2017 Iowa Farm Business Management Career Development Event

INDIVIDUAL EXAM (150 pts.)

Select the best answer to each of the 75 questions to follow (2 pts. ea.). Code your answers on the answer sheet provided. Be sure to erase completely any answers that you change. You have 120 minutes (maximum) to complete this exam. Section A contains 25 questions over 'Principles of Economics and Management'. Section B contains 30 questions over 'Financial Statements and Records Analysis: Section C contains 20 questions over 'Marketing and Risk Management'.

Section A. Principles of Economics and Management (Questions #1-#25)

1. The proportion of assets of a firm financed by non-owners of the business is called:
   a. debt capital
   b. owners' equity
   c. net worth
   d. solvency

2. What is the future value in five years of $100 today if the annual interest rate is 6%?
   a. (100) (1.06)
   b. $(100)\ (1.05)^6$
   c. $(100)\ (1.06)^5$
   d. $(100)/(1.06)^5$

3. User ownership, user control, and user benefits are distinguishing principles for:
   a. non-profit firms
   b. cooperatives
   c. partnerships
   d. corporations

4. In a market, the price where the demand curve and the supply curve intersect is known as this price:
   a. equilibrium
   b. ceiling
   c. cross
   d. own

5. Which of the following is true at the breakeven quantity of output for a business firm?
   a. revenue per unit of output = cost per unit of output
   b. total revenue = total cost
   c. profit = 0
   d. all of the above

6. Which of the following causes a movement along a given market demand curve for pork chops but does NOT shift the curve?
   a. change in population
   b. change in the price of hamburger, a substitute product
   c. change in the supply of pork chops
   d. all of the above

7. Costs that do NOT change in the short run regardless of output level for a firm are called:
   a. opportunity costs
   b. fixed costs
   c. variable costs
   d. perfectly elastic costs

8. What does the 'R' in the "DIRTI 5" in farm management represent?
   a. real estate values
   b. interest rates
   c. repair expenses
   d. before-tax returns

9. A financial statement that itemizes revenues and expenses for an enterprise that is part of Rolling Hills Farms is called:
   a. a balance sheet
   b. a budget
   c. a cash flow statement
   d. a tax return

10. The incremental cost to a wheat farmer of producing one more bushel of wheat is this type of cost:
   a. opportunity
   b. total
   c. marginal
   d. average variable

11. Assume a marginal income tax rate of 10% on the first $15,000 of income and 15% on the next $10,000 of income for Arria. How much income tax would Arria owe if she made $25,000 in income?
   a. $3,750
   b. $2,500
   c. $1,500
   d. $3,000

12. A governmental price that is a minimum price that must be paid to sellers is called:
   a. a price ceiling
   b. a salvage value
   c. a quota
   d. none of the above

13. Assume Longview Farms a) hires a new employee at an annual cost of $40,000, b) all of the new employee's costs are tax-deductible, and c) the marginal income tax rate for Longview Farms is 25%. What is the 'after-tax' cost to Longview Farms of the new employee?
    a. $40,000
    b. $30,000
    c. $50,000
    d. $10,000

14. If there is a maximum amount of money an owner of True Mark Inc. can lose by investing in the company that is known as:
    a. limited liability
    b. a price ceiling
    c. maximum risk tolerance
    d. a good financial deal

15. The highest value of what Joan Jones gives up to operate a one-acre garden is known as:
    a. utility
    b. breakeven price
    c. opportunity cost
    d. returns to labor

16. Ramsey just bought a Dodge Ram truck for the farm. The amount of the truck's purchase price that Ramsey can deduct for income tax purposes this year is most likely called:
    a. depreciation
    b. interest expense
    c. book value
    d. salvage value

17. A change in inventory is likely used in calculating:
    a. depreciation
    b. current liabilities
    c. cash on hand
    d. net farm income

18. The accounting method that records cash receipts when they are received and cash expenses when they are paid is known as this method:
    a. accrual
    b. cash
    c. real-time
    d. first in, first out

19. Revenue protection insurance offers a farmer a guaranteed:
    a. maximum amount of revenue
    b. maximum casualty loss
    c. minimum amount of gross income
    d. profit

20. Average fixed cost is total fixed cost:
    a. per year
    b. per unit of output
    c. minus total variable cost
    d. divided by total cost

21. The law of diminishing returns (or diminishing marginal product) states which of the following will eventually decrease if a corn farmer keeps putting more fertilizer on a given acre of corn ground?
    a. profit
    b. revenue
    c. the additional corn yield per additional pound of fertilizer
    d. net cash flow

22. Owners' equity on a balance sheet is the same as:
    a. assets
    b. assets + liabilities
    c. liabilities
    d. assets – liabilities

23. Making plans as to how John Doe's assets will be passed on to his descendants at the time of his death is generally known as:
    a. estate planning
    b. setting up a trust
    c. escrow planning
    d. wealth accumulation

24. Which of the following is a profitability ratio:
    a. debt to asset ratio
    b. current ratio
    c. return on equity ratio
    d. all of the above

25. What is the management term used to describe an annual period of time used by a business to record income and expenses if that annual period does NOT correspond to a normal 'calendar' year?
    a. fiscal year
    b. leap year
    c. tax year
    d. grace period

Section B. Financial Statements, Records Analysis, Marketing, Risk Management. **(Questions #26-#75)**

Use the attached net worth statement (balance sheet) and net farm income statement to answer questions #26-37.

26. Which of the following financial statements would be best for analyzing a farm's solvency?
    a. net income statement
    b. balance sheet
    c. statement of cash flows
    d. statement of owner equity

27. Last November, Farmer Joe prepaid his local coop $20,000 for fertilizer to be delivered and applied in April. This would be recorded on his year-end year balance sheet as a(n) _____ ?
    a. account payable
    b. account receivable
    c. investment in growing crops
    d. prepaid expense

28. What was FFA farm's debt to asset ratio (using market values) on January 1, 2017?
    a. 0.35
    b. 2.85
    c. 0.24
    d. 0.31

29. How much did FFA Farm's market value net worth change from a year ago?
    a. It increased by $31,080
    b. It decreased by $31,080
    c. It increased by $20,008
    d. It decreased by $20,008

30. Cost value net worth is increased by which of the following?
    a. Retained earnings and contributed capital
    b. Investing in machinery and increased debt
    c. Positive net cash flow and retained earnings
    d. Changes in market values and contributed capital

31. What percent of the farm's total liabilities are NOT due and payable in the next 12 months?
    a. 71.7%
    b. 39.4%
    c. 28.3%
    d. 35.1%

32. Which of the following statements is true?
    a. In an accrual accounting system, you report income from corn when produced
    b. In a cash accounting system, you report income from beans when produced
    c. In an accrual accounting system, you report income from corn on the date you contracted it for future delivery to the cooperative
    d. In an accrual accounting system, you report income from corn when money was received

33. Which of the following is a non-cash expense that would appear on an income statement?
    a. Depreciation
    b. Fuel Expense
    c. Principal payments on loans
    d. Interest Expense

34. How much was FFA Farms' **cash** net farm income from operations in 2016?
    a. -$18,055
    b. $46,403
    c. $123,284
    d. $794,674

35. Low profitability can be caused by all of the following except:
    a. Low yields or output levels relative to input use
    b. Low levels of off-farm income
    c. Poor marketing leading to low prices received
    d. Insufficient amounts of labor

36. How much would FFA Farm's accrual adjustment for accounts payable be this year?
    a. $24,250
    b. -$5,596
    c. +$5,596
    d. -$24,250

37. Which of the following refers to measures that are computed as dollar values per unit of resource?
    a. Physical efficiency
    b. Capital efficiency
    c. Economic efficiency
    d. Labor efficiency

Use the attached cash flow budget projection to answer questions #38-45.

38. Which of the following cash inflows appear on a cash flow budget but are not included on an income statement?
    a. cash received from new loans
    b. off farm income
    c. full sale price of capital assets
    d. all of the above

39. In which period does this farm expect to have its largest net cash flow surplus?
    a. November-December
    b. September-October
    c. May-June
    d. July-August

40. How much operating capital does FFA Farm need to borrow in January-February in order to have a cash balance of $2,000 at the end of February?
    a. $ 12,733
    b. $ 10,733
    c. $ 13,733
    d. $ 15,733

41. In which period does this farm expect to have its largest cash outflow?
    a. January - February
    b. March-April
    c. May-June
    d. July-August

42. What is FFA Farm's projected total cash inflows for all of 2017?
    a. $8,686
    b. $244,800
    c. $1,129,354
    d. $1,138,040

43. Is it possible for net farm income to be positive and cash flow for the same period to be negative?
    a. Yes, for example if family living and principal payments exceed net farm income.
    b. Yes, especially if there is a large depreciation charge on the income statement.
    c. No, positive net farm income and negative cash flow in the same period is not possible
    d. Yes, for example if loan proceeds are received, which would not be counted as income

44. In how many periods does FFA farm expect to have a positive net cash flow?
    a. none
    b. two
    c. three
    d. six

45. Which of the following is NOT a use for a cash flow budget?
    a. To estimate borrowing needs and help plan for minimizing interest expense
    b. To help plan timing of crop sales to ensure sufficient cash to pay bills
    c. To estimate how much profit the farm will make next year
    d. To combine business and personal financial affairs into one complete plan.

Use the information below to answer questions 46-48.

The Browns currently rent 200 acres for a cash rent of $200 per acre to grow soybeans. Their landlord proposes a custom farming agreement as an alternative. If they custom farm, the landlord would pay the Browns $100 per acre to provide the labor and machinery to grow the crop. The landlord would pay all other inputs. The Browns would also haul the soybeans to an elevator 30 miles away at their expense for an estimated cost $0.30 per bushel.

Their current enterprise budget shows input costs of $163 per acre, machinery costs of $64 per acre, and labor costs of $32 per acre. The average yield on this land is 60 bushels per acre and the current market price for soybeans is $8.50.

46. If the Browns construct a partial budget to analyze the change to custom farm instead of renting, what would be the total reduced revenue per acre?
    a. $82
    b. $510
    c. $100
    d. $51

47. What would be the total reduced cost per acre in the Brown's partial budget?
    a. $ 363
    b. $ 459
    c. $ 259
    d. $18

48. What would be the net change in returns per acre on the Brown's partial budget?
    a. -$97
    b. -$65
    c. -$31
    d. $265

49. What is the average annual depreciation for a new feed grinder-mixer that costs $15,000 and has an expected salvage value of $3,000 after 8 years?
    a. $3,000
    b. $1,500
    c. $2,400
    d. $2,775

50. A whole farm budget is best suited for answering which of the following questions?
    a. How much net farm income do you expect the entire farm to make this year?
    b. How much operating capital will you need to borrow in the spring to plant your crops?
    c. Should you buy or raise replacement heifers?
    d. How much will you need to sell your milk for this year to at least pay all your variable costs?

Refer to the attached budget for corn to answer questions 51-55. FFA Farms will grow 500 acres of corn this year. They expect to receive a price of $3.50 per bushel.

51. What is FFA Farms projecting for expected profit given this enterprise budget?
    a. $ 53.50
    b. $ 611.50
    c. $ 665.00
    d. $ 342.76

52. How many bushels does FFA Farms need to produce to just break even?
    a. 365 bushels per acre
    b. 190 bushels per acre
    c. 175 bushels per acre
    d. 83 bushels per acre

53. What is the budgeting unit for this enterprise budget?
    a. Bushel
    b. Farm
    c. Acre
    d. Year

54. All of the following could be opportunity costs on an enterprise budget except:
    a. Land charge
    b. Operator labor
    c. Interest on variable cost (i.e. if you paid cash for inputs)
    d. Seed expense to grow the crop

55. Below what price is FFA Farms better off not producing corn this year (i.e., what is the short run shut down price)?
    a. $1.70
    b. $3.22
    c. $3.50
    d. $1.52

Section C. Marketing and Risk Management. **(Questions #56-#75)**

56. If Fanny Farmer sells a corn futures contract at $3.20 per bushel, they have:
    a. the right to buy corn at $3.20/bu.
    b. the right to sell corn at $3.20/bu.
    c. an obligation to sell corn at $3.20/bu.
    d. no obligation to do anything in the corn futures market

57. Basis is a marketing term that generally refers to:
    a. a futures price – a cash price
    b. the quality of an item being sold
    c. the location of a market
    d. one futures price – another futures price

58. A speculator is generally:
    a. a risk taker
    b. the same as a hedger
    c. risk neutral
    d. someone who always buys

59. Who has the right to sell the underlying futures contract?
    a. call option buyer
    b. call option seller
    c. put option seller
    d. put option buyer

60. What is the price at which the underlying futures contract can be traded at with a given option contract?
    a. futures price
    b. strike price
    c. option premium
    d. basis

61. Which of the following would make selling wheat today less appealing versus storing the wheat and selling it one year from now?
    a. expected decline in wheat prices over the next year
    b. lower interest rates and other storage costs
    c. greater need for cash today
    d. all of the above

62. A patronage refund paid to member Danny DuGood by the Ace Feed Co-op is:
    a. a stock dividend paid to Danny by the Co-op
    b. a price adjustment on feed Danny bought from the Co-op
    c. money paid to Danny for returned feed he bought but did not use
    d. a redemption of shares of stock in the Co-op Danny owned

63. If a corn farmer's yield is 200 bu./acre and the selling price is $4.00/bu., this farmer would be breaking even if their:
    a. total cost/acre = $800
    b. cost/bu. = $4.00
    c. profit/acre = $0
    d. all of the above

64. What kind of expectations exist if those expectations are for the price of an item to increase between now and some point in the future?
    a. bullish
    b. bearish
    c. deflationary
    d. contrarian

65. To protect against a decline in the price of soybeans being stored by the All Star Co-op, the Co-op will most likely:
    a. buy soybean futures
    b. sell soybean futures
    c. delay paying farmers for the delivered soybeans
    d. delay marketing the soybeans

66. Enterprise diversification by Big League Farms will likely for the farm:
    a. spread and reduce financial risks
    b. increase financial risks
    c. have no impact on financial risks
    d. decrease the total number of farm enterprises

67. Revenue per head of cattle marketed by Acme Feeders is an example of:
    a. marginal revenue
    b. total revenue
    c. average revenue
    d. profit

68. Corn sold by U.S. sellers to Japanese buyers would be regarded as:
    a. imports for the U.S.
    b. net exports for the U.S.
    c. exports for Japan
    d. exports for the U.S.

69. A soybean farmer sold a soybean futures contract at $6.50/bu. and paid a commission fee of $0.02/bu. If the expected basis when the farmer lifts the hedge and sells the soybeans is $0.30/bu., what is the most likely net price/bu. this farmer will receive for their soybeans?
    a. $6.78
    b. $6.18
    c. $6.22
    d. $6.48

70. How much would Golden Harvest add to their gross income if they add $0.10/bu. to their selling price by doing a better job of marketing their corn and assuming they produce 180 bu./acre of 2,000 acres?
    a. $3,600
    b. $360,000
    c. $36,000
    d. it will depend on their costs of production

71. To buy or sell a futures contract, Madison Money as a hedger would typically have to deposit the following amount of money with the company who executed the order:
    a. $ that are < the value of the contract
    b. $ that = the value of the contract
    c. $ that are > the value of the contract
    d. it will depend on how far out into the future the futures contract is

72. The price paid to buy an options contract is called this:
    a. the strike price
    b. the call price
    c. the basis
    d. the premium

73. Sally Sorghum agrees to sell 5,000 bu. of sorghum to the Great Plains Elevator next August for $7.25/bu. What kind of contract is this?
    a. futures
    b. hedge to arrive
    c. options
    d. cash forward

74. If Mexico imposes a ban or an embargo on imports of U.S. corn, how would one most likely show the graphical impact of this in the U.S. corn market?
    a. shift the Demand curve to the left
    b. shift the Demand curve to the right
    c. shift the Supply curve to the right
    d. shift the Supply curve to the left

75. If Korny Calhoun sees their costs of corn production increase per acre but their yields remain constant, what happens to their breakeven selling price for their corn?
    a. it does not change
    b. it increases
    c. it decreases by a % < % cost increase
    d. it decreases by a % > % cost increase

INDIVIDUAL EXAM KEY

Section A. Principles of Economics and Management

1.	A	
2.	C	
3.	B	
4.	A	
5.	D	
6.	C	
7.	B	
8.	C	
9.	B	
10.	C	
11.	D	
12.	D	Price Floor
13.	B	(1 – t)(initial cost) = (1 - .25)(40,000) = 30,000 after-tax cost
14.	A	
15.	C	
16.	A	
17.	D	
18.	B	
19.	C	
20.	B	
21.	C	
22.	D	
23.	A	
24.	C	
25.	A	

Section B. Financial Statements, Records Analysis, Marketing, Risk Management

26. B The balance sheet provides information about solvency – the degree to which a firm's liabilities are backed up by assets.

27. D This is an example of a prepaid expense. If the fertilizer had been paid for and applied in the fall, it would be categorized as an investment in growing crops.

28. C Debt to Asset ratio = Total Liabilities/Total Assets
= $816,614 - $3,432,843 = 0.24

29. D Change in market value net worth = (Market Value Farm Net Worth this year – Market Value Farm Net Worth Last Year)= ($2,616,228 - $2,636,236) = -$20,008

30. A Cash value net worth is affected by net income that is retained in the business (not taken out for family living and taxes, for example) and contributed capital. It is not affected by changes in the market value of assets.

31. A Non-Current Liabilities / Total Liabilities = $585,824 / $816,614 =71.7%

32. A In accrual accounting systems revenue is recorded when produced and expenses when incurred. In a cash system, transactions are recorded when cash is received or paid.

33. A Depreciation is a non-cash expense that appears on the net farm income statement.

34. C Cash net farm income from operations = Total cash income – total cash expenses $794,674 - $671,390 = $123,284

35. B

36. B The adjustment would add ending values and subtract beginning values for accounts payable: ($18,654 - $24,250) = -$5,596

37. C

38. D These are all examples of cash inflows that are not counted as revenue on an income statement.

39. B $80,834 during the September-October period.

40. A Net operating loans needed in January-February = (negative net cash flow Jan. and Feb.) – (beg. Cash balance) – (ending cash balance)
$13,733 - $3,000 + $2,000 = $12,733

41. B The projected cash outflows are largest at $293,178 for March-April.

42. D Total cash inflows for the whole year = $1,138,040.

43. A

44. C There is a projected positive net cash flow in May-June, July-August and Sept-Oct.

45. C Profit is estimated from a projected income statement, not a cash flow statement.

46. B The reduced Revenue would be 60 bu x $8.50 = $510 per acre

47. A The reduced cost would be the rent ($200) and the input costs ($163): 200 + 163 = $363. In either scenario they incur the labor and machinery costs so those would not be included in a partial budget.

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48. B Net Change is Added Revenue + Reduced Cost – (Reduced Revenue +Added Costs) = $100 + 363 –(510 + 18) = -$65.

49. B Average annual depreciation is (Cost – Salvage value)/(years of useful life): $15,000-$3,000=$12,000 / 8 = $1,500

50. A

51. A Expected profit = gross revenue – total costs = ($3.50 x 190 bu - $322.25 – 289.25) = $53.50.

52. C (Total cost) / expected price
= $611.50/3.50 bu. = 175 bushels.

53. C The budgeting unit is one acre.

54. D

55. D In the short run, FFA Farms is better off producing as long as they cover their variable costs. The short run shut down price is therefore Variable Costs / Bushels: $289.25/190 = $1.52

56. C
57. A
58. A
59. D
60. B
61. B
62. B
63. D
64. A
65. B
66. A
67. C
68. D
69. B = 6.50 – commission – exp'd basis = 6.50 -.02 -.30 = 6.18
70. C = ($0.10) (180) (2000) = 36,000
71. A
72. D
73. D
74. A
75. B

2017 Team Participation Event = "Individual" Portion (5 Questions @ 1 pt ea)

2017 Iowa Vo-Ag/FFA
Farm Business Management Career Development Event
(Maximum possible pts = 5 per individual and 15 per team)

Instructions: The questions below are related to the problems you just worked on as a team. Select the best answer (1 pt. each). Code your answers on the answer sheet provided. Be sure to erase completely any answers that you change.

1. Which of the following is the best example of a long-term farm family goal.
    a. Put money into a college education savings account
    b. Buy a new dining set (table and chairs) this year
    c. Buy an additional 100 acres of land
    d. a and c

2. Which of the following is most likely true for a farmer's ROA (return on assets) versus ROE (return on equity)?
    a. ROA = ROE
    b. ROE > ROA if both are positive
    c. ROE < ROA if both are positive
    d. ROE + ROA = 1

3. Jolly Rancher has $2 million in total assets, $1 million in total liabilities, and ROE (return on equity = 3%). What is Jolly Rancher's ROA (return on total assets)?
    a. 6%
    b. 3%
    c. 1.5%
    d. 0.75%

4. Jolly Rancher's spouse Joleen has an off-farm, part-time job. Which of the following is most likely a family budget advantage of this?
    a. ↑ family income
    b. ↓ family health insurance costs
    c. ↓ retirement funding costs
    d. All of the above

5. Jolly Rancher farms (typical commercial farm) and has a family with no off-farm income. Which of the following is most likely true for Jolly:
    a. The family budget is included in the farm income statement
    b. Net farm income will never be used to fund family expenses
    c. Farm expenses exceed family expenses
    d. Jolly will not have to pay for any family health insurance

2017 Team Participation Event – "TEAM" Portion (7 questions @ 5 pts. ea.)

2017 Iowa Vo-Ag/FFA
Farm Business Management Career Development Event
(Maximum possible pts = 35 per team)

As a group (or team), you are to collectively select the best answer to each question below (5 pts. each). Code your answers on the answer sheet provided (one answer sheet per team). Be sure to erase completely any answers that your team changes.

This activity is designed to test your ability as a group to 1) apply your knowledge of economic and business concepts to actual firm decisions, and 2) generalize and summarize the basic content and implications of economic articles and reports. The applications will focus on analysis of returns, costs, and farm family budgeting.

1. Assume Jolly Rancher has $2 million in total assets and $500 thousand in total liabilities. What is Jolly Rancher's total equity?
    a. $2.5 million
    b. $2.0 million
    c. $1.5 million
    d. $0.5 million

2. Jolly Rancher has $2 million in total assets, $500 thousand in total liabilities, and profit as a % of total assets is +2%. What is Jolly Ranger's profit as a % of equity?
    a. +2%
    b. +6%
    c. +0.5%
    d. +2.67%

3. Assume 4 grain farmers (Al, Bob, Sue, Jan) have the following machinery costs ($) per acre:

    Al = 150 Sue = 130
    Bob = 140 Jan = 120

    Which of the following financial analysis statements is true regarding these farmers?
    a. Al is the least profitable
    b. Al is the most non-liquid
    c. Jan is the most efficient
    d. Can't tell based on the information provided

4. Which of the following would decrease Jolly Rancher's profit as a % of assets?
    a. ↑ profit 10%, ↑ total assets 5%
    b. ↓ profit 5%, ↓ total assets 10%
    c. No change in gross revenue, no change in total assets, increase total costs
    d. B and C

5. Which of the following is generally true regarding a farm family's living expenses?
    a. They are NOT tax deductible
    b. They are part of the farm's income and expenses statement
    c. They are larger than farm expenses
    d. All of the above

6. Which of the following is most likely true for a "farm" family versus a "city" family?
    a. Business income is more irregular
    b. Housing expenses are higher
    c. Cash food expenses are higher
    d. They have lower personal insurance and health costs

7. Which of the following is the best example of a short-term farm family goal?
    a. Paying off a loan on a new truck
    b. Purchasing a new, big-screen tv this year
    c. Putting money into a college education savings account
    d. Increasing corn yields by 10 bushels per acre over last year

VIII. 2017 Event Resources

2017 Farm Business Management Team Topic:
Analysis of Returns, Costs, and Family Living Expenses in Farming

SUGGESTED REFERENCES:

2015 Iowa Farm Costs and Returns
https://www.extension.iastate.edu/agdm/wholefarm/html/c1-10.html

Farm Family Living Expenses
https://www.extension.iastate.edu/agdm/articles/eggers/EggFeb17.html

Cost and Revenue Considerations In Farm Management Decision Making (note this was a reference used for the 2016 test)
https://www.arec.umd.edu/sites/default/files/_docs/Cost%20and%20Revenue%20Considerations_0.pdf
1991

Net Farm Income Statement

Ag Decision Maker -- Iowa State University Extension and Outreach

Name	**FFA Farm**			**Year**	**2016**
Income					
Cash Income (can come from IRS Schedule F)		***Income Adjustments***		**Beginning**	**Ending**
Sales of livestock bought for resale		Crops held for sale or feed (Sched. B)		$453,800	$331,490
Sales of market livestock, grain, etc.	$724,689	Market livestock (Sched. F)		$204,610	$277,100
Cooperative distributions paid	$460	Accounts receivable (Sched. H)		$0	$0
Agricultural program payments	$18,540	Other current assets		$0	$0
Crop insurance proceeds		Unpaid cooperative distributions (Sched. I)		$14,435	$16,275
Custom hire income		Breeding livestock (Sched. J)		$61,650	$59,750
Other cash income	$15,300	Subtotal of adjustments		$734,495	$684,615
Sales of breeding livestock	$35,685	(b) Net adjustment (beginning - ending)		$49,880	
(a) Total Cash Income	$794,674	**(c) Gross Farm Revenue**		**$744,794**	
Expenses					
Cash Expenses (can come from IRS Schedule F)		***Expense Adjustments (paid in advance)***		**Beginning**	**Ending**
Car and truck expenses	$1,894	Investment in growing crops (Sched. C)		$21,735	$23,535
Chemicals	$30,760	Commercial feed on hand (Sched. D)		$8,750	$12,000
Conservation expenses		Prepaid expenses (Sched. E)		$0	$20,250
Custom hire		Supplies on hand (Sched. G)		$0	$0
Employee benefits	$2,400	Subtotals		$30,485	$55,785
Feed purchased	$137,210	(e) Net adjustment (beginning - ending)		($25,300)	
Fertilizer and lime	$105,500	***Expense Adjustments (due)***		**Beginning**	**Ending**
Freight, trucking	$12,290	Accounts payable (Sched. O)		$24,250	$18,654
Gasoline, fuel, oil	$23,650	Farm taxes due (Sched. P)		$4,490	$4,490
Insurance	$7,000	Accrued interest (Sched. Q, R)		$37,632	$31,071
Interest paid	$37,632	Subtotals		$66,372	$54,215
Labor hired	$36,000	(f) Net adjustment (ending - beginning)		($12,157)	
Pension and profit-share plans					
Rent or lease payments	$132,000	(g) Depreciation (Sched. K, L)		$64,458	
Repairs, maintenance	$12,333	**(h) Gross Farm Expenses**		$698,391	
Seeds, plants	$64,925				
Storage, warehousing		**(j) Net Farm Income from Operations**			
Supplies purchased	$3,675				
Taxes (farm)	$8,980	(j) Sales of farmland (Sched. M)		$0	
Utilities	$17,358	(k) Cost value of farmland sold (Sched. M)		$0	
Vet. fees, medicine, breeding	$11,623	(l) Capital gains or losses (j - k)		$0	
Other cash expenses	$4,560				
Livestock purchased	$21,600	**Net Farm Income (accrual)**			
(d) Total Cash Expenses	$671,390				
		Value of Farm Production			
Net Farm Income (cash)	**$123,284**	**(NFI - purchases of feed & livestock)**		**$585,984**	

Ending Net Worth Statement

Name **FFA Farm** **Date** **01/01/17**

Farm Assets	Cost Value	Market Value	Farm Liabilities	Market Value
Current Assets			***Current Liabilities***	
Checking, savings accounts (Sch. A)	$23,468	$23,468	Accounts payable (Sched. O)	$17,535
Crops held for sale/feed (Sched. B)	$333,360	$333,360	Farm taxes due (Sched. P)	$4,715
Investment in growing crops (Sch. C)	$18,275	$18,275	Current notes and credit lines (Sched. Q)	$88,088
Commercial feed on hand (Sch. D)	$13,750	$13,750		
Prepaid expenses (Sched. E)	$20,250	$20,250	Accrued interest - short (Sched. Q)	$1,625
Market livestock (Sched. F)	$248,578	$248,578	- fixed (Sched. R)	$28,394
Supplies on hand (Sched. G)	$0	$0	Due in 12 months - fixed (Sched. R)	$90,434
Accounts receivable (Sched. H)	$0	$0	Deferred tax liabilities	
Other current assets		$0	Other current liabilities	
A) Total Current Assets	**$657,681**	**$657,681**	**C) Total Current Liabilities**	**$230,790**
Fixed Assets			***Fixed Liabilities***	
Unpaid coop. distributions (Sch. I)	$17,012	$17,012	Notes and contracts remainder (Sched. R)	$585,824
Breeding livestock (Sched. J)	$59,750	$59,750	Deferred tax liabilities	
Machinery & equipment (Sched. K)	$360,948	$455,600	Other fixed liabilities	
Buildings/improvements (Sched. L)	$531,065	$622,800	Total Fixed Liabilities	**$585,824**
Farmland (Sched. M)	$1,160,000	$1,620,000		
Farm securities, certificates (Sch. N)	$0	$0		
Other fixed assets		$0		
Total Fixed Assets	**$2,128,775**	**$2,775,162**		
B) Total Farm Assets	**$2,786,456**	**$3,432,843**	**D) Total Farm Liabilities**	**$816,614**
E) Farm Net Worth (B - D)	**$1,969,841**	**$2,616,228**		
F) Farm Net Worth Last Year	$1,938,761	$2,636,236	**Working Capital (A - C)**	
G) Change in Farm Net Worth (E - F)			**Current Asset-to-Debt Ratio (A / C)**	
Percent Change in Net Worth (G / F)			**Total Debt-to-Asset Ratio (D / B)**	

Cash Flow Budget

Name: FFA FARM

Year: 2017

CASH INFLOWS Operating	Total for Year	January February	March April	May June	July August	September October	November December
Livestock income	880,400	146,733	146,733	146,733	146,733	146,733	146,733
Sales of crops	195,240	20,040	19,800	9,900	0	52,500	93,000
Other crop income	0	0	0	0	0	0	0
USDA payments	12,000	6,000	0	0	0	6,000	0
Custom hire income	0	0	0	0	0	0	0
Farm rents, interest	0	0	0	0	0	0	0
Other	8,000	1,333	1,333	1,333	1,333	1,333	1,333
Sales of Capital Assets	0	0	0	0	0	0	0
Financing							
Total new short-term loans to receive	0	0	0	0	0	0	0
New term loans to receive	20,000	0	0	20,000	0	0	0
Non-farm Income	22,400	3,733	3,733	3,733	3,733	3,733	3,733
Total Cash Inflows	**1,138,040**	**177,840**	**171,600**	**181,700**	**151,800**	**210,300**	**244,800**

CASH OUTFLOWS Operating	Total for Year	January February	March April	May June	July August	September October	November December
Seed	86,080	14,347	14,347	0	0	0	57,387
Fertilizer and lime	77,640	25,880	25,880	0	0	0	25,880
Pesticides	42,800	0	42,800	0	0	0	0
Crop insurance	8,860	0	0	0	0	8,860	0
Drying fuel	13,200	0	0	0	0	13,200	0
Custom hire or machine rental	0	0	0	0	0	0	0
Other cash costs per acre	10,600	1,767	1,767	1,767	1,767	1,767	1,767
Purchased crops	0	0	0	0	0	0	0
Purchased livestock	37,500	6,250	6,250	6,250	6,250	6,250	6,250
Purchased feed	189,000	31,500	31,500	31,500	31,500	31,500	31,500
Health and veterinary	12,500	2,083	2,083	2,083	2,083	2,083	2,083
Marketing	15,000	2,500	2,500	2,500	2,500	2,500	2,500
Other cash costs per head	0	0	0	0	0	0	0
Real estate taxes	16,000	0	8,000	0	0	8,000	0
Cash rent	179,200	0	89,600	0	0	0	89,600
Hired labor	45,000	7,500	7,500	7,500	7,500	7,500	7,500
Repairs and upkeep	13,000	2,889	1,444	1,444	1,444	2,889	2,889
Fuel and lubrication	25,000	2,500	5,000	5,000	2,500	5,000	5,000
Other fixed expenses	6,000	1,000	1,000	1,000	1,000	1,000	1,000
Equipment lease payments	0	0	0	0	0	0	0
Purchases of Capital Assets	65,000	0	0	45,000	0	20,000	0
Financing							
Accounts payable	29,540	29,540	0	0	0	0	0
Short term notes due	22,500	22,500	0	0	0	0	0
Term loan payments	96,934	23,484	24,673	1,083	45,526	1,083	1,083
Non-farm Expenditures							
Family living expenses	95,000	15,833	15,833	15,833	15,833	15,833	15,833
Non-farm investments	43,000	2,000	13,000	22,000	2,000	2,000	2,000
Total Cash Outflows	**1,129,354**	**191,573**	**293,178**	**142,961**	**119,904**	**129,466**	**252,272**

SUMMARY	Total for Year	January February	March April	May June	July August	September October	November December
Net Cash Flow	**8,686**	**(13,733)**	**(121,578)**	**38,739**	**31,896**	**80,834**	**(7,472)**
Beginning cash balance	3,000	3,000	(10,733)	(132,311)	(93,572)	(61,676)	19,158
New operating loan received	0						
Repayment of operating loan	0						
Interest paid on oper. loan balance	0	0	0	0	0	0	0
Ending cash balance	11,686	(10,733)	(132,311)	(93,572)	(61,676)	19,158	11,686
Operating Loan Balance							
Beginning Balance	35,750	35,750	35,750	35,750	35,750	35,750	35,750
Ending Balance	35,750	35,750	35,750	35,750	35,750	35,750	35,750

Field Name		Expected Yield	190	bu./acre
FFA Farms Field 6		Acres	1	

		Cost per Acre		
Preharvest machinery		Fixed	Variable	**Total**
Tandem disk		$4.30	$3.20	$7.50
Apply nitrogen		$4.45	$4.10	$8.55
Field cultivate		$2.70	$2.70	$5.40
Plant		$5.25	$4.50	$9.75
Spray		$2.20	$1.90	$4.10
Custom hire		$0.00	$0.00	$0.00
Other		$0.00	$0.00	$0.00
Other		$0.00	$0.00	$0.00
Total per acre		$18.90	$16.40	**$35.30**
Seed, chemicals, etc.				
Seed		----	$97.20	$97.20
cost per 1000 kernels	*$3.24*			
kernels per acre	*30,000*			
Nitrogen		----	$35.37	$35.37
price per pound	*$0.27*			
pounds per acre	*131*			
Phosphate		----	$19.72	$19.72
price per pound	*$0.29*			
pounds per acre	*68*			
Potash		----	$10.26	$10.26
price per pound	*$0.19*			
pounds per acre	*54*			
Lime (annual cost)		----	$8.90	$8.90
Herbicide		----	$31.40	$31.40
Crop insurance		----	$10.00	$10.00
Miscellaneous		----	$9.00	$9.00
Interest on preharvest variable costs		----	$8.74	$8.74
length of period (months)	*8*			
interest rate	*5.5%*			
Total		----	$230.59	**$230.59**
Harvest machinery				
Combine		$13.00	$6.70	$19.70
Grain Cart		$6.20	$3.00	$9.20
Haul		$8.17	$7.22	$15.39
Fixed- price per bushel	*$0.04*			
Variable- price per bushel	*$0.04*			
Drying		$9.50	$21.66	$31.16
Fixed- price per bushel	*$0.05*			
Variable- price per bushel	*$0.11*			
Handling		$3.33	$3.69	$7.01
Fixed- price per bushel	*$0.02*			
Variable- price per bushel	*$0.02*			
Custom hire		$0.00	$0.00	$0.00
Total per acre		$40.20	$42.27	**$82.46**
Labor				
Operator		$33.15	----	$33.15
Hours	*2.55*			
Rate per hour	*$13.00*			
Hired		----	$0.00	$0.00
Hours	*0*			
Rate per hour	*$0.00*			
Total		$33.15	$0.00	**$33.15**
Land				
Cash rent equivalent		$230.00	----	$230.00
Total fixed, variable and all costs				
Per acre		$322.25	$289.25	

2017 Team Participation Event = "Individual" Portion - KEY

2017 Iowa Vo-Ag/FFA
Farm Business Management Career Development Event
(Maximum possible pts = 5 per individual and 15 per team = sum of team's top 3 individual scores)

1. A Long-term family goal = family goal that will take longer than one year to achieve (e.g. save up for college expenses).

2. B ROA = $\frac{profit}{total\ assets}$ (100); ROE = $\frac{profit}{Equity}$ (100)

   Given equity < total assets, ROE > ROA for a given positive profit.

3. C TA = $2 mil, total liabilities = $1 mil. Thus, equity = $1 mil. If profit = 3% of equity , $ profit = (.03) (1 mil) = 30,000. Thus,
   ROA = (profit/TA)(100) = (30,000/2 mil)(100) = 1.5%

4. D

5. C

2017 Team Participation Event = "TEAM" Portion (35 pts.) – KEY

2017 Iowa Vo-Ag/FFA
Farm Business Management Career Development Event
(7 questions @ 5 ps. ea.)

1. C Total equity = TA – total liabilities
   = 2 mil - .5 mil = 1.5 mil.

2. D If profit as % of TA = 2% => profit = (.02)(TA)
   = (.02) (2 mil)
   = 40,000

   ⇨ Profit as % of OE = $\frac{profit}{OE}$ x 100 = $\frac{40{,}000}{1{,}500{,}000}$ x 100 = 2.67%

3. C Cost per unit of input (or output) is a measure of efficiency. The lower this cost, the more efficient the operation is said to be. To be able to analyze profitability, one needs revenue information. Liquidity analysis would require information on current assets and current liabilities.

4. C profit as % of TA = (profit/total assets)(100)
   (a) and (b) increase this ratio. (c) decreases this ratio

5. A Family living expenses (e.g. food, clothing, household supplies, furniture, utilities, recreation, etc.) are NOT tax deductible.

6. A Due to variability of crop and livestock prices, farm family business income is more irregular than a city family's salaried income.

7. B Short-term family goals = family goals to accomplish within the coming year. Paying off the truck loan and increasing corn yields = farm business goals, not family goals. Putting money away for college expenses is not a short-term goal.