Really Stink
45. The _____Function show the relationship between one input and total output.
- Production
 - Consumption
 - Isoquant
 - Isorevenue
46. What farm machinery manufacturer is known for their green paint?
- Allis-Chalmers
 - John Deere
 - Case IH
 - Ford

47. Which of the following is a commodity?
- Organic Beef
 - Non-GMO Corn
 - #2 Corn
 - A Chevrolet Pickup
48. When should a farm shut down production in the short run?
- When they cannot recoup any fixed costs
 - When the price is below the minimum of AVC
 - When they would lose more by producing than shutting down
 - All of the above
49. Ralph currently produces corn and soybeans. He is thinking about going back to graduate school for five years. What effect will Ralph's departure have on the market for the commodities he produces?
- No effect
 - The price of Corn and Soybeans would both rise
 - The price of Corn and Soybeans would both fall
 - The quantity of Corn and Soybeans demanded would rise
50. For most agricultural producers, the marginal revenue of producing one more unit of output is _____
- Falling, due to the law of demand
 - Constant
 - Rising, due to the law of supply
 - Unknown
51. If an industry is perfectly competitive (such as farming), what type of products are sold?
- Utility maximizing
 - "needs"
 - Commodities
 - Differentiated products
52. Feedlots production could be described as beef cattle weight gain. Which of the following would be an input for this production?
- Ground Beef
 - Pork Loin
 - Ribeye
 - Vitamins and Minerals
53. What condition exists when the price is higher than the market equilibrium?
- surplus
 - shortage
 - maximum efficiency
 - minimum efficiency

54. Assume Corn and Milo are perfect substitutes in a feed ration for chickens. The same energy is provided by either 1 lb. of corn or 1.5 lb. of mil. If the price of corn is \$.10 per lb. while the price of milo is \$.08/lb, the cost minimizing producer would:
- Use all corn
 - Us all milo
 - Use half corn, half milo
 - Use 60% corn and 40% milo
55. At the production quantity where $MR=MC$, profit is _____
- Maximized
 - Zero
 - Negative
 - Average
56. Which of the following would **not** be reflected as Revenue on a Farmer's yearly accrual-based income statement?
- Gain from the sale of tractor
 - \$1000 won in a local charity raffle
 - Cash sale of grain harvested during the current period.
 - Market value of harvested grain, unsold in storage
57. Why is depreciation a "non-cash" expense?
- It occurs against assets which are not purchased with cash
 - The expense is deducted from the principal payment
 - The expense is added to the principal payment
 - No actual depreciation expense is paid
58. Mary buys an asset that qualifies to be depreciated under IRS guidelines. It was purchased for \$100,000 and has a salvage value of \$10,000. Assuming a useful life of 10 years, what is the book value of the asset after 6 years? (assume straight-line depreciation)
- \$54,000
 - \$46,000
 - \$60,000
 - \$40,000
59. Which asset is the most likely to have a salvage value of \$0?
- A truck
 - An ATV
 - A combine
 - A fence
60. Joe and Mary's farm has a current ratio of 1.5. If they have \$200,000 of liabilities, and \$150,000 of those liabilities are long-term, what is the value of Joe Mary's current Assets?
- \$75,000
 - \$50,000
 - \$100,000
 - Not enough information

61. What day does a calendar year begin?
- January 1
 - December 31
 - July 1
 - July 31
62. If a firm has a current ratio <1 , what overall condition is assumed?
- Bankruptcy
 - Insolvency
 - Illegal activity
 - Liquidity problems
63. A farm has current assets of \$50,000, non-current assets of \$4,500,000 and liabilities of \$4,000,000. What is the value of this farm's owner's equity?
- \$4,550,000
 - \$8,550,000
 - \$550,000
 - \$50,000
64. Which of the following is currently used as an input for a cattle feed ration, according to a recent news report?
- Defective Skittles
 - Discarded Fast food
 - Pinecones
 - Grasshoppers
65. 50 pound salt licks and 100 pound salt licks would be what type of inputs?
- Perfect complements
 - Perfect substitutes
 - Supplementary
 - Competitive
66. Recently Super Saver raised their donut prices from \$.60 to \$.88. This is most likely due to inflation.
- True
 - False
67. A government "set aside" program incentivizes farmers by paying them to not produce. Which aspect of the farm "problem" does this address?
- Inelastic demand for farm commodities
 - Asset Fixity
 - Increased OSHA regulations
 - Increasing commodity costs
68. Why is unpaid family labor included in many farm financial ratios?
- To be able to equally evaluate farms with and without "free" family labor
 - To limit income tax
 - To calculate earnings per worker

d. To calculate earnings per employee

69. Nintendo released a miniature version of their classic game console just before the holidays at a price of \$60. The console has consistently sold out, and many experts believe there will be a persistent shortage, extending past Christmas. This is an example of a market failure due to what?

- a. Inflexible Prices
- b. A price above equilibrium
- c. A negative Externality
- d. A positive externality

70. If a farmer obtains a “non-recourse” loan from the government, how is the loan repaid if crop production does not produce enough revenue to pay back the loan?

- a. The government forgives the entire loan
- b. The government takes possession of the crop produced in lieu of a monetary payment
- c. The government takes ownership of other farm assets
- d. The farmer takes another government loan to cover the shortfall

71. What is the main advantage of a sole proprietorship?

- a. Ease
- b. Tax-savings
- c. Cash –flow
- d. Opportunity to add investors

72. Bill and Ted are partners in a cow-calf operation. Ted tragically dies. What happens to the partnership?

- a. It continues with Bill as the sole-owner
- b. It continues with Bill and whomever Ted has passed ownership to.
- c. The partnership ends when Ted dies.
- d. It depends if Bill can get the time-machine phone booth to start working again.

73. Long before Ted died, he borrowed money using land owned by the partnership to fund a family vacation to Aruba. Ted stayed in Aruba for five years, earning no money. Who is liable for paying back the loan?

- a. Ted, he took out the loan
- b. Bill, he was the one who continued to work
- c. Both Bill and Ted, as partners
- d. Neither

74. True/false: A sole proprietorship can have multiple owners (as in a married couple on a farm)

- a. True
- b. False

75. How is an operating agreement different than a partnership?

- a. The costs/profits are split in a different way
- b. The operating agreement has a specified end
- c. The operating agreement is more permanent than a partnership
- d. An operating agreement is taxed at the highest of the two operator’s tax brackets.

76. During this stage of the life cycle of a farm, the operator is likely to take on risk to expand the operation.

- a. Entry
- b. Growth
- c. Consolidation
- d. Exit

77. Who is the current Secretary of Agriculture?

- a. Sonny Perdue
- b. Tom Vilsack
- c. Ben Kerry
- d. George Steinbrenner

78. Assessing the potential production gains of new technology depends on the manager's ability to evaluate which type of risk?

- a. Production
- b. Market
- c. Financial
- d. Personal

79. What river borders Nebraska to the East?

- a. Missouri
- b. Mississippi
- c. Amazon
- d. Nile

80. Which type of risk do forward contracts alleviate?

- a. Production
- b. Market
- c. Financial
- d. Personal

81. Which of the following is the simplest precaution against financial, market, and production risk?

- a. Having Large Cash Reserves
- b. Always borrowing utilizing balloon loans
- c. Obtaining a limited partner
- d. Converting a Sole Proprietorship to an LLC or S corp

82. How does spreading sales minimize market risk?

- a. A "spreading sale" is another name for entering a futures contract
- b. A "Spreading sale" is another name for entering a forward contract
- c. It guarantees all sales at the highest part of the market
- d. It guarantees sales at all levels of market prices

83. What is the main technological production difference between corn grown in eastern and western Nebraska?
- The growing
 - Harvesting equipment
 - Fertilization
 - Irrigation
84. Suppose a crop consultant estimates there is a 20 percent chance of a major insect infestation, which would reduce your per acre profits by \$60. There is a precautionary treatment available, but must be applied by a professional at a rate of \$15 per acre. What is the expected value if you have the treatment applied?
- \$12
 - \$15
 - \$3
 - \$3
85. What basic macroeconomic principle is one reason why money earned in the future is worth less than money in the present?
- Inflation
 - GDP
 - Unemployment
 - Recessions
86. If you invest \$100 for two years at 10% interest, compounded annually, how much do you have at the end of two years?
- \$110
 - \$120
 - \$121
 - Not enough information
87. What crop enterprise is usually grown in rotation with corn?
- Soybeans
 - Watermelons
 - Apples
 - Strawberries
88. A net present value calculation compares:
- The current cost of the investment to the future value of the investment
 - The future cost of the investment compared to the present value of the additional income caused by the investment
 - The current cost of the investment and the present value of the future increases in profits
 - The interest rate and the discount rate
89. If a loan is secured to an asset using a mortgage, what is the security of the loan?
- Cash
 - Equipment
 - Real Estate
 - Livestock

90. Which of the following could improve negative cash flow?
- Refinancing existing debt
 - Limiting family living expenses
 - Engaging in a secondary enterprise (or side-hustle as Uber Calls it)
 - All of the above
91. If a farm has negative cash flow, it is bankrupt
- True
 - False
92. During which decade did farmland prices escalate quickly, leading to the Farm Debt Crisis?
- 1960s
 - 1970s
 - 1980s
 - 2000s
93. Why would a manager choose to use MACRS or double declining balance as a depreciation method instead of straight-line?
- Ease
 - They plan to sell the asset before it is salvaged
 - To offset income at the end of the asset's useful life for income tax purposes
 - To show equal depreciation over the assets useful life
94. In accrual accounting, what is a "left side" entry also known as?
- Debit
 - Debt
 - Credit
 - Liability
95. As corn prices increase, a farmer should use _____ fertilizer, in order to maximize profit.
- More
 - Less
 - The same amount
96. Because the IRS determines the useful life of depreciable assets, they must be sold upon the end of the defined useful life
- True
 - False
97. Farmers and Ranchers should consider sunk costs when making production decisions
- True
 - False
98. What type of budget projects the expected revenues and expenses of one production (corn only, for example) unit associated with a farm?
- Partial

- b. Enterprise
- c. Pro-forma
- d. Whole Farm

99. A farmer decides he or she wants to produce coconuts, but does not know where to find any information related to the costs of production. Where could this information be obtained?

- a. Siri
- b. Google
- c. State Extension Offices
- d. It is not available

100. What is the capital of Nebraska?

- a. Lincoln
- b. Omaha
- c. Des Moines
- d. Hastings

Appendix 2. Answer Key

1. E	41. B	81. A
2. B	42. A	82. D
3. E	43. A	83. D
4. A	44. C	84. D
5. A	45. A	85. A
6. D	46. B	86. C
7. C	47. C	87. A
8. A	48. D	88. C
9. A	49. A	89. C
10. B	50. B	90. D
11. B	51. C	91. B
12. B	52. D	92. B
13. A	53. A	93. B
14. C	54. A	94. A
15. B	55. A	95. A
16. A	56. B	96. B
17. A	57. D	97. B
18. B	58. B	98. B
19. A	59. D	99. C
20. B	60. A	100. A
21. A	61. A	
22. B	62. D	
23. A	63. C	
24. B	64. A	
25. D	65. B	
26. D	66. B	
27. B	67. A	
28. D	68. A	
29. B	69. A	
30. C	70. B	
31. B	71. A	
32. C	72. C	
33. D	73. C	
34. Da	74. A	
35. A	75. B	
36. A	76. B	
37. A	77. A	
38. C	78. A	
39. A	79. A	
40. A	80. B	