Participant Number _____ State Abbreviation _____

Participant's Name (please print clearly) _____

Important: Before you start this portion of the event, please write your participant number and state abbreviation on the blanks provided at the top of ***each page***.

2018 NATIONAL FFA
FARM AND AGRIBUSINESS MANAGEMENT
CAREER DEVELOPMENT EVENT

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Participant Number _____ State Abbreviation _____

Part I - Financial Statements

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Which financial statement summarizes the sources and uses of cash to explain the change in the cash balance reported on the balance sheet?

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

2. Which financial statement summarizes financial data for a specific date in time?

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

3. This financial statement shows the relationship between revenues and expenses.

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

4. This financial statement explains changes in net worth.

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

5. The Cedar Creek Farms profit for 2017 was

6. The Cedar Creek Farms accrual adjusted gross farm income for 2017 is

7. The income statement includes

   A. cash receipts, cash expenses, and accrual adjustments.
   B. cash receipts, cash expenses, and current inventory.
   C. assets, liabilities, and accrued interest.
   D. cash receipts, cash expenses, and machinery assets.

8. Which of the following is/are associated with farm revenue? Place the letter(s) in the box on the answer sheet.

   A. Seed purchased during the accounting period.
   B. Interest payments during the accounting period.
   C. Cash received from the sale of grain produced during the accounting period.
   D. A change in the value of crop inventory.

9. Which of the following is/are likely found in a revenue ledger?

   A. Date of sale
   B. Buyer
   C. Quantity sold
   D. Unit price and total revenue received
   E. All of the above

10. The Cedar Creek Farms' chart of accounts normally includes

    A. income and expense accounts.
    B. inventory and current liability accounts
    C. depreciable business asset accounts with depreciation schedules.
    D. other accounts necessary to create financial reports needed for good management.
    E. All of the above

11. When using cash accounting records,

    A. income and expense are recorded at the time of actual cash transactions.
    B. income and expense are recorded at the time they are incurred.
    C. income is recorded when it is produced.
    D. expenses are recorded when used in the production process.

12. The net cash income generated by farm operation in 2017 was

13. A major advantage of accrual accounting when compared to cash accounting is it

    A. provides a more accurate calculation of profit.
    B. provides more flexibility in managing taxable income.
    C. provides an easier method of recording financial transactions than cash accounting.
    D. does not require maintaining receipts and expenses.

14. The original cost basis of an asset plus the cost of any improvements extending the life of the asset less accumulated depreciation on the asset is referred to as the

    A. net cost value of the asset.
    B. net market value of the asset.
    C. adjusted basis of the asset.
    D. total amortization value of the asset.

15. The decrease in value of a capital asset that occurs regardless of repair and maintenance due to wear and/or obsolescence is called

    A. amortization.
    B. remaining value.
    C. capitalized value.
    D. depreciation.

16. In order to make accrual adjustments to cash income and cash expenses, it is necessary to have

    A. a balance sheet from each month of the accounting period.
    B. a balance sheet at the beginning, middle and end of the accounting period.
    C. a balance sheet from the beginning and ending of the accounting period.
    D. the most recent balance sheet provided to a lender.

17. Contributed or paid in capital plus retained earnings plus valuation equity is equal to

    A. change in owner equity.
    B. total owner equity.
    C. net farm income from operations.
    D. total assets.

18. The amount of net farm income that has accumulated in a business since it began is

    A. retained earnings.
    B. total net farm income.
    C. one source of owner equity.
    D. Both A and C.

19. In order for retained earnings of a sole proprietorship to increase,

    A. net farm income must be larger than money withdrawn from the business.
    B. the increase in asset value needs to be more than the net farm operating loss.
    C. asset values on the ending balance sheet must be larger than asset values on the beginning balance sheet.
    D. the cash balance on the ending balance sheet must be larger than the cash balance on the beginning balance sheet.

20. How much of the change in owner equity from 2017 to 2018 came from the change in retained earnings? (Refer to **Pages R3 and R4**)

How much did items 21, 23, 25 and 27 contribute to the change in retained earnings? Indicate if the contribution was positive or negative. (Refer to **Page R7**)

21. Cash withdrawn from Cedar Creek Farms during 2017 for personal use was

22. Net farm income contribution is

    A. Positive
    B. Negative

23. Personal income is

24. Personal income contribution is

    A. Positive
    B. Negative

25. Family living expenses are

26. Family living expenses contribution is

    A. Positive
    B. Negative

27. Income taxes paid are

28. Income taxes paid contribution is

    A. Positive
    B. Negative

29. Net farm income for a farm business organized as a sole proprietorship represents a return to all the following except

    A. unpaid operator and family labor.
    B. owner's investment in the business.
    C. equity capital.
    D. personal assets.

Part II - Budgeting

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. The farm has decided that renting land for cash rather than shares of production results in

   A. more risk for both the landlord and the tenant.
   B. less risk for both the landlord and the tenant.
   C. more risk for the landlord and less risk for the tenant.
   D. less risk for the landlord and more risk for the tenant.

2. When considering the production information for the soybean enterprise, the farm is trying to get maximum returns above variable cost (direct expenses). You, as a farm management consultant, should recommend that managers add input until

   A. marginal cost is equal to marginal revenue.
   B. marginal cost is equal to average total revenue.
   C. marginal revenue is equal to average variable costs.
   D. average total cost is equal to average total revenue.

3. If more acres of corn are planted, which of the following costs is least likely to change?

   A. Total variable (direct) costs
   B. Average fixed cost per acre
   C. Average variable (direct) costs per acre
   D. Average total costs per acre

4. Which of the following would be considered a fixed cost?

   A. Hired seasonal labor
   B. Depreciation on machinery
   C. Crop production inputs
   D. Feed purchases

5. When an increase in the level of production of one enterprise causes a reduction in the level of production of another enterprise, these two enterprises are said to be

   A. independent.
   B. complementary.
   C. supplementary.
   D. competitive.

6. The cost of using a resource based on what it could have earned in the next best alternative is

   A. an opportunity cost.
   B. always a variable cost.
   C. always a fixed cost.
   D. an alternative cost.

7. Budgeting is used to

   A. allow for experimentation with possible outcomes before resources are committed.
   B. estimate the amount of credit needed.
   C. estimate the yields necessary to be profitable.
   D. All of the above

8. Partial budgets are used to evaluate

   A. net income.
   B. the useful life of an asset.
   C. expanding an enterprise.
   D. owner equity.

Review the information in the **Corn Combined, Cash Rented enterprise, Page R9**, and the **Hogs, Weaning-to-Finish (Contract Grower) enterprise, Page R10**, when answering questions 9 through 12.

9. What price per bushel did the farm need to receive for the corn to cover direct expenses per acre?

10. What was the rate of return on their assets for the Hogs, Weaning-to-Finish enterprise? Round to the nearest tenth (x.x) of a percent.

11. What was the farm's biggest expense for their pig operation?

12. If the 2018 interest on long term debt went up to $4.66 per pig, what would the new estimate on net return over labor and management be? Round to the nearest cent.

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Review the information in the **crop budgets for owned corn, both irrigated and dryland, and soybeans, on Page R17** when answering the following questions.

13. What is the long-term expected yield per acre on the dryland corn?

14. What long-range increase in yield per acre does the farm expect from irrigating?

15. What is the estimated price for corn in year 2018?

16. What is the estimated per acre fertilizer cost for dryland corn in 2018?

17. What does the farm expect for returns over direct expenses for the dryland corn in year 2018?

18. The list of expenses in the enterprise budget is a complete list of all expenses required for these enterprises.

    A. True
    B. False

19. What yield would the farm need for the irrigated corn to break even to cover the cost of total direct expenses, if they receive the estimated price for the corn? Round to the nearest tenth (x.x) of a bushel.

20. The enterprise budget for soybeans does not include a cash rent expense. If you add a planned cash rent amount of $225 per acre to the total direct expenses for year 2018, what would be the break even yield to cover direct expenses on rented land, if they received the estimated price for their crop? Round to the nearest hundredth (x.xx) of a bushel.

21. What is the farm's long-term expected yield on the dryland soybeans?

22. If the $225 per acre rental cost is included, how much income would be available from soybeans to cover the overhead expense, based on the long range expected yield, 2018 expected price, and 2018 expected cost?

Part III – Cash Flow Planning

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Refer to Pages R14, R15 and R16 for this section.

1. The projected term debt coverage ratio indicates that the Net Farm Income should be sufficient to cover family living, taxes and debt service of existing term debt. What is the term debt coverage ratio?

2. What would the term debt coverage ratio be, if operating expenses increased by 10% over those planned?

3. Net Farm Income for 2018 is projected to be equal to or even greater than the actual Net Farm Income of 2017.

   A. True
   B. False

4. Cedar Creek Farms' liquidity is anticipated to improve in 2018.

   A. True
   B. False

5. Cedar Creek Farms' solvency is anticipated to improve in 2018.

   A. True
   B. False

6. It is projected that Cedar Creek Farms will have Personal (non-farm) Income that will exceed Family Living Expenses in 2018.

   A. True
   B. False

7. Which cash income item is expected to be the largest contributor to the farm's cash flow in 2018?

8. What is the largest projected cash operating expense in 2018?

9. Excluding the beginning cash balance from the Total Inflow of cash in 2018, what percentage of the inflow is contributed by Contract Livestock income? Round to the nearest tenth of one percent (x.x).

10. What is the monthly payment amount for the BLDG PYMT loan?

11. How many dollars of Family living expense are anticipated for 2018?

12. What is the Annual Operating (AO) Loan balance projected to be at the end of 2018?

13. In which month will the farm borrow the largest amount on the AO Loan?

14. In which month is the Capital Purchase anticipated to happen?

15. The debt to asset ratio is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

16. The ability of the farm's current assets to repay the farm's current liabilities is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

17. _____ measures the relationship of the total assets, the total debt and the relationship of total debt to total equity (net worth).

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

18. _____ measurements show the distribution of the total revenue among operating expenses, depreciation, interest, and net farm income.

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

19. _____ measures whether there is sufficient adjusted revenue to cover family living expenses, income and FICA taxes, and total principle and interest on term debt

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

20. Net farm income is a measurement of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

21. Working Capital is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

22. Term debt coverage ratio is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

23. Rate of Return on Assets is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

24. A formula for Net Cash Flow is Beginning operating loan balance - Ending operating loan balance + Ending cash balance - Beginning cash balance. Using this formula, what is the 2018 Net Cash Flow? (If a negative number, indicate that.)

25. How much is the Earned Net Worth estimated to change in 2018? (If a negative number, indicate that.)

26. What is the expected peak of the operating loan in 2018?

27. Before any capital purchases, capital sales, new borrowings, or loan payments are made, how many dollars are available on an annual basis as Operating Surplus? (If a negative number, indicate that.)

28. In what month is the largest repair bill anticipated?

Use **Page R12** to answer question 29.

29. How many bushels of soybeans were planned to be sold in 2017?

Part IV - Marketing

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. A _____ is the right to sell an underlying future contract at a specific price.

   A. put option
   B. call option
   C. long option
   D. short option

2. A _____ is a person who attempts to anticipate price changes and makes profits through market activities.

   A. hedger
   B. bull
   C. bear
   D. speculator

3. _____ is the difference in the future's price and the local price.

   A. Equilibrium
   B. Hedge
   C. Basis
   D. Margin

4. The right to buy an underlying futures contract at a specific price is a

   A. put option.
   B. call option.
   C. short option.
   D. long option.

5. Funds deposited with a broker to trade futures contracts are called a/an _____ account.

   A. deposit
   B. escrow
   C. margin
   D. loan

6. A farmer who sells futures contracts to protect production from price fluctuations is called a

   A. bear.
   B. bull.
   C. speculator.
   D. hedger.

7. An increase in the value of the dollar relative to the currency of other countries should

   A. increase exports to other countries.
   B. decrease exports to other countries.
   C. have no impact on exports or imports.
   D. decrease imports to the United States.

8. A producer who decides to use the futures market to hedge the price of corn to be sold at harvest would

   A. buy futures contracts expecting to sell contracts when the corn is sold.
   B. buy futures contracts expecting to buy more contracts when corn is sold.
   C. sell futures contracts expecting to sell more contracts when corn is sold.
   D. sell futures contracts expecting to buy them back when corn is sold.

9. When using options, the futures price you want to fix or lock in is called the

   A. option price.
   B. strike price.
   C. buyer’s price.
   D. seller’s price.

10. The price quote offered to the producer is a derived price that reflects the

    A. final use value.
    B. value added.
    C. market-related challenges.
    D. cost of production.

11. _____ prompts much of the short-run price variability of agricultural commodities.

    A. A demand shift
    B. Supply variation
    C. The Farm Bill
    D. The producer

12. The purchase of a put option by a producer sets a price

    A. ceiling.
    B. target.
    C. floor.
    D. wall.

13. Producers using hedging should always close out the cash position and futures position

    A. simultaneously.
    B. within a day.
    C. within a week.
    D. within a month.

14. What is specified in a forward corn contract?

    A. Number of bushels
    B. Moisture content
    C. Test weight
    D. All the above

15. Selling through a farmers' market or roadside market is called _____ marketing.

    A. wholesale
    B. contract
    C. direct
    D. drive-through

16. An increase in the quantity of corn exported by the United States will most likely

    A. decrease the price of corn in the U.S.
    B. increase the price of corn in the U.S.
    C. cause ending stocks to increase in the U.S.
    D. both answers A and C

17. This law indicates the rational consumer will purchase more at a lower price.

    A. Supply
    B. Quality
    C. Demand
    D. Quantity

18. How many futures contracts would be needed to sell 100,000 bushels of corn?

    A. 10
    B. 20
    C. 40
    D. 50

19. A price _____ is attached to those products that are not being accepted by consumers.

    A. increase
    B. discount
    C. reference
    D. pattern

A soybean farmer has the option to sell at harvest on October 1 or to store until February 1. Use the information in the table below to answer questions 21 through 26. Make all calculations on a per bushel basis.

Decision Date: October 1

November Futures (Harvest Contract Price)	$9.85 / bushel
Harvest basis for November Contract on Oct 1	-$0.35 / bushel
Storage costs	$0.025 / bushel per month
Interest cost	$0.04 / bushel per month
March Futures Price	$10.40 / bushel
Normal Basis in February	-$0.05 / bushel
March Put: $10.40 strike premium	$0.35 / bushel

20. What is the cash price for soybeans if the farmer sold on October 1?

21. What is the carrying cost for soybeans stored from October 1 and sold on February 1?

22. What is the expected net price for soybeans hedged with a March futures contract if the grain is stored until February 1?

23. If the farmer decided to buy a March put option, what would be the price floor established by the put if the grain is stored until February 1?

24. What alternative provides the largest net price?

    A. Sell at harvest
    B. Store and hedge with March futures
    C. Store and buy a March put option

25. If the March soybean futures price is $10.85 per bushel when the soybeans are sold on February 1, and the basis is -$0.05, the price received by the farmer who purchased the put option would be

26. A cash contract fixes

    A. the futures price but not the basis.
    B. the basis but not the futures price.
    C. the futures price and the basis.
    D. None of the above

27. Most grains have a marketing time frame of

    A. six months.
    B. twelve months.
    C. eighteen months.
    D. twenty-four months.

28. Producers who use the futures market are able to

    A. shift price risk.
    B. establish cost of production.
    C. set price.
    D. set basis.

Participant Number _____ State Abbreviation _____

Part V - Income Tax

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Answers in this section will be based upon the 2017 Farmer's Tax Guide.

Over the next several years Cedar Creek Farms may purchase a number of depreciable assets. When using the Modified Accelerated Cost Recovery System (MACRS), General Depreciation System (GDS), farm property falls into different Recovery Periods. For questions 1 through 5, how many years would be required to depreciate the listed listed properties?

1. Drainage tile installed in crop land

2. Grain storage bin

3. A new tractor

4. A confinement hog finishing building

5. A machine shed that could double as a grain storage facility if needed

6. Most farmers keep records and pay their taxes using the cash method of accounting because they find it easier to use than the accrual method.

   A. True
   B. False

7. Under the accrual method, income is counted as income when it is earned regardless of when you receive it.

   A. True
   B. False

8. Under the cash method, a bill that is owed can be considered an expense this tax year even though you intend to pay it next year, because you intend to pay in cash.

   A. True
   B. False

9. Section 179 Expense Deduction allows you to recover a portion (or all) of the purchase cost of certain properties in the year of purchase, rather than depreciating the item over a specific number of years.

   A. True
   B. False

10. In 2017, the Special Depreciation Allowance allowed the farmer to take 50% more depreciation deduction over the class life of the property, than if the item was depreciated over time using MACRS (GDS) depreciation.

    A. True
    B. False

Specific rules apply to depreciating purchased assets. Some are required to be depreciated over a number of years, while others can be depreciated more rapidly using the Section 179 Expense Deduction or by claiming the Special Depreciation Allowance. For questions 11 through 15, select the deduction or combination of deductions listed in A though E that best describes the deduction allowance for the listed items. Answers may be used more than once. **For questions 11 through 15 place the answers in the Answer column on the scoresheet not the A, B, C, D and E column.**

A. Must depreciate the item slowly over the required number of years
B. Could depreciate it slowly or could also utilize Section 179 but not the Special Depreciation Allowance
C. Could depreciate it slowly or could also utilize the Special Depreciation Allowance but not Section 179
D. Could depreciate it slowly or could use either or both Section 179 and the Special Depreciation allowance.
E. Cannot be depreciated

11. Purchase of 80 acres of unimproved farm ground at an auction

12. Purchase of a used tractor from a neighbor

13. Construction of new machine shed that could also store hay

14. Purchase of a used chisel plow from their father

15. Purchase of new combine from the local John Deere dealer

On September 13, 2017, Thor traded his old ripper (a tillage tool) for a new J.D. 2700 ripper. His old ripper was fully depreciated. He traded his old ripper plus paid $19,339 to boot for the new ripper. He financed $9,750 over 5 years, and paid the rest in cash. Use this information to complete questions 16 through 20. Calculate to the nearest whole dollar.

16. What was the adjusted basis of his old ripper that he traded in?

17. What is the basis of his new ripper?

18. What is the maximum amount that he could expense out in 2017, if he chose to utilize the Sec. 179 expense deduction but not the Special Depreciation?

19. What is the maximum amount of Special Depreciation Allowance he could take in 2017 if he was not taking any Sec. 179 expense deduction?

20. What is the amount of depreciation for the year 2017 if he used MACRS (GDS) Straight-line depreciation, but did not use any Sec. 179 expense deduction or Special Depreciation Allowance?

When Thor and Elsa filed their 2017 Income Tax Return, the financial information was reported on a number of IRS Forms and Schedules. The following is a partial list of forms and schedules that would be used to file a tax return for a sole-proprietor farm couple. Indicate the IRS Form or Schedule that the income or expense is reported on for questions 21 through 25. The Form or Schedule can be used more than once.

Schedule F
Schedule J
Schedule SE
Form 1040
Form 4797

21. The income from custom hog finishing

22. The sale of an old plow no longer used

23. The self-employment income is reported, and the self-employment tax is calculated using

24. The amount spent on fertilizer

25. The summary form used by individuals to report federal taxable income, adjustments to income, the amount of tax assessed, and tax payments and credits are reported on

26. A sole-proprietor farmer who hires his 17-year-old daughter to work on the farm must withhold federal income tax, social security and Medicare tax.

    A. True
    B. False

27. Self-Employment Tax is paid by self-employed individuals (who make over $400 of self-employed income) at the rate of 15.3% which covers both social security tax and Medicare tax.

    A. True
    B. False

28. A farmer must withhold FICA taxes on a person hired as an independent contractor to wire his machine shed.

    A. True
    B. False

29. A person hired by a farmer to run a machine owned by the farmer, when the farmer tells the person when to come and leave, and how to do the task, could be classified as an independent contractor for employment tax purposes, if the person agrees to that status.

    A. True
    B. False

30. A farmer who has two seasonal employees with a combined annual salary of approximately $8,000 would not be required to pay Federal Unemployment (FUTA) Tax on them.

    A. True
    B. False

Part VI – Investment Analysis

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Cedar Creek Farms wants to purchase an 85,000 bu. grain bin from a dealer in the area. They want this particular structure because it fits in with the expansion of their current on-farm grain storage system. The dealer will provide them a seven-year loan with an interest rate of 4%. To purchase this bin, the farm will borrow $14,500. The payments are due in annual installments. Because they are such great customers, the dealer will carry the note in-house.

Year	Annual Payment	Interest	Principal	Balance
0	[redacted]	[redacted]	[redacted]	$14,500.00
1	2,415.84	580.00	1,835.84	12,664.16
2	2,415.84	506.57	1,909.27	10,754.89
3	2,415.84	430.20	1,985.64	8,769.25
4	2,415.84	350.77	2,065.07	6,704.18
5	2,415.84	268.17	2,147.67	4,556.61
6	2,415.84	182.26	2,233.58	2,322.93
7	2,415.85	92.92	2,322.93	0

1. The total interest paid over the term of the loan will be

2. The total annual payment for year 2 is

3. The loan balance after the payment in year 5 is

4. The loan balance after the final payment is made is

5. What does the total interest paid on this grain bin loan represent?

   A. The actual amount of money borrowed from the dealer.
   B. The total amount of money you pay to the lender.
   C. The present value of money borrowed.
   D. The amount of money left over
   E. None of the above

6. The promissory note, which a lender provides with the grain bin loan, will show

   A. the amount of money you borrowed.
   B. the amount of principal and interest paid with each payment.
   C. when repayment begins, frequency of repayment, and repayment amount.
   D. the names of the parties involved.
   E. All of the above

7. If the grain bin loan is sold in the secondary market, this will increase the loanable funds available for use by the lender.

   A. True
   B. False

8. The principal amount in each loan payment on the grain bin will always be the same.

   A. True
   B. False

9. What is repossession?

   A. The recovery of collateral for non-payment.
   B. Paying off debt with a revised repayment schedule.
   C. Paying off debt with a fixed repayment schedule.
   D. The ability to repay a loan from the bank with a refinanced loan.

10. What is the usual length of time for the term on the machinery loan?

    A. 5 years
    B. 10 years
    C. 15 years
    D. Match the useful life of the asset but typically not more than seven years

11. An annual loan payment generally consists of

    A. interest.
    B. principal.
    C. balance.
    D. Both A and B

Part VII - Risk Management

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Unexpected circumstances where the probability of an event occurring can be measured is called

   A. certainty.
   B. uncertainty.
   C. risk.
   D. unknown.

2. _____ is the act of managing or controlling exposures to risk in order to meet preset objectives or risk exposure guidelines.

   A. Speculation
   B. Risk Management
   C. Financial Management
   D. Uncertainty Management

3. When the probability of an event occurring cannot be measured, this situation is called

   A. certainty.
   B. uncertainty.
   C. risk.
   D. an unknown.

4. A/an _____ is an economic device where an individual or business substitutes a certain cost for an uncertain financial loss.

   A. government subsidy
   B. premium payment
   C. insurance policy
   D. futures contract

5. The payment to an insurance company by a policyholder to purchase and maintain an insurance policy is an insurance

   A. premium.
   B. indemnity.
   C. subsidy.
   D. annuity.

6. Hedging with commodity futures is an example of risk

   A. avoidance.
   B. control.
   C. transfer.
   D. retention.

A farmer has the following total variable costs and cash rental rate to produce corn and soybeans. Use this information to answer questions 7 and 8.

	Variable Costs ($/acre)	**Cash Rent ($/acre)**	**Planned Yield (bushels/acre)**
Corn	$531	$180	180
Soybeans	$351	$180	65

7. What is the break even price per bushel for corn that covers variable costs plus cash rent? Round to the nearest cent.

8. If the price of corn is $4.50 per bushel, what soybean price provides the same return over variable costs and cash rent? Round to the nearest cent.

9. Planting a combination of corn, soybeans, and winter wheat is an example of which risk management strategy?

   A. Specialization
   B. Diversification
   C. Loss minimization
   D. Risk transfer

10. Many corn farmers purchase crop revenue insurance to protect against adverse outcomes. This type of crop insurance helps to protect against which of the following?

    A. Low crop prices and yields
    B. High crop prices and yields
    C. Increases in production costs
    D. Failure of grain buyer to make a prompt payment upon delivery.

11. Insurance is an example of

    A. risk avoidance.
    B. diversification.
    C. risk control.
    D. risk transfer.

12. Forward contracting is usually considered a form of risk management. Under what circumstance would a forward contract be a liability to the business?

    A. The harvested yield is greater than the bushels contracted, and the market price at delivery is above the contract price.
    B. The yield is less than the bushels contracted, and the market price at delivery is below the contract price.
    C. The yield is less than the amount contracted, and the price has increased.

13. A young family that just purchased a home with borrowed money should consider which risk management tool?

    A. Diversification
    B. Life insurance
    C. Hedging with futures
    D. None of the above

14. Liability insurance is used to protect against

    A. crop yield loss.
    B. hail damage.
    C. legal action.
    D. livestock price risk.

15. When a soybean farmer sells a futures contract, the farmer passes risk to the

    A. broker.
    B. purchaser (speculator).
    C. Chicago Mercantile Exchange (CME).
    D. Commodity Futures Trading Commission (CFTC).

16. A disability, employee work accidents, and an employee not reporting for work are examples of which type of risk?

    A. Human risk
    B. Price risk
    C. Production risk
    D. Financial Risk

17. Risk assessment requires managers to consider the

    A. ways to avoid a bad decision.
    B. likelihood of a bad decision and what to do if you are wrong.
    C. consequences and the probability of a bad outcome.

18. A manager who is willing to take a bigger risk would expect to receive

    A. a smaller average net return.
    B. the same average net return.
    C. a larger average net return.

19. Risk management is the process by which a business

    A. identifies potential risk exposure.
    B. prioritizes the risk faced by the business.
    C. develops a plan to mitigate the risk exposure.
    D. All of the above

20. Which of the following is <u>not</u> a market risk?

    A. Changes in input prices
    B. Changes in product prices
    C. Not being able to gain access to a market for a specific specialty crop
    D. Changes in the cost of production per unit due to a reduced yield

21. Lower than average yields are an example of _____ risk.

    A. production
    B. market
    C. human
    D. financial

22. A large amount of debt relative to the value of total assets is an example of _____ risk.

    A. production
    B. market
    C. human
    D. financial

23. What is an example of human risk?

    A. A drought reducing corn yields
    B. A change in interest rates
    C. Hired help injured by farm machinery
    D. A change in regulations regarding pesticide use

24. _____ is/are an example of risk control.

    A. Crop insurance
    B. Hedging with commodity futures
    C. Fire alarms and fire sprinklers
    D. Both A and B

25. The current ratio is a measure of _____ risk.

    A. financial
    B. market
    C. production
    D. human
    E. legal

26. Forming an LLC can reduce the business owner's _____ risk.

    A. production
    B. market
    C. human
    D. legal

27. An insurance policy deductible is a form of risk

    A. avoidance.
    B. control.
    C. transfer.
    D. retention.

28. Which of the following risks should be realistically covered by insurance?

    A. A low frequency and low severity risk
    B. A low frequency and high severity risk
    C. A high frequency and low severity risk
    D. All of these risks should be transferred

29. What is an example of an incurred loss to a corn field prevented from planting?

    A. Cost of tillage and inputs applied prior to planting
    B. The value of corn not harvested and sold
    C. The value of inputs not applied to the crop
    D. All of the above

Part VIII - Business Organization / Land Measurement

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Which of the following is a type of cooperative?

   A. Marketing
   B. Credit
   C. Processing
   D. All of these are types of cooperatives.

2. Which of the following statements about trusts is true?

   A. A trust is a legal arrangement by which a person (settlor) transfers ownership of specific assets to a trust. A person or group (trustee) to manages the trust.
   B. Trustees are the people who manage a trust.
   C. A trust can be used to manage estate taxes.
   D. All of the above are true.

3. The parents are planning for retirement. During their farming career, they have grown their farm to 2,000 acres of prime farmland. They are particularly concerned about leaving their family a legacy of farming by protecting and ensuring that their farmland stays in their family for many generations to come.

   Which of the following entities would best suit their goal of leaving their farm for future generations of their family?

   A. A trust
   B. A Sole-Proprietorship
   C. A Cooperative
   D. A partnership
   E. None of these is appropriate.

4. Which of the following is <u>not</u> a benefit of a corporate business structure?

   A. Corporate income is not subject to income taxes.
   B. Ownership is easily divided into shares.
   C. A corporation does not dissolve with the death of an owner.
   D. Benefits estate planning.
   E. All of the above are benefits of organizing as a corporation.

5. If a person does not have a will at the time of their death, the disbursement of his or her assets will be guided by

   A. city statutes.
   B. county statutes.
   C. state statutes.
   D. federal statutes.
   E. international laws regarding disbursement of assets.

6. The most commonly used type of business organization for US farms and ranches is the

   A. corporation.
   B. partnership.
   C. sole-proprietorship.
   D. LLC.
   E. Cooperative.

7. Of the types of business organizations listed below, which would provide the least protection from tort liability to the owners?

   A. LLC
   B. S-Corporation
   C. C-Corporation
   D. General Partnership

8. An owner of a corporation is also called a(n)

   A. director.
   B. stockholder.
   C. officer.
   D. member.
   E. trustor.

9. Which of the following statements is <u>not</u> a best practice when selecting a business organization structure?

   A. Business owners should select the simplest business organization that still meets their needs and goals.
   B. Partnership agreements should always be written and reviewed by an attorney before they are signed.
   C. The business structure that minimizes taxation the most is always the best choice.
   D. Future plans and aspirations of the business owner should be taken into account when deciding the optimal business structure.

10. An owner of an LLC is also called a

    A. director.
    B. stockholder.
    C. member.
    D. trustee.

11. Owners of an S-Corporation must be US citizens.

    A. True
    B. False

12. In limited partnerships, management duties and liabilities are shared equally by all partners.

    A. True
    B. False

13. Cooperatives are owned and controlled by their member-patrons, and the profits earned by the cooperative are returned to the members based on patronage.

    A. True
    B. False

14. Cooperatives allow farmers and ranchers to gain market power by combining their resources.

    A. True
    B. False

15. Sole-Proprietorships persist after the death of the owner.

    A. True
    B. False

16. How many sections are usually in a township?

    A. 12
    B. 24
    C. 36
    D. 48

17. How many acres are in a section?

    A. 320
    B. 640
    C. 80
    D. 20

18. When reading a legal land description you read it by

    A. reading it from the smallest to the largest parcel.
    B. locating the section in the township.
    C. finding the location in the quarter.
    D. All of the above

19. The range refers to columns of townships running north and south (quadrangle).

    A. True
    B. False

20. Some properties in the U.S. do not have some form of legal land description.

    A. True
    B. False

21. There are approximately _____ acres in a township.

    A. 23,040
    B. 22,050
    C. 19,580
    D. 64,000

22. An acre equals ____ square feet.

    A. 23,040
    B. 43,560
    C. 64,000
    D. 12,346

23. A tier refers to the townships running east and west in six-mile increments.

    A. True
    B. False

24. A typical township is six miles square.

    A. True
    B. False

25. Generally, parcels of land that are irregular in shape are legally described by using

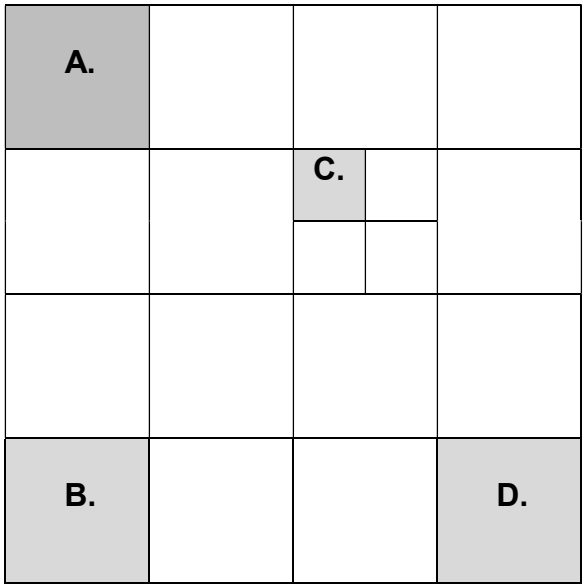
    A. rectangular survey.
    B. metes and bounds.
    C. Either A or B

26. Residential property in towns and cities is generally described by using the recorded plat system.

    A. True
    B. False

Use the chart below of section 9 to answer questions 27 and 28.

Section 9



27. In the illustration above, what is the legal description of parcel **A**?

    A. NE 1/4 of the NW 1/2 of Section 9.
    B. NW 1/2 of the NW 1/2 of the NE 1/4 of Section 9
    C. NW 1/4 of the NW 1/4 of Section 9
    D. NE 1/2 of the NW 1/8 of Section 9

28. How many acres are in parcel **C**?

    A. 80 acres
    B. 40 acres
    C. 20 acres
    D. 10 acres

Part IX, Section 1 - Analyzing the Agricultural Business

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Using the Resource Information for the Cedar Creek Farms 1/1/2017 and the 1/1/2018 Balance Sheets, found on **Pages R3 and R4**, and the Executive Summary **Page R5**, answer questions 1 through 6.

1. What was the amount of the change in the total value of **farm assets** on the Cost Balance Sheet between 1/1/2017 and 1/1/2018?

2. What was the increase in Total Current Assets?

3. In the Farm Overview, several goal areas were noted. One of those areas was Solvency, which includes the Debt to Asset Ratio. The stated goal was to improve the Debt to Asset Ratio by at least 2%. Did the farm Debt to Asset Ratio improve by 2% or more?

   A. Yes
   B. No

4. On the Market Balance Sheet, the difference between the Net Worth on 1/1/2018 and 1/1/2017 is the Net Worth Change. Calculate the Net Worth Change.

5. Is the Net Worth Change in question 5 better than the area average net worth change for **All Farms** on Market Balance Sheet, **Page R21**?

   A. Yes
   B. No

6. Of the major farm asset and farm liability categories listed below, which had greatest negative impact on the Net Worth Change?

   A. Current assets
   B. Long-term assets
   C. Current liabilities
   D. Long-term liabilities

7. Compare the ending working capital for Cedar Creek Farms, **Page R5** Executive Summary, to the working capital for the Area Average, **Page R19**. Is their working capital better than the average?

   A. Yes
   B. No

8. Is the ending working capital as a percentage of gross income better than the average?

   A. Yes
   B. No

9. A second goal area identified in the farm overview was repayment capacity. That includes Term Debt Coverage Ratio. The goal was to be better than the average. Is the farm's ratio better than the Area Average?

   A. Yes
   B. No

10. For every dollar of term debt repayment required in 2017, how many dollars are available to pay on the term debt?

Net Farm Income is used to pay for family living, social security and income tax, retirement accounts, health and medical expenses, and loan principal payments. Calculate the "Balance or Net" of net farm income to determine if there is enough net farm income to cover the uses of net farm income. Use data on pages **R3, R5 and R11**, rounded to whole numbers. NOTE: Your answer for items 11-16 **must include a + or – sign** in front of the numbers, to show whether they are added or subtracted in the calculation.

11. **Net Farm Income** (+ or -)

12. Total Family Living Expense (+ or -)

    (excluding furnishings and appliances personal savings and investments and income and social security taxes)

13. Social security and Income Tax (+ or -)

14. Other Nonfarm Expenditures, Excluding Taxes (+ or -)

15. Principal Due on Term Loans in 2017 (+ or -)

16. **Balance or Net** (+ or -)

A positive balance indicates sufficient net income for business investment or other uses, while a negative balance indicates a need for revenue from other sources.

17. Does this operation require outside revenue to ensure a positive balance?

    A. Yes
    B. No

Part IX, Section 2 - Analyzing the Agricultural Business

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Answer the following questions that relate to the Corn enterprises, found on **Pages R8 and R23** in the Resource information.

1. What is the primary reason that the gross return per acre for the farm's owned, dryland corn is greater than the average of all farms?

   A. Price
   B. Yield
   C. Direct Cost
   D. Overhead

2. Of the Direct Expenses on the farm's owned, dryland corn, which two expenses are the greatest amount **below** the average for those expenses?

3. What is their break even price per bushel for owned dryland corn with labor and management costs included?

Using the Percentile Rank Report for Owned Soybeans on **page R18,** answer the following questions.

(Note: The Percentile Rank Report provides a unique look at all the data by splitting the information into 10 columns with 10% of the data in each column. The weakest numbers are on the left (10%) and the best numbers to the right (100%) for each individual line. So, each line is unique to itself and is not connected to the line above or below it. The shaded areas are the percentiles where the farm data ranks.)

4. The majority of the factors for the farm appear to be weaker rather than stronger.

   A. True
   B. False

5. Which factor on the farm is at the 50 percentile rank?

6. Which of the following direct expenses on the farm has the weakest percentile rank?

   A. Seed and plants
   B. Fuel and Oil
   C. Repairs
   D. Crop chemicals

The owners of Cedar Creek Farms are interested in comparing annual financial information. For questions 7-10 use the comparative trend for their business**, Page R13**.

7. Their 2017 net farm income is at the highest level since 2008.

   A. True
   B. False

8. For how many years has their net worth been increasing?

   A. 1
   B. 4
   C. 7
   D. 9

9. In which year did the gross farm income have the greatest reduction from the prior year?

   A. 2011
   B. 2013
   C. 2015
   D. 2016

10. Over each of the last 4 years, the operating profit margin or operating expense ratio has become

    A. better.
    B. worse.

The Planned vs. Actual Income Statement provides a look at the producer's ability to project income and expense for the upcoming year. Review this statement on **Page R12** and answer the following questions.

11. What income item generated a "pleasant surprise" because the actual was significantly greater than planned?

12. Which non-income item had the greatest impact on the increase in the Actual Net Farm Income compared to the Planned Net Farm Income?

13. The local lender prefers that the Actual Income Statement amounts to be within 10% of the Planned Income Statement. Which item listed below was within the 10% guideline?

    A. Gross cash farm income
    B. Total cash farm expense
    C. Net cash farm income
    D. Net farm income

Comparing trend data is also an important aspect of farm business management. Using the Comparative Trends, found on **Page R13** in the Resource Information, indicate whether each of these ratios/factors were better or worse in 2017 versus 2016.

14. Based on the Asset and Liability factors in the trends, did the farm meet its goal to make the overall balance sheet better or did it get worse?

    A. Better
    B. Worse

15. Did the farm meet its goal to make all their efficiency measures better?

    A. Yes
    B. No

16. Based on the yield information for the dryland corn enterprise, do we know that these enterprises were better in 2017, so they met their enterprise improvement goal?

    A. Yes
    B. No

`

Part X – Family Living

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Review the **Family Living Expenses, Page R11,** and **Area Average, Page R22** to answer the following questions.

1. What is the total personal expenditure per family member for the Cedar Creek Farms? Round answer to whole dollar.

2. Cedar Creek Farms spends how much per family member on education?

   A. $1,025
   B. $610
   C. $1,770
   D. $205
   E. $379

3. Which expense listed below would be the most difficult to reduce?

   A. Gifts
   B. Clothing
   C. Medical care
   D. Recreation
   E. Cash donations

4. In which category does Cedar Creek Farms have a larger per person expenditure than the area average?

   A. Food and meals expense
   B. Health insurance
   C. Clothing
   D. Personal care
   E. Medical care

5. Which annual cash family living expense would Cedar Creek Farms find the easiest to reduce?

   A. Recreation
   B. Utilities
   C. Medical care
   D. Health insurance
   E. Life insurance

For each expense category listed below, determine if Cedar Creek Farms is spending more or less than five percent of their total cash family living expense on that category.

6. Medical care A. Less B. More

7. Household supplies A. Less B. More

8. Personal care A. Less B. More

9. Clothing A. Less B. More

10. What is the area average total family living dollar amount spent per family member? Round answer to whole dollar.

    A. $60,829
    B. $61,641
    C. $12,128
    D. $20,825
    E. $20,976

11. Cedar Creek Farms is saving for future college education and retirement expenses. What is the amount being saved per person?

12. The area average per person expenditure on recreation is

    A. $4,060
    B. $1,620
    C. $1,400
    D. $8,100
    E. $979

13. What percent of the Total Cash Family Living Expense is Health Insurance for Cedar Creek Farms? Round to the nearest tenth of a percent (x.x)

Part XI - Economic Principles

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. The concept in economics that explains the magnitude of changes in the production of a product relative to changes in the price of the product is called

   A. Price Elasticity of Demand.
   B. Cross-Price Elasticity.
   C. Income Elasticity.
   D. Price Elasticity of Supply.

2. For a hog production operation, the cost of feed can best be described as

   A. fixed cost.
   B. variable cost.
   C. marginal cost.
   D. total cost.
   E. average total cost.

3. The decision rule for profit maximization is

   A. Marginal Revenue = Marginal Cost.
   B. Marginal Revenue > Marginal Cost.
   C. Marginal Revenue < Marginal Cost.
   D. Marginal Revenue ≠ Marginal Cost.

4. The principle of _____ implies that due to the finite availability of resources, economic decision-makers must make decisions to deploy their resources in an efficient manner.

   A. Opportunity Cost
   B. Scarcity
   C. Comparative Advantage
   D. Economies of Size
   E. The Production Function

5. The branch of economics that studies a business' resource allocation decisions is

   A. Macroeconomics.
   B. Market Economics.
   C. Capitalism Economics.
   D. Microeconomics.

6. The principle of _____ states that producers should produce the products that they are best able to produce and purchase products that they produce less efficiently.

   A. Opportunity Cost
   B. Scarcity
   C. Comparative Advantage
   D. Economies of Size
   E. The Production Function

7. The Federal Reserve raising interest rates is an example of _____ policy that affects agricultural businesses.

   A. monetary
   B. fiscal
   C. farm
   D. trade
   E. foreign

8. If the supply of corn were to increase while demand remained constant, what would happen to the price?

   A. The price would increase.
   B. The price would decrease.
   C. There would be no change in the price.
   D. The effects of supply and demand on the price are indeterminable.

9. Congress lowering taxes is an example of a change in _____ policy that affects agricultural businesses.

   A. monetary
   B. fiscal
   C. farm
   D. trade
   E. foreign

10. Of the following descriptions, which best describes a perfectly competitive market?

    A. A market with four major firms that control 85% of all sales.
    B. A market in which all firms are price takers.
    C. A market in which firms sell similar, but differentiated products.
    D. A market in which the government allows a single producer to market goods.

11. This stage of production is characterized by negative marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

12. This stage of production is characterized by increasing marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

13. This stage of production is characterized by decreasing marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

Use the table below to complete questions 14 through 16.

Lbs of Fertilizer Applied per acre	Yield of Feed Grain in bushels per acre	Cost of Fertilizer per acre	Marginal Cost	Marginal Revenue
60	43	30	$1.43	$8.60
80	47	40	$2.50	$8.60
100	50	50	$3.33	$8.60
120	53	60	$3.33	$8.60
140	54	70	$10.00	$8.60

14. At (or between) which level(s) of fertilizer input is total revenue maximized?

15. At (or between) which level(s) of fertilizer input is profit maximized?

16. At (or between) which level(s) of fertilizer input does the farmer begin to see a decline in profit?

17. If a producer can gain 2 additional bushels per acre by applying a fungicide that costs $18 per acre to apply, what is the increase or decrease in profit per acre if the crop can be sold for $10.30 per bushel?

Overview of Cedar Creek Farms

Owners: Thor and Elsa Johanson

Thor Johanson began his farming operation in 1996 when he share-cropped 110 acres with a neighbor his father had been working with for many years. In this same year he graduated from high school and enrolled in the local community/technical college to major in accounting. He interned at an accounting firm about 45 miles from his home, and after graduating in 1998, continued working there until 2007 while also operating and growing his farming business.

In 2003, Thor first expanded his operation, Cedar Creek Farms, by purchasing 80 acres about 3 miles away from another neighbor. This parcel was recently paid off. Also in 2003, he expanded the number of rental acres and settled in to the size of operation that was compatible with his off-farm employment. At that time, he also met someone who would change his life in a very positive way.

In 2008, Thor married Elsa, and after much discussion, they decided that he would begin farming full-time. Elsa had graduated from a local university with a Master's Degree in Education and began teaching at the community/technical college. Elsa has a very successful professional career which provides the family with a number of benefits. After numerous discussions with his father and wife, Thor decided to start a hog operation. In 2008, the Johansons built two hog finishing buildings and began the custom hog finishing operation. These barns will be paid off in 4 years. The custom feeding agreement arranged for him to receive 15-pound pigs that had recently been weaned from the sow or mother.

In 2009, the Johansons decided to purchase another 40-acres from a neighbor. The couple also purchased a 2-acre lot from his father as the site of their new home, which was finished early in 2010. The house was paid off in 2016. In 2010, they also expanded their share-cropping enterprise with another neighbor and a family friend.

Beginning with 110 acres of share-cropped land, Thor has expanded to now own 123 acres with 118 of those acres in crop. Thor also cash rents 130 acres and share rents an additional 666 acres for a total of 914 acres. Of those total acres, 529 are irrigated and 385 are dryland. The irrigated acres all have center pivot irrigation systems. The cropping plan generally consists of 2/3 corn and 1/3 soybeans.

Thor has been very fortunate to work with his father on machinery use for the cropping program. This has been instrumental in enabling him to successfully expand the operation over the past 10 years. Along the way, the Johansons have purchased equipment to upgrade the machinery available from his father.

Below is a brief list of those purchases:

- 1998: A tractor – 50/50 purchase
- 2001: A Skid Loader
- 2003: A Grain Cart
- 2004: A pull-type Field Sprayer
- 2009: Another tractor – 50/50 purchase
- 2011: First Auto Steer system
- 2011: Updated Grain Drying system – 50/50 purchase
- 2014: First Semi & Grain Trailer
- 2014: 4-Wheel Drive Tractor – 50/50 purchase
- 2015/2017: Sprayer upgrade

The 50/50 purchases were all made with his father. They purchase all machinery from the local John Deere dealer.

Thor currently considers himself to be a full-time farmer, but he intends to expand both the cropping program and the custom hog operation in the future. Within the next 2 years, the Johansons hope to upgrade the grain handling system. Cedar Creek Farms has limited wet corn storage and drying capacity that limits the number of hours a day that Thor can harvest corn. His goal is to shorten the number of days it takes to complete harvest. Thor has spent time considering the advantages and disadvantages of several options.

Thor and his father are members of the Farm Management Association. While working with his Farm Business Management instructor early in 2017, Thor developed goals for the year. General areas targeted by those goals include the following:

1. Improved Solvency Measures - debt to asset ratio improves by at least 2%
2. Improved Repayment Capacity - term debt coverage ratio is better than average
3. Improved Overall Balance Sheet - based on financial measures
4. All Efficiency Measures will improve
5. Show enterprise improvement - Increase both yield and net return

Within the next 5 years, the Johansons also hope to purchase another 80 acres of cropland and continue to purchase more of the machinery that his dad owns. Their intent is to own all the machinery when his father retires so that they can share crop his father's 540 acres and continue to share crop their current 666 acres with their neighbors as well.

The Johansons have 2 sons, Jim and Ellis, and 1 daughter, Jemma. All 3 of the children are currently in elementary school and show strong interest in wanting to be farmers like their parents and grandfather. The children spend a lot of time with the adults as they work in the operation. Long term, the Johansons hope to continue farming as a family if that is possible. Cedar Creek Farms is currently operated as a sole proprietorship.

Cedar Creek Farms
1/1/2017 Balance Sheet

Current Assets			Value	***Current Liabilities***				Balance
Cash and checking (Schd A)			13,184	Accrued interest				11,588
Prepaid exp. & suppl. (Schd B)			103,760	Payables & accr exp (Schd T)				7,840
Growing crops			-					
Accounts receivable			-		Int	P & I		Principal
Hedging accounts			-	Current loans (Schd U)	Rate	Due		Balance
Other current assets			-	FSA-OPERATING	6.00	-		143,600
Crops (Schd G)	Quantity	Value/Unit		Principal due within 12 months on term liabilities				110,499
Corn	58,000	3.61/bu.	209,200					
Soybeans	2,300	9.89/bu.	22,740					
Livestock held for sale			-					
Total Current Assets			**348,884**	**Total Current Liabilities**				**273,527**

Intermediate Assets	Cost Value	Market Value
Breeding livestock	-	-
Machinery (Schd J)	240,201	273,155
Titled vehicles (Schd K)	96,000	97,657
Other intermed. (Schd L)	1,650	1,650
Total Intermediate Assets	**337,851**	**372,462**

Intermediate Liabilities (Schd V)	Int Rate	Principal Balance	P & I Due	Principal Due	Intermed Balance
Loan					
FCS-IRRIGATOR	3.85	57,000	12,250	9,948	47,052
JDCC-9430 TRACTOR	2.75	88,781	19,182	16,529	72,252
US Bank-PICKUP	2.64	13,275	4,344	4,038	9,237
US Bank-05 PICKUP	2.70	1,557	1,570	1,554	3
JDCC-O5 TRAC & GT	4.30	40,000	9,060	7,170	32,830
Total Intermediate Liabilities					**161,374**

Long Term Assets		Cost	Market
Land (Schd M)	Acres	Value	Value
MARSH FARM 2003	85	135,000	135,000
LAKE FARM 33.3 TILLAB	40	140,000	260,000
Bldgs & improve. (Schd N)		581,955	633,620
Other long term (Schd O)		265,644	281,744
Total Long Term Assets		**1,122,599**	**1,310,364**

Long Term Liabilities (Schd W)	Int Rate	Principal Balance	P & I Due	Principal Due	Lg Term Balance
Loan					
FCS-GILT BLDG 20	4.80	378,886	76,392	59,110	319,776
FCS-2ND NOTE GB	5.90	894	905	890	4
FCS-MARSH FARM	6.35	80,152	12,225	7,037	73,115
FCS-LAKE FARM	5.65	91,831	10,696	4,223	87,608
Total Long Term Liabilities					**480,503**

Total Farm Assets	**1,809,334**	**2,031,710**	**Total Farm Liabilities**		**915,404**
Personal Assets (Schd P)	457,400	463,925	Personal Liabilities		-

		Cost	Market
Deferred Liabilities (c)			70,331
Total Liabilities (d)(e)		915,404	985,735
Retained Earnings/Contributed Capital	[a-d]	1,351,329	
Market valuation equity	[b-a-c]		158,570
Total Assets (a)(b)		**2,266,734**	**2,495,635**	**Net Worth**	[b-e]		**1,509,900**

Cedar Creek Farms
1/1/2018 Balance Sheet

Current Assets			Value
Cash and checking (Schd A)			37,000
Prepaid exp. & suppl. (Schd B)			126,728
Growing crops			-
Accounts receivable			-
Hedging accounts			-
Other current assets			-
Crops (Schd G)	Quantity	Value/Unit	
Corn	86,000	3.44/bu.	295,970
Soybeans	-	-/bu.	-
Livestock held for sale			-
Total Current Assets			**459,698**

Intermediate Assets	Cost Value	Market Value
Breeding livestock	-	-
Machinery (Schd J)	240,323	273,372
Titled vehicles (Schd K)	86,400	88,868
Other intermed. (Schd L)	1,320	1,320
Total Intermediate Assets	**328,043**	**363,560**

Long Term Assets		Cost	Market
Land (Schd M)	Acres	Value	Value
MARSH FARM 2003	85	135,000	135,000
LAKE FARM 33.3 TILLABL	40	140,000	260,000
Bldgs & improve. (Schd N)		558,677	614,611
Other long term (Schd O)		260,944	276,896
Total Long Term Assets		**1,094,621**	**1,286,507**

Total Farm Assets	**1,882,362**	**2,109,765**
Personal Assets (Schd P)	533,523	540,048
Total Assets (a)(b)	**2,415,885**	**2,649,813**

Current Liabilities			Balance
Accrued interest			8,706
Payables & accr exp (Schd T)			7,840
	Int	P & I	Principal
Current loans (Schd U)	Rate	Due	Balance
FSA-OPERATING	6.00	-	-
CCC Crop Loan-CORN	2.00	124,529	124,529
JDCC-INPUTS	0.001	82,719	82,719
Principal due within 12 months on term liabilities			115,326
Total Current Liabilities			**339,120**

Intermediate Liabilities (Schd V)	Int	Principal	P & I	Principal	Intermed
Loan	Rate	Balance	Due	Due	Balance
FCS-IRRIGATOR	3.85	46,500	12,250	10,353	36,147
JDCC-9430 TRACTOR	2.75	71,918	19,182	17,038	54,880
US Bank-PICKUP	2.64	9,322	4,344	4,145	5,177
JDCC-O5 TRAC & GT	4.30	32,660	9,060	7,517	25,143
JDCC-2700 RIPPER	4.10	9,750	2,240	1,801	7,949
Total Intermediate Liabilities					**129,296**

Long Term Liabilities (Schd W)	Int	Principal	P & I	Principal	Lg Term
Loan	Rate	Balance	Due	Due	Balance
FCS-GILT BLDG 20	4.80	322,148	76,392	61,957	260,191
FCS-MARSH FARM	6.35	66,760	12,225	7,904	58,856
FCS-LAKE FARM	5.65	86,323	10,696	4,611	81,712
Total Long Term Liabilities					**400,759**

Total Farm Liabilities			**869,175**
Personal Liabilities			-
		Cost	Market
Deferred Liabilities (c)			84,316
Total Liabilities (d)(e)		869,175	953,490
Retained Earnings/Contributed Capital	[a-d]	1,546,710	
Market valuation equity	[b-a-c]		149,613
Net Worth	[b-e]		**1,696,323**

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2017 Financial Analysis Executive Summary

Income Statement

Crop sales	352,684	
Crop inventory change	64,030	
Gross crop income		416,714
Livestock sales	-	
Livestock inventory change	-	
Gross livestock income		-
Government payments		11,709
Other cash farm income		166,178
Change in accounts receivable		-
Gain or loss on hedging accts		-
Change in other assets		-5,030
Gain or loss on breeding lvst		-
Gross farm income		**589,571**
Cash operating expense	348,027	
Change in prepaid exp and supplies	-22,968	
Change in growing crops	-	
Change in accounts payable	-	
Depreciation	52,095	
Total operating expense		377,154
Interest paid	38,456	
Change in accrued interest	-2,883	
Total interest expense		35,573
Total expenses		**412,728**
Net farm income		**176,844**

Other Measures

Total crop acres		914
Change in earned net worth	195,381	14 %
Change in market value net worth	186,423	12 %

Financial Standards Measures

Liquidity	**Beg**	**End**
Current ratio	1.28	1.36
Working capital	75,357	120,578
Working capital to gross revenues	12.8 %	20.5 %
Solvency (market)	**Beg**	**End**
Debt to asset ratio	48 %	45 %
Debt to equity ratio	0.94	0.82
Profitability	**Cost**	**Market**
Net farm income	176,844	167,886
Rate of return on assets	9.6 %	8.1 %
Rate of return on equity	14.9 %	12.1 %
Operating profit margin	30.1 %	28.6 %
Repayment Capacity		
Term debt coverage ratio (farm only)		1.75
Replacement margin coverage ratio		1.72
Efficiency	**Cost**	**Market**
Asset turnover rate	31.9 %	28.5 %
Operating expense ratio		55.1 %
Depreciation expense ratio		8.8 %
Interest expense ratio		6.0 %
Net farm income ratio		30.0 %
Other		
Term debt coverage (farm+personal)		1.75
Term debt to EBITDA		2.43

Information Accuracy

Cash discrepancy	0
Liability discrepancy	0
Cash discrepancy to gross revenue	0 %

Income Statement

Income	Quantity	Price	Amount	***Expense***	Amount
Corn	58,883 bu.	3.59/bu.	211,598	Seed	51,231
Soybeans	15,190 bu.	9.29/bu.	141,086	Fertilizer	63,148
Crop government payments			9,001	Crop chemicals	31,003
CRP payments			2,708	Crop insurance	7,194
Contract Livestock income			153,813	Drying expense	12,628
Patronage dividends, cash			11,815	Irrigation energy	9,388
Other farm income			550	Crop Marketing	1,052
				Crop Miscellaneous	2,703
				Purchased feed	43
				Interest	38,456
				Fuel & oil	32,397
				Repairs	38,788
				Custom hire	2,220
				Hired labor	19,616
				Land rent	28,163
				Machinery leases	10,000
				Real estate taxes	5,914
				Farm insurance	14,358
				Utilities	6,883
				Dues & professional fees	4,987
				Miscellaneous	6,311
Gross cash income			530,571	Total cash expense	386,483
				Net cash income	144,088

Inventory Changes	Beginning Inventory	Purchases	Sales	Ending Inventory	Inventory Change	
Prepaids and supplies	103,760			126,728	22,968	
Crops and feed	231,940			295,970	64,030	
Other assets	267,294	-	-	262,264	-5,030	
Accounts payable	7,840			7,840	-	
Accrued interest	11,588			8,706	2,883	
Total inventory change						84,851
Net operating profit						228,939
Depreciation	Beginning Inventory	Purchases	Sales	Ending Inventory	Depreciation	
Machinery and equipment	240,201	19,339	-	240,323	-19,217	
Titled vehicles	96,000	-	-	86,400	-9,600	
Buildings and improvement	581,955	-	-	558,677	-23,278	
Total depreciation						-52,095
Net farm income						**176,844**

Profitability Measures

			Cost	Market
(A)	Net farm income from operations		176,844	167,886
	Rate of return on assets	(E/F)	9.6 %	8.1 %
	Rate of return on equity	(G/H)	14.9 %	12.1 %
	Operating profit margin	(E/I)	30.1 %	28.6 %
	Asset turnover rate	(I/F)	31.9 %	28.5 %
	EBITDA		264,512	255,555
(B)	Change in market valuation		-	-8,958
(C)	Interest expense		35,573	35,573
(D)	Value of unpaid oper labor & mgmt		35,000	35,000
(E)	Return on farm assets	(A+C-D)	177,417	168,460
(F)	Average farm assets		1,845,848	2,070,737
(G)	Return on farm equity	(A-D)	141,844	132,886
(H)	Average farm net worth		953,558	1,101,777
(I)	Value of farm production		589,528	589,528

Liquidity Measures

			Begin	End
(J)	Current assets		348,884	459,698
(K)	Current liabilities		273,527	339,120
	Current ratio	(J/K)	1.28	1.36
	Working capital	(J-K)	75,357	120,578
	Change in working capital		45,222	
	Working capital to gross revenues		12.8 %	20.5 %

Solvency Measures (Market)

			Begin	End
(L)	Total assets		2,495,635	2,649,813
(M)	Total liabilities		985,735	953,490
	Net worth	(L-M)	1,509,900	1,696,323
	Net worth change		186,423	
	Current debt to assets	(K/J)	78 %	74 %
	Intermediate debt to assets		43 %	36 %
	Long term debt to assets		37 %	31 %
	Total debt to assets ratio	(M/L)	39 %	36 %

Repayment Capacity

	Net farm income from operations		176,844
	Depreciation	(+)	52,095
	Personal income	(+)	80,634
	Family living expense	(-)	61,641
	Income taxes accrued	(-)	27,679
	Interest on term debt	(+)	36,125
(N)	Capital debt repayment capacity	(=)	256,378
(O)	Scheduled term debt payments		146,624
(P)	Capital debt repayment margin	(N-O)	109,754
(Q)	Cash replacement allowance		2,725
	Replacement margin	(P-Q)	107,029
	Term debt coverage ratio	(N/O)	1.75
	Replacement coverage ratio	(N/O+Q)	1.72

Statement of Owner's Equity

(a)	Beginning net worth		1,509,900
	Net farm income		176,844
	Personal income		80,634
	Family living expense		61,641
	Income taxes accrued		27,679
	Change in personal assets		27,223
	Change in nonfarm accounts payable		-
(b)	Total change in retained earnings		195,381
	Change in market value of capital assets		5,027
	Change in deferred liabilities	-	13,985
(d)	Total change in market valuation	=	-8,958
(e)	Total change in net worth	(b+d)	186,423
	Ending net worth		1,696,323

Statement of Cash Flows

(f)	Beginning cash balance (farm & personal)		47,284
	Gross cash farm income		530,571
	Cash farm expenses	(-)	386,483
(g)	Cash provided by operating activities	(=)	144,088
	Sale of capital assets		-
	Purchase of machinery and equipment	(-)	19,339
	Purchase of personal assets	(-)	10,000
(h)	Cash provided by investing activities	(=)	-29,339
	Money borrowed		216,998
	Principal payments	(-)	260,345
	Personal income	(+)	80,634
	Family living expense	(-)	61,641
	Income taxes paid	(-)	27,679
(i)	Cash provided by financing activities	(=)	-52,033
	Net change in cash	(g+h+i)	62,716
	Ending cash balance (farm and personal)		110,000

Crop Enterprise Analysis

	Corn Irrigated Owned	*Corn Dryland Owned*	*Corn Dryland Cash Rented*	*Corn Dryland Cash Rented*	*Corn Dryland Share Rented*	*Corn Irrigated Share Rented*	*Soybeans Dryland Owned*
Returns							
Acres	80.00	20.00	75.00	25.00	27.00	319.00	12.50
Unit	bu.	bu.	bu.	bu.	bu.	bu.	bu.
Yield per acre	237.00	212.00	256.00	212.00	219.19	237.08	64.96
Share of production (%)	100.00	100.00	100.00	100.00	99.00	99.00	100.00
Value per unit	3.41	3.41	3.41	3.41	3.41	3.41	9.32
Total product value	808.17	722.92	872.96	722.92	739.97	800.37	605.43
Other crop income	-	-	-	-	-	-	-
Gross return per acre	808.17	722.92	872.96	722.92	739.97	800.37	605.43
Direct Expenses							
Seed	79.81	79.81	79.81	79.81	79.81	79.81	29.98
Fertilizer	78.87	78.87	78.87	78.87	78.87	78.87	-
Crop chemicals	31.14	31.14	31.14	31.14	31.14	31.14	34.77
Crop insurance	6.78	6.78	6.78	6.78	6.78	6.78	9.64
Drying expense	23.13	23.13	23.13	23.13	23.13	23.13	-
Custom hire	2.57	-	2.57	-	2.57	2.57	2.57
Land rent	-	-	216.64	216.64	-	-	-
Marketing	1.46	1.46	1.46	1.46	1.46	1.46	0.70
Miscellaneous	2.98	2.98	2.98	2.98	2.98	2.98	2.98
Irrigation energy	17.75	-	-	-	-	17.75	-
Fuel & oil	22.33	22.33	22.33	22.33	22.33	22.33	17.86
Repairs	40.28	40.28	40.28	40.28	40.28	40.28	32.22
Operating interest	4.42	4.42	4.42	4.42	4.42	4.42	3.53
Total direct expenses	311.50	291.18	510.39	507.82	293.75	311.50	134.24
Return over direct expenses	496.67	431.74	362.57	215.10	446.22	488.87	471.18
Overhead Expenses							
Hired labor	12.92	12.92	12.92	12.92	12.92	12.92	10.33
Machinery leases	11.96	11.96	11.96	11.96	11.96	11.96	9.57
Real estate taxes	26.51	26.51	-	-	-	-	26.51
Farm insurance	7.15	7.15	7.15	7.15	7.15	7.15	5.72
Utilities	8.23	8.23	8.23	8.23	8.23	8.23	6.58
Dues & professional fees	3.22	3.22	3.22	3.22	3.22	3.22	2.58
Interest on interm. debt	7.15	7.15	7.15	7.15	7.15	7.15	5.72
Interest on lng term debt	76.08	76.08	-	-	-	-	76.08
Machinery depreciation	29.70	29.70	29.70	29.70	29.70	29.70	23.76
Miscellaneous	7.55	7.55	7.55	7.55	7.55	7.55	6.04
Total overhead expenses	190.46	190.46	87.87	87.87	87.87	87.87	172.89
Total dir & ovhd expenses	501.96	481.64	598.26	595.69	381.62	399.37	307.13
Net return per acre	306.21	241.28	274.70	127.23	358.35	401.00	298.29
Government payments	16.49	16.49	16.49	16.49	16.49	16.49	-
Net return with govt pmts	322.69	257.76	291.18	143.71	374.83	417.48	298.29
Labor & management charge	25.11	25.11	25.11	25.11	25.11	25.11	20.09
Net return over lbr & mgt	297.58	232.65	266.07	118.60	349.72	392.37	278.20
Cost of Production Per Unit							
Total direct expenses	1.31	1.37	1.99	2.40	1.35	1.33	2.07
Total dir & ovhd expenses	2.12	2.27	2.34	2.81	1.76	1.70	4.73
Less govt & other income	2.05	2.19	2.27	2.73	1.68	1.63	4.73
With labor & management	2.15	2.31	2.37	2.85	1.80	1.74	5.04
Net value per unit	3.41	3.41	3.41	3.41	3.41	3.41	9.32
Machinery cost per acre	113.99	111.42	113.99	111.42	113.99	113.99	91.70
Est. labor hours per acre	0.93	0.93	0.93	0.93	0.93	0.93	0.75

CROP ENTERPRISE ANALYSIS (continued)

	Soybeans Dryland Cash Rented	*Soybeans Dryland Share Rented*	*Soybeans Irrigated Share Rented*	*CRP Dryland Owned*	*Corn Combined Cash Rented*
Returns					
Acres	30.00	190.00	130.00	5.00	100.00
Unit	bu.	bu.	bu.	$	bu.
Yield per acre	65.00	61.11	62.12	541.60	245.00
Share of production (%)	100.00	99.00	99.00	100.00	100.00
Value per unit	9.23	9.23	9.23	1.00	3.41
Total product value	599.95	558.42	567.65	541.60	835.45
Other crop income	-	-	-	-	-
Gross return per acre	599.95	558.42	567.65	541.60	835.45
Direct Expenses					
Seed	29.98	29.98	29.98	-	79.81
Fertilizer	-	-	-	-	78.87
Crop chemicals	34.77	34.77	34.77	-	31.14
Crop insurance	9.64	9.64	9.64	-	6.78
Drying expense	-	-	-	-	23.13
Custom hire	2.57	2.57	2.57	-	1.93
Land rent	216.64	-	-	-	216.64
Marketing	0.70	0.70	0.70	-	1.46
Miscellaneous	2.98	2.98	2.98	-	2.98
Irrigation energy	-	-	17.75	-	-
Fuel & oil	17.86	17.86	17.86	1.12	22.33
Repairs	32.22	32.22	32.22	2.01	40.28
Operating interest	3.53	3.53	3.53	0.22	4.42
Total direct expenses	350.88	134.24	151.99	3.35	509.75
Return over direct expenses	249.07	424.17	415.65	538.25	325.70
Overhead Expenses					
Hired labor	10.33	10.33	10.33	0.65	12.92
Machinery leases	9.57	9.57	9.57	0.60	11.96
Real estate taxes	-	-	-	26.51	-
Farm insurance	5.72	5.72	5.72	0.36	7.15
Utilities	6.58	6.58	6.58	0.41	8.23
Dues & professional fees	2.58	2.58	2.58	0.16	3.22
Interest on interm. debt	5.72	5.72	5.72	0.36	7.15
Interest on lng term debt	-	-	-	76.08	-
Machinery depreciation	23.76	23.76	23.76	1.49	29.70
Miscellaneous	6.04	6.04	6.04	0.38	7.55
Total overhead expenses	70.30	70.30	70.30	106.98	87.87
Total dir & ovhd expenses	421.18	204.54	222.29	110.34	597.62
Net return per acre	178.77	353.87	345.36	431.26	237.83
Government payments	-	-	-	-	16.49
Net return with govt pmts	178.77	353.87	345.36	431.26	254.32
Labor & management charge	20.09	20.09	20.09	1.26	25.11
Net return over lbr & mgt	158.68	333.78	325.27	430.01	229.20
Cost of Production Per Unit					
Total direct expenses	5.40	2.22	2.47	0.006	2.08
Total dir & ovhd expenses	6.48	3.38	3.61	0.20	2.44
Less govt & other income	6.48	3.38	3.61	0.20	2.37
With labor & management	6.79	3.71	3.94	0.21	2.47
Net value per unit	9.23	9.23	9.23	1.00	3.41
Machinery cost per acre	91.70	91.70	91.70	5.57	113.35
Est. labor hours per acre	0.75	0.75	0.75	0.05	0.93

Hogs, Weaning to Finish (Contract Grower) -- Average Per Pig Space

	Per PIG SPACES	*Enterprise Total*
PIG SPACES	1.00	4,000
Revenue		
Wean-Fin Pig premium	8.60	34,386
Direct income	29.86	119,428
Total revenue	38.45	153,814
Cost of goods sold	-	-
Gross margin	38.45	153,814
Expenses		
Fuel & oil	0.57	2,287
Repairs	1.25	5,002
Hired labor	2.16	8,639
Real estate taxes	0.69	2,743
Farm insurance	2.05	8,215
Dues & professional fees	0.56	2,248
Interest on lng term debt	4.16	16,621
Machinery depreciation	0.64	2,550
Building depreciation	5.70	22,813
Total expenses	17.78	71,117
Net income	20.67	82,697
Unpaid labor & management charge	3.43	13,720
Net return over labor & management	17.24	68,977
Estimated labor hours	0.57	2,293
Total investment	168.00	672,000
Rate of return on assets	12.7 %	12.7 %

Contributions to Overhead Expenses

Enterprise	Units	Contribution Per Unit	Total Contribution
Corn, Irrigated	399. Acres	506.92	202,260
Corn, Dryland	147. Acres	378.75	55,676
Soybeans, Dryland	232. Acres	404.10	93,954
Soybeans, Irrigated	130. Acres	415.65	54,035
CRP, Dryland	5.0 Acres	538.25	2,691
Total contributions			408,616
Overhead expenses			
Hired labor			10,801
Machinery leases			10,000
Real estate taxes			3,115
Farm insurance			5,975
Utilities			6,883
Dues & professional fees			2,693
Interest on interm. debt			5,981
Interest on lng term debt			8,939
Machinery depreciation			24,838
Miscellaneous			6,311
Total overhead expense			85,536
Total return over overhead expe			323,080

Nonfarm Summary

Personal Income	Amount
Personal wages & salary	80,634
Personal business income	-
Personal rental income	-
Personal interest income	-
Personal cash dividends	-
Tax refunds	-
Other personal income	-
Total personal income	80,634
Family Living Expenses	
Number of family members	5
Food and meals expense	8,786
Medical care	3,641
Health insurance	12,038
Cash donations	2,025
Household supplies	4,396
Clothing	2,379
Personal care	2,850
Gifts	1,897
Education	1,025
Recreation	8,100
Utilities (household share)	2,500
Personal vehicle operating expenses	3,150
Household real estate taxes	1,852
Life insurance payments	3,003
Personal property insurance	2,055
Miscellaneous	1,944
Total cash family living expense	61,641
Family living from the farm	-
Total family living	61,641
Furnishings and appliances	10,000
Personal vehicles	-
Personal business investment	-
Other intermediate assets	-
Personal real estate	-
Other long term assets	-
Personal savings and investments	38,900
Income and social security tax	27,679
Total personal expenditures	138,220

Planned vs Actual

Income Statement

Cash Farm Income	Unit	Planned Quantity	Planned Value	Actual Quanitity	Actual Value
Corn	bu.	58,000	209,260	58,883	211,598
Soybeans	bu.	9,300	89,090	15,190	141,086
Crop government payments			12,000		9,001
CRP payments			2,400		2,708
Custom work income			2,000		-
Patronage dividends, cash			-		11,815
Other farm income			4,000		550
Contract livestock income			153,000		153,813
Gross cash farm income			471,750		530,571
Seed			54,410		51,231
Fertilizer			52,510		63,148
Crop chemicals			22,475		31,003
Crop insurance			8,580		7,194
Drying expense			7,400		12,628
Irrigation energy			-		9,388
Custom hire			2,253		2,220
Marketing			-		1,052
Purchased feed			-		43
Interest			42,221		38,456
Fuel & oil			20,000		32,397
Repairs			30,000		38,788
Hired labor			15,000		19,616
Land rent			24,000		28,163
Machinery leases			7,840		10,000
Real estate taxes			6,400		5,914
Farm insurance			15,500		14,358
Utilities			6,000		6,883
Dues & professional fees			7,000		4,987
Miscellaneous			1,500		9,014
Total cash farm expense			323,088		386,483
Net cash farm income			148,662		144,088
Inventory change			8,244		84,851
Depreciation			-50,907		-52,095
Net farm income			105,999		176,844

Cash Flows

Cash Inflows	Planned	Actual
Beginning cash balance	13,184	13,184
Gross cash farm income	471,750	530,571
Personal income	50,000	80,634
Capital sales	-	-
Money borrowed	178,508	216,998
Beg personal savings	34,100	34,100
Total inflows	747,542	875,487
Cash Outflows		
Cash farm expense	323,088	386,483
Family living	65,000	61,641
Income taxes	9,000	27,679
Capital purchases	3,500	29,339
Principal payments	311,854	260,345
Ending personal savings	34,100	73,000
Ending cash balance	1,000	37,000
Total outflows	747,542	875,487

Ending Inventories

Corn	75,230	86,000
Soybeans	3,325	-

Crop Production

Crop	Unit	Planned Acres	Planned Yield	Planned Production	Actual Acres	Actual Yield	Actual Production
Corn, Dryland	bu.	130.0	191.0	24,830	147.0*	235.8	34,599
Corn, Irrigated	bu.	240.0	210.0	50,400	399.0*	237.1	93,833
Soybeans, Dryland	bu.	200.0	51.6	10,325	232.5*	61.8	14,257
Soybeans, Irrigated	bu.	-	-	-	130.0*	62.1	7,995
CRP, Dryland	$	-	-	-	5.0	541.6	2,708

* Includes share rented acres

Comparative Trend

	2008	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***
Profitability										
Gross farm income (accrual)	286,322	274,322	362,501	414,748	470,135	407,516	516,689	507,972	456,110	589,571
Total farm expense (accrual)	181,027	210,884	207,587	251,313	302,080	248,270	291,335	335,383	330,962	412,728
Net farm income from oper.	105,295	63,438	154,913	163,435	168,055	159,246	225,355	172,588	125,148	176,844
Rate of return on assets	11.2 %	9.6 %	13.9 %	15.0 %	12.9 %	11.4 %	13.4 %	9.6 %	7.7 %	9.6 %
Rate of return on equity	28.7 %	19.0 %	35.6 %	34.1 %	28.3 %	21.9 %	25.5 %	16.6 %	11.5 %	14.9 %
Operating profit margin	46.3 %	40.6 %	45.3 %	47.8 %	41.8 %	43.9 %	43.2 %	33.8 %	30.6 %	30.1 %
Asset turnover rate	24.1 %	23.6 %	30.7 %	31.3 %	31.0 %	25.9 %	31.0 %	28.4 %	25.4 %	31.9 %
Liquidity										
Current ratio	2.29	1.22	2.17	1.98	1.77	1.85	1.41	1.33	1.28	1.36
Working capital	47,975	15,223	95,816	125,651	121,840	90,861	90,731	80,057	75,357	120,578
Working cap. to gross rev.	16.8 %	5.5 %	26.4 %	30.3 %	25.9 %	22.3 %	17.6 %	15.8 %	16.5 %	20.5 %
Solvency (market)										
Total assets	1,349,615	1,545,991	1,635,680	2,021,483	2,225,911	2,169,915	2,463,255	2,457,516	2,495,635	2,649,813
Total liabilities	965,244	1,101,216	1,066,775	1,206,432	1,254,665	1,043,484	1,195,930	1,024,300	985,735	953,490
Net worth	384,371	444,775	568,904	815,051	971,245	1,126,431	1,267,325	1,433,216	1,509,900	1,696,323
Debt to asset ratio	78 %	76 %	69 %	63 %	61 %	54 %	55 %	50 %	48 %	45 %
Net worth change %	12 %	16 %	28 %	43 %	19 %	16 %	13 %	13 %	5 %	12 %
Repayment Capacity										
Term debt coverage ratio	2.52	1.42	2.32	2.23	2.25	1.64	2.10	1.87	1.22	1.75
Replacement coverage ratio	2.37	1.37	2.19	2.13	2.06	1.63	1.91	1.76	1.16	1.72
Efficiency										
Operating expense ratio	23.9 %	35.3 %	28.9 %	40.8 %	43.8 %	47.0 %	38.4 %	46.2 %	51.9 %	55.1 %
Interest expense ratio	21.7 %	23.0 %	15.0 %	13.7 %	10.7 %	11.0 %	8.5 %	7.7 %	8.6 %	6.0 %
Other Cash Flows										
Personal income	46,244	-	22,765	36,351	42,598	58,767	-	51,000	63,330	80,634
Owner draws/Adj. family living	35,647	36,599	45,732	43,878	42,223	45,385	46,478	46,914	73,718	61,641
Crop and Livestock Summary										
Total crop acres	200	210	338	274	292	304	392	391	391	914
Crop acres owned	80	78	80	80	98	113	113	113	113	118
Crop acres cash rented	120	132	130	194	130	128	131	131	130	130
Crop acres share rented	-	-	128	-	64	64	148	148	148	666
Corn Dryland										
Acres	115	85	203	210	187	172	105	118	43	147
Yield (bu.) / acre	191.5	164.7	144.3	177.1	169.5	150.6	168.2	207.0	206.0	235.8
Price / bu.	4.23	4.64	5.01	4.53	5.99	5.89	4.43	3.82	3.84	3.59
Corn Irrigated										
Acres	-	-	-	-	80	-	145	84	228	399
Yield (bu.) / acre	-	-	-	-	200.0	-	183.5	243.6	216.0	237.1
Price / bu.	-	-	-	-	5.99	-	4.43	3.82	3.84	3.59
CRP Dryland										
Acres	-	-	-	-	-	-	-	-	-	5
Yield ($) / acre	-	-	-	-	-	-	-	-		541.6

Monthly Cash Flow Plan Executive Summary

Projected Cash Flow Summary

Total operating inflow		606,053
Total operating outflow	(-)	369,011
Capital purchases	(-)	4,000
Capital sales	(+)	-
New credit	(+)	-
Loan payments	(-)	353,689
Net cash flow	**(=)**	**-120,647**
Beginning cash balance	(+)	37,000
Operating loan borrowings	(+)	95,040
Operating loan principal payments	(-)	10,393
Ending cash balance	(=)	1,000
Beginning operating loan balance		-
Peak operating loan balance (Dec)		84,647
Ending operating loan balance		84,647

Projected Change in Working Capital

Change in cash		-36,000
Change in current inventories	(+)	-58,627
Change in operating loan balance	(-)	84,647
Change in other current loans	(-)	-205,790
Change in princ due on term loans	(-)	7,267
Estimated change in working capital	(=)	19,249

Projected Income Statement

Gross cash farm income		521,053
Inventory change - income items	(+)	-26,440
Gross revenue	(=)	494,614
Cash farm operating expense		274,511
Interest expense	(+)	32,263
Depreciation	(+)	49,315
Inventory change - expense items	(+)	32,187
Total farm expense	(=)	388,276
Net farm income		106,337

Projected Earned Net Worth Change

Net farm income		106,337
Personal income	(+)	85,000
Family living expense	(-)	65,000
Income taxes accrued	(-)	29,500
Personal asset depreciation	(-)	1,400
Earned net worth change	(=)	95,437

Term Debt Coverage

Net farm income from operations		106,337
Depreciation	(+)	49,315
Personal income	(+)	85,000
Family living expense	(-)	65,000
Income taxes accrued	(-)	29,500
Interest on term debt	(+)	28,043
Capital debt repayment capacity	(=)	174,195
Term debt payments		146,389
Capital debt repayment margin		27,806
Term debt coverage ratio		1.19

Financial Standards Measures

Liquidity	**Beginning**	**Ending**
Current ratio	1.4	1.6
Working capital	120,578	139,828
Working capital to gross revenue	24.4 %	28.3 %
Solvency (market)		
Debt to asset ratio	45.2 %	36.3 %
Debt to equity ratio	0.8	0.6
Profitability (market)		
Net farm income		106,337
Rate of return on assets		5.0 %
Rate of return on equity		5.9 %
Operating profit margin		20.4 %
EBITDA		185,215
Repayment Capacity		
Term debt coverage ratio (farm)		1.19
Replacement margin coverage ratio		1.19
Efficiency		
Asset turnover rate (market)		24.3
Operating expense ratio		62.6 %
Depreciation ratio		10.0 %
Interest expense ratio		6.0 %
Net farm income ratio		21.5 %
Other		
Term debt coverage (farm+personal)		1.19
Term debt to EBITDA		2.86

Shocks to Farm Term Debt Coverage Ratio

10% decrease in gross income	0.85
10% increase in operating expenses	0.98
3% increase in interest rates	1.04

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CASH INFLOWS													
Beg cash bal	37000	62164	37854	16266	4401	1000	70146	59829	97159	97545	139200	38606	37000
Corn	56700	-	-	-	-	125020	34500	77510	-	-	-	-	293730
Soybeans	-	-	-	-	-	-	-	-	-	61750	-	-	61750
Crop gov pay	-	-	-	-	-	-	-	-	-	6000	-	-	6000
CRP payments	-	-	-	-	-	-	-	-	-	2708	-	-	2708
Custom work	400	400	400	-	-	-	-	-	-	-	400	400	2000
Cntrct lvstk	12905	12905	12905	12905	12905	12905	12905	12905	12905	12905	12905	12905	154865
Pers. wages	7083	7083	7083	7083	7083	7083	7083	7083	7083	7083	7083	7083	85000
Total inflow	114089	82553	58243	36255	24390	146009	124635	157328	117148	187991	159589	58995	643053
CASH OUTFLOWS													
Seed	-	-	-	-	-	-	-	-	-	-	-	52238	52238
Fertilizer	19710	-	-	-	-	1877	-	-	-	-	-	16894	38481
Chemicals	-	-	-	-	-	-	1137	-	-	-	227	21596	22960
Crop insur.	-	-	-	-	-	-	-	-	-	8706	-	-	8706
Drying fuel	-	-	-	-	-	-	-	-	-	6060	-	-	6060
C. Cust hire	-	-	-	-	-	-	-	-	-	2304	2576	-	4879
Fuel & oil	-	1250	-	-	3750	2500	1250	1250	1250	3750	3750	1250	20000
Repairs	1087	1087	1087	2174	3261	3261	1087	1087	2174	4348	3261	1087	25000
Labor	1423	1423	1423	1423	1565	1565	1565	1565	1423	1565	2135	1423	18500
Land rent	3198	-	5359	-	-	-	-	-	-	-	5359	10372	24287
Mach leases	-	7500	-	10000	-	-	-	-	-	-	-	-	17500
RE taxes	-	-	-	-	3200	-	-	-	-	-	3200	-	6400
Farm insur.	-	-	-	-	7750	-	-	-	-	7750	-	-	15500
Utilities	333	333	333	333	333	833	833	833	833	333	333	333	6000
Dues & fees	-	-	-	-	-	-	3500	-	-	-	3500	-	7000
Misc.	83	83	83	83	83	83	83	83	83	83	83	83	1000
Living/Draw	5417	5417	5417	5417	5417	5417	5417	5417	5417	5417	5417	5417	65000
Income taxes	1695	1695	10851	1695	1695	1695	1695	1695	1695	1695	1695	1695	29500
Min end bal	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Tot. outflow	33946	19789	25553	22126	28055	18232	17568	12931	13876	43011	32536	113389	370011
Opr. surplus	80142	62764	32690	14129	-3665	127777	107067	144397	103273	144980	127053	-54394	273042

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
CAPITAL PURCHASES													
NEWSHED	-	-	-	4000	-	-	-	-	-	-	-	-	4000
Tot. cap pur	-	-	-	4000	-	-	-	-	-	-	-	-	4000
LOAN PAYMENTS													
CCC-CORN	-	-	-	-	-	41510	41510	41510	-	-	-	-	124529
JDCC-INPUTS	-	-	-	-	-	-	-	-	-	-	82719	-	82719
JDCC-2700..	-	-	-	-	-	-	-	-	-	-	-	2240	2240
JDCC-9430..	-	19182	-	-	-	-	-	-	-	-	-	-	19182
FCS-IRRIGA..	12250	-	-	-	-	-	-	-	-	-	-	-	12250
JDCC-O5TR..	-	-	-	-	-	-	-	-	-	-	-	9060	9060
USBa-PICKUP	362	362	362	362	362	362	362	362	362	362	362	362	4344
BLDG PYMT	6366	6366	6366	6366	6366	6366	6366	6366	6366	6366	6366	6366	76392
FCS-LAKEF..	-	-	10696	-	-	-	-	-	-	-	-	-	10696
FCS-MARSH..	-	-	-	-	-	-	-	-	-	-	-	12225	12225
Tot loan pay	18978	25910	17424	6728	6728	48238	48238	48238	6728	6728	89447	30253	353637
Surp. or def	**61164**	**36854**	**15266**	**3401**	**-10393**	**79539**	**58829**	**96159**	**96545**	**138252**	**37606**	**-84647**	**-84595**
ANNUAL OPERATING LOAN TRANSACTIONS & BALANCES													
Beg AO bal	-	-	-	-	-	10393	-	-	-	-	-	-	-
AO borrowing	-	-	-	-	10393	-	-	-	-	-	-	84647	95040
AO int. pay	-	-	-	-	-	-	-	-	-	52	-	-	52
AO prin. pay	-	-	-	-	-	10393	-	-	-	-	-	-	10393
End AO bal.	**-**	**-**	**-**	**-**	**10393**	**-**	**-**	**-**	**-**	**-**	**-**	**84647**	**84647**
Accrued int.	-	-	-	-	-	52	52	52	52	-	-	-	-
End cash bal	62164	37854	16266	4401	1000	70146	59829	97159	97545	139200	38606	1000	1000

2018 Cedar Creek Farms Crop Budgets

	Corn, *DRYLAND*		**Soybeans**		**Corn, *IRRIGATED***
	Long Range	Year 2018	Long Range	Year 2018	Long Range
Yield (bu.)	190	191	55	50	210
Price	3.75	4.00	9.85	8.00	3.75
Product income	**712.50**	**764.00**	**541.75**	**400.00**	**788.00**
Miscellaneous income	-	-	-	-	-
Gross income	**712.50**	**764.00**	**541.75**	**400.00**	**693.00**
Seed	120.00	125.00	35.00	53.00	125.00
Fertilizer	175.00	127.00	-	-	175.00
Crop chemicals	30.00	40.00	35.00	40.00	40.00
Crop insurance	15.00	18.00	12.00	12.00	20.00
Drying expense	20.00	20.00	-	-	20.00
Irrigation energy	-	-	-	-	25.00
Custom hire	9.00	8.50	9.00	8.50	10.00
Hired labor	-	-	-	-	-
Total direct expenses	**369.00**	**338.50**	**91.00**	**113.50**	**415.00**
Return over direct expenses	**343.50**	**425.50**	**450.75**	**286.50**	**278.00**
Labor hours	5	5	4	4	5

Soybeans 2017; Owned Land

Cedar Creek Farms data is highlighted below

Benchmark Report: All data split into 10% increments, rows individually ranked

	My Farm	Group Median	Count	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Yield per acre (bu.)	64.96	53.55	1180	28.72	36.95	43.11	48.91	52.18	54.70	56.87	59.49	62.00	66.58
Value per unit	9.32	9.00	1180	8.80	8.91	9.00	9.00	9.00	9.07	9.17	9.26	9.44	9.63
Total product value	605.43	486.12	1180	259.91	333.56	394.56	444.18	475.22	498.24	519.67	545.42	569.25	613.25
Hedging gains/losses	0.00	24.63	41	-99.92	-13.92	-7.46	3.53	13.39	28.57	31.03	33.64	38.30	47.29
Crop insurance	0.00	24.67	254	1.39	6.51	10.53	14.36	19.53	30.10	48.20	70.85	96.80	179.60
Other crop income	0.00	13.96	240	0.92	3.00	5.38	8.88	12.33	16.80	19.12	27.29	32.63	48.55
Gross return	605.43	497.95	1180	276.63	351.46	409.25	459.93	486.32	508.16	530.34	554.14	582.35	631.11
Seed and plants	29.98	58.00	1180	80.07	69.82	65.66	62.00	59.58	56.48	53.58	51.02	47.00	39.53
Fertilizer	0.00	30.39	781	67.08	51.58	44.20	37.77	32.96	27.97	23.83	19.32	14.46	8.23
Crop chemicals	34.77	42.99	1180	75.68	61.05	54.20	49.99	44.69	40.48	36.06	31.46	25.10	16.02
Crop insurance	9.64	17.55	1158	39.71	30.04	25.29	21.68	18.75	16.05	13.96	12.21	9.19	6.37
Fuel & oil	17.86	14.36	1171	26.26	20.76	18.14	16.29	14.89	13.65	12.50	10.89	9.28	5.71
Repairs	32.22	26.71	1172	57.60	44.51	37.97	32.37	28.79	24.59	21.24	17.71	13.57	7.54
Custom hire	2.57	13.31	560	63.91	40.23	26.55	19.61	14.62	11.51	8.01	6.06	3.76	1.64
Operating interest	3.53	6.11	999	24.13	15.10	11.35	8.87	7.22	5.43	3.87	2.21	1.13	0.22
Total direct expenses	134.24	208.16	1180	296.79	269.55	245.82	228.23	213.55	202.80	189.52	176.61	164.46	138.84
Return over direct expenses	471.18	274.79	1180	84.82	149.41	200.13	235.77	261.03	288.00	308.63	334.59	369.69	436.11
Hired labor	10.33	6.74	723	36.23	22.72	15.82	11.12	7.98	5.30	3.24	1.93	0.58	0.00
Real estate taxes	26.51	28.80	1179	59.98	46.33	40.10	34.73	30.77	27.08	22.83	18.36	13.54	6.80
Farm insurance	5.72	7.71	1158	20.96	14.11	11.19	9.55	8.17	7.15	5.91	4.73	3.53	1.82
Utilities	6.58	4.09	1055	12.57	8.10	6.66	5.60	4.48	3.70	2.96	2.30	1.38	0.00
Dues & professional fees	2.58	2.61	880	11.10	6.12	4.46	3.61	2.87	2.29	1.85	1.54	1.03	0.56
Interest on interm. debt	5.72	2.96	901	15.13	8.79	6.21	4.54	3.53	2.54	1.86	1.39	0.74	0.26
Interest on lng term debt	76.08	52.98	987	189.02	130.41	105.42	82.15	61.26	46.34	35.58	23.42	12.95	3.28
Machinery depreciation	23.76	30.16	1171	67.44	51.51	43.04	36.60	32.55	27.33	22.34	18.61	13.35	6.29
Building depreciation	0.00	5.38	919	21.12	13.50	9.89	8.06	5.99	4.83	3.86	2.84	1.65	0.55
Miscellaneous	6.04	3.03	1102	16.48	9.13	6.18	4.62	3.42	2.64	1.95	1.44	0.88	0.24
Total overhead expenses	172.89	145.21	1180	306.88	238.90	202.62	177.70	156.32	138.94	123.11	106.33	91.55	66.11
Total dir & ovhd expenses	307.13	370.96	1180	552.04	469.67	434.38	407.22	381.05	354.25	330.24	302.35	274.83	239.63
Net return	298.29	105.90	1180	-74.87	-5.07	29.37	60.65	91.58	118.16	148.01	179.29	221.28	273.74
Government payments	0.00	11.02	1180	0.00	0.00	0.00	1.90	7.71	13.50	17.94	22.50	29.90	41.79
Net return with govt pymts	298.29	118.68	1180	-68.17	6.12	43.99	75.54	105.00	133.03	163.43	194.14	235.54	289.38
Labor & management charge	20.09	31.66	1180	69.69	51.73	43.56	38.28	33.89	30.06	26.70	23.40	19.27	12.67
Net return over lbr & mgt	278.20	83.34	1180	-100.36	-29.63	9.25	41.01	70.71	98.79	127.92	158.71	201.57	259.40
Direct cost of prod per unit	2.07	4.15	1180	6.99	5.57	5.00	4.63	4.31	4.02	3.76	3.51	3.18	2.66
Dir & ovhd cost of prod/unit	4.73	7.24	1180	12.30	9.70	8.69	8.05	7.48	7.08	6.69	6.17	5.59	4.69
COP less govt & other income	4.73	6.76	1180	10.82	9.02	8.10	7.45	6.99	6.55	6.09	5.64	5.04	4.19
Cost of prod with lbr & mgt	5.04	7.45	1180	11.81	9.79	8.91	8.20	7.68	7.24	6.80	6.29	5.64	4.72
Machinery cost per acre	91.70	89.13	1180	162.10	128.59	109.66	99.38	92.82	85.88	77.33	67.76	57.75	44.03
Est. labor hours per acre	0.75	1.74	1180	3.72	2.72	2.30	1.98	1.83	1.66	1.48	1.30	1.16	0.89

Financial Summary
Area Average
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	1420	284	284	284
Income Statement				
Gross cash farm income	774,349	1,008,938	397,884	1,468,242
Total cash farm expense	680,554	967,434	348,851	1,214,310
Net cash farm income	93,795	41,504	49,034	253,932
Inventory change	9,243	-67,542	2,997	97,756
Depreciation	-51,355	-72,239	-29,011	-86,808
Net farm income from operations	51,683	-98,277	23,019	264,880
Gain or loss on capital sales	2,558	1,908	262	9,483
Average net farm income	54,241	-96,369	23,282	274,363
Median net farm income	25,337	-61,158	20,854	199,320
Profitability (cost)				
Rate of return on assets	1.9 %	-3.8 %	1.3 %	6.3 %
Rate of return on equity	0.0 %	-14.3 %	-1.5 %	8.0 %
Operating profit margin	5.8 %	-11.7 %	4.6 %	18.3 %
Asset turnover rate	32.2 %	32.5 %	28.1 %	34.6 %
Liquidity & Repayment (end of year) Current assets	561,180	675,872	308,207	1,062,428
Current liabilities	358,121	605,458	196,361	502,902
Current ratio	1.57	1.12	1.57	2.11
Working capital	203,059	70,414	111,847	559,526
Change in working capital	-10,191	-94,378	-4,822	73,895
Working capital to gross inc	25.6 %	7.3 %	27.5 %	35.7 %
Term debt coverage ratio	1.02	-0.13	0.91	2.03
Replacement coverage ratio	0.75	-0.10	0.68	1.51
Term debt to EBITDA	4.12	24.12	5.18	2.20
Solvency (end of year at market) Number of farms	1,420	284	284	284
Total assets	3,103,692	3,698,697	2,056,253	5,097,966
Total liabilities	1,323,581	1,859,187	869,789	2,010,074
Net worth	1,780,111	1,839,510	1,186,464	3,087,892
Total net worth change	64,497	-12,902	32,751	205,130
Farm debt to asset ratio	45 %	53 %	45 %	41 %
Total debt to asset ratio	43 %	50 %	42 %	39 %
Change in total net worth %	4 %	-1 %	3 %	7 %
Nonfarm Information Net nonfarm income	35,787	42,341	36,903	25,058
Farms reporting living expenses	352	56	71	78
Total family living expense	59,601	62,538	55,884	71,819
Total living, invest, cap. purch	87,463	72,555	73,699	136,134
Crop Acres				
Total crop acres	699	985	423	1,072
Total crop acres owned	187	212	140	310
Total crop acres cash rented	497	760	269	744
Total crop acres share rented	14	13	14	18
Machinery value per crop acre	851	884	817	866

Balance Sheet at Cost Values
Area Average
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	1420	284	284	284
Assets				
Current Farm Assets				
Cash and checking balance	26,581	23,071	19,804	44,927
Prepaid expenses & supplies	72,953	72,468	42,989	149,001
Growing crops	645	630	39	497
Accounts receivable	33,149	34,295	16,848	75,955
Hedging accounts	4,712	4,770	1,238	11,137
Crops held for sale or feed	353,922	483,337	193,192	613,231
Crops under government loan	-	-	-	-
Market livestock held for sale	62,294	51,681	31,489	152,603
Other current assets	6,924	5,621	2,608	15,077
Total current farm assets	561,180	675,872	308,207	1,062,428
Intermediate Farm Assets				
Breeding livestock	86,443	143,824	36,095	142,557
Machinery and equipment	402,222	592,567	237,207	642,843
Titled vehicles	33,234	41,218	23,468	48,467
Other intermediate assets	31,680	40,148	15,123	60,516
Total intermediate farm assets	553,579	817,757	311,892	894,383
Long Term Farm Assets				
Farm land	630,380	633,579	434,520	1,157,829
Buildings and improvements	289,556	320,829	173,776	530,983
Other long-term assets	42,711	45,753	27,595	84,028
Total long-term farm assets	962,647	1,000,161	635,891	1,772,840
Total Farm Assets	2,077,406	2,493,790	1,255,991	3,729,650
Total Nonfarm Assets	230,923	213,546	203,958	271,031
Total Assets	2,308,329	2,707,337	1,459,949	4,000,681
Liabilities				
Current Farm Liabilities				
Accrued interest	9,113	15,178	5,723	11,668
Accounts payable	18,786	37,280	8,094	24,321
Current notes	268,330	472,217	143,958	363,480
Government crop loans	-	-	-	-
Principal due on term debt	61,892	80,783	38,585	103,433
Total current farm liabilities	358,121	605,458	196,361	502,902
Total intermediate farm liabs	139,564	260,738	78,661	191,136
Total long term farm liabilities	486,212	598,509	357,499	758,940
Total farm liabilities	983,897	1,464,705	632,520	1,452,977
Total nonfarm liabilities	43,283	38,644	44,312	47,931
Total liabilities	1,027,180	1,503,349	676,832	1,500,908
Net worth (farm and nonfarm)	1,281,149	1,203,987	783,118	2,499,773
Net worth change	31,232	-96,535	14,929	188,156
Percent net worth change	2 %	-7 %	2 %	8 %
Ratio Analysis				
Current farm liabilities / assets	64 %	90 %	64 %	47 %
Intermediate farm liab. / assets	25 %	32 %	25 %	21 %
Long term farm liab. / assets	51 %	60 %	56 %	43 %
Total debt to asset ratio	44 %	56 %	46 %	38 %

Balance Sheet at Market Values
Area Average
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	1420	284	284	284
Assets				
Current Farm Assets				
Cash and checking balance	26,581	23,071	19,804	44,927
Prepaid expenses & supplies	72,953	72,468	42,989	149,001
Growing crops	645	630	39	497
Accounts receivable	33,149	34,295	16,848	75,955
Hedging accounts	4,712	4,770	1,238	11,137
Crops held for sale or feed	353,922	483,337	193,192	613,231
Crops under government loan	-	-	-	-
Market livestock held for sale	62,294	51,681	31,489	152,603
Other current assets	6,924	5,621	2,608	15,077
Total current farm assets	561,180	675,872	308,207	1,062,428
Intermediate Farm Assets				
Breeding livestock	94,249	155,834	41,404	154,912
Machinery and equipment	587,202	855,263	338,229	938,179
Titled vehicles	47,975	64,594	31,354	68,543
Other intermediate assets	41,151	58,772	21,034	72,018
Total intermediate farm assets	770,577	1,134,463	432,021	1,233,652
Long Term Farm Assets				
Farm land	1,034,669	1,134,742	784,001	1,655,034
Buildings and improvements	382,029	414,730	229,529	697,019
Other long-term assets	51,855	52,757	42,261	95,301
Total long-term farm assets	1,468,552	1,602,229	1,055,790	2,447,354
Total Farm Assets	2,800,309	3,412,565	1,796,018	4,743,435
Total Nonfarm Assets	303,383	286,132	260,234	354,532
Total Assets	3,103,692	3,698,697	2,056,253	5,097,966
Liabilities				
Current Farm Liabilities				
Accrued interest	9,113	15,178	5,723	11,668
Accounts payable	18,786	37,280	8,094	24,321
Current notes	268,330	472,217	143,958	363,480
Government crop loans	-	-	-	-
Principal due on term debt	61,892	80,783	38,585	103,433
Total current farm liabilities	358,121	605,458	196,361	502,902
Total intermediate farm liabs	139,564	260,738	78,661	191,136
Total long term farm liabilities	486,212	598,509	357,499	758,940
Total farm liabilities	983,897	1,464,705	632,520	1,452,977
Total nonfarm liabilities	43,283	38,644	44,312	47,931
Total liabs excluding deferreds	1,027,180	1,503,349	676,832	1,500,908
Total deferred liabilities	296,401	355,838	192,957	509,167
Total liabilities	1,323,581	1,859,187	869,789	2,010,074
Retained earnings	1,281,149	1,203,987	783,118	2,499,773
Market valuation equity	498,962	635,523	403,346	588,119
Net worth (farm and nonfarm)	1,780,111	1,839,510	1,186,464	3,087,892
Net worth excluding deferreds	2,076,512	2,195,347	1,379,421	3,597,059
Net worth change	64,497	-12,902	32,751	205,130
Percent net worth change	4 %	-1 %	3 %	7 %
Ratio Analysis				
Current farm liabilities / assets	64 %	90 %	64 %	47 %
Intermediate farm liab. / assets	18 %	23 %	18 %	15 %
Long term farm liab. / assets	33 %	37 %	34 %	31 %
Total debt to asset ratio	43 %	50 %	42 %	39 %
Debt to assets excl deferreds	33 %	41 %	33 %	29 %

Household and Personal Expenses
Area Average
(Farms Sorted By Net Farm Income)

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	352	56	71	78
Average family size	2.9	2.7	2.7	3.1
Family Living Expenses				
Food and meals expense	8,100	8,841	8,248	8,367
Medical care	4,387	4,491	4,396	4,674
Health insurance	5,465	5,672	4,396	8,768
Cash donations	2,748	2,297	1,649	4,590
Household supplies	5,757	5,780	4,422	6,864
Clothing	1,829	1,506	1,961	2,113
Personal care	4,125	2,806	3,427	7,197
Child / Dependent care	758	890	333	732
Alimony and child support	22	-	-	101
Gifts	2,043	2,481	2,567	2,512
Education	1,770	715	940	3,361
Recreation	4,060	4,598	3,567	4,899
Utilities (household share)	2,838	2,987	3,228	2,896
Personal vehicle operating exp	3,306	2,933	4,080	3,368
Household real estate taxes	579	590	635	730
Dwelling rent	119	-	73	144
Household repairs	1,683	2,013	829	2,202
Personal interest	1,482	1,302	1,389	2,309
Disability / Long term care ins	421	570	421	275
Life insurance payments	3,821	4,262	3,772	5,215
Personal property insurance	410	380	447	578
Miscellaneous	4,670	6,084	4,950	5,319
Total cash family living expense	60,393	61,198	55,730	77,214
Family living from the farm	436	1,339	209	93
Total family living	60,829	62,537	55,939	77,307
Other Nonfarm Expenditures				
Income taxes	16,556	8,028	13,187	33,399
Furnishing & appliance purchases	386	468	277	879
Nonfarm vehicle purchases	4,284	2,997	3,703	5,289
Nonfarm real estate purchases	2,497	-208	147	3,911
Other nonfarm capital purchases	2,712	-17	-3,451	21,075
Nonfarm savings & investments	1,863	88	4,159	-145
Total other nonfarm expenditures	28,298	11,356	18,022	65,308
Total cash family living investment & nonfarm capital purch	88,691	72,554	73,752	142,522

Crop Enterprise Analysis
Area Average
(Farms Sorted By Return to Overhead)

Corn on Owned Land

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	675	135	135	135
Acres	168.04	136.21	170.71	182.11
Yield per acre (bu.)	215.93	196.10	219.63	226.81
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.19	3.12	3.21	3.28
Other product return per acre	0.70	1.16	0.33	1.11
Total product return per acre	690.53	612.77	704.58	744.82
Hedging gains/losses per acre	1.09	-	0.62	6.04
Crop insurance per acre	8.69	4.29	4.76	22.95
Other crop income per acre	3.62	0.97	3.49	5.22
Gross return per acre	703.93	618.03	713.45	779.03
Direct Expenses				
Seed	120.13	120.11	120.60	115.09
Fertilizer	120.42	134.86	129.83	105.18
Crop chemicals	40.55	45.36	42.17	33.22
Crop insurance	19.64	21.76	20.84	18.86
Drying expense	23.91	27.88	24.00	20.30
Storage	2.23	5.05	2.35	0.74
Fuel & oil	23.49	27.22	24.55	20.77
Repairs	42.70	55.06	45.33	36.50
Repair, machinery	2.48	1.29	1.64	2.75
Custom hire	13.01	25.84	13.39	6.25
Repair, buildings	0.37	0.18	0.15	0.52
Hired labor	3.14	4.52	3.55	2.81
Machinery leases	2.05	1.27	2.93	2.00
Utilities	1.65	2.25	1.73	1.79
Hauling and trucking	2.39	4.35	2.03	1.07
Marketing	1.93	2.56	2.24	1.63
Operating interest	12.53	17.75	13.27	7.87
Miscellaneous	2.08	2.87	2.06	2.34
Total direct expenses per acre	434.68	500.19	452.64	379.69
Return over direct exp per acre	269.25	117.84	260.80	399.34
Overhead Expenses				
Hired labor	11.81	7.34	11.11	12.43
Machinery leases	2.03	1.04	2.31	1.23
Building leases	1.00	0.72	1.04	1.44
RE & pers. property taxes	39.01	34.81	39.37	41.20
Farm insurance	12.98	15.26	13.21	11.74
Utilities	6.24	6.99	6.43	5.39
Dues & professional fees	3.89	3.52	3.92	3.34
Interest	78.30	70.35	77.15	91.49
Mach & bldg depreciation	61.17	54.75	64.06	57.68
Miscellaneous	7.55	8.79	8.36	7.06
Total overhead expenses per acre	223.99	203.57	226.95	232.99
Total dir & ovhd expenses per acre	658.67	703.76	679.59	612.69
Net return per acre	45.26	-85.73	33.86	166.35
Government payments	20.86	19.80	20.04	22.28
Net return with govt pmts	66.13	-65.93	53.90	188.63
Labor & management charge	53.88	60.09	51.26	51.13
Net return over lbr & mgt	12.25	-126.02	2.64	137.50
Cost of Production				
Total direct expense per bu.	2.01	2.55	2.06	1.67
Total dir & ovhd exp per bu.	3.05	3.59	3.09	2.70
Less govt & other income	2.89	3.46	2.96	2.45
With labor & management	3.14	3.76	3.19	2.67
Net value per unit	3.20	3.12	3.21	3.31
Machinery cost per acre	141.54	164.49	147.52	121.70
Est. labor hours per acre	2.78	3.19	2.71	2.66

Crop Enterprise Analysis
Area Average
(Farms Sorted By Return to Overhead)

Corn on Cash Rent

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	904	180	181	181
Acres	328.74	243.59	400.58	345.77
Yield per acre (bu.)	215.33	199.59	215.49	225.77
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	3.24	3.15	3.23	3.29
Other product return per acre	0.52	0.18	0.03	0.99
Total product return per acre	698.09	628.71	695.81	743.87
Hedging gains/losses per acre	2.57	-0.05	0.25	10.45
Crop insurance per acre	7.33	5.81	3.82	13.39
Other crop income per acre	3.55	1.22	3.23	4.87
Gross return per acre	711.55	635.69	703.10	772.59
Direct Expenses				
Seed	116.82	122.34	116.74	109.12
Fertilizer	117.88	131.76	119.63	101.26
Crop chemicals	38.15	43.68	38.50	32.61
Crop insurance	20.15	22.90	19.08	20.07
Drying expense	21.81	24.24	21.28	18.83
Storage	2.58	2.40	2.20	2.64
Fuel & oil	24.12	27.99	23.61	22.62
Repairs	39.76	50.09	38.07	37.57
Repair, machinery	2.47	1.92	3.23	1.28
Custom hire	11.15	14.95	11.69	7.12
Hired labor	4.64	5.80	3.99	4.62
Land rent	218.49	230.49	218.43	205.18
Machinery leases	4.91	6.73	4.57	1.37
Utilities	1.82	1.62	1.07	1.44
Hauling and trucking	2.29	3.63	2.88	0.76
Marketing	2.32	2.46	2.48	1.98
Operating interest	14.07	18.29	14.27	11.54
Miscellaneous	2.90	3.96	2.67	2.36
Total direct expenses per acre	646.32	715.27	644.40	582.40
Return over direct exp per acre	65.22	-79.57	58.70	190.20
Overhead Expenses				
Hired labor	12.03	11.41	13.67	13.93
Machinery leases	3.45	1.78	2.71	6.42
Building leases	2.24	1.53	2.32	3.65
Farm insurance	10.43	11.06	9.67	10.55
Utilities	5.18	5.60	5.23	5.89
Dues & professional fees	3.90	3.79	3.63	4.23
Interest	6.62	8.21	6.86	6.21
Mach & bldg depreciation	51.59	52.73	50.75	53.39
Miscellaneous	6.54	6.74	5.35	6.97
Total overhead expenses per acre	101.97	102.86	100.18	111.24
Total dir & ovhd expenses per acre	748.29	818.13	744.58	693.64
Net return per acre	-36.75	-182.43	-41.48	78.95
Government payments	19.54	17.78	21.21	17.56
Net return with govt pmts	-17.21	-164.65	-20.26	96.52
Labor & management charge	48.75	49.07	45.39	49.45
Net return over lbr & mgt	-65.97	-213.72	-65.65	47.07
Cost of Production				
Total direct expense per bu.	3.00	3.58	2.99	2.58
Total dir & ovhd exp per bu.	3.48	4.10	3.46	3.07
Less govt & other income	3.32	3.97	3.32	2.86
With labor & management	3.55	4.22	3.53	3.08
Net value per unit	3.25	3.15	3.23	3.34
Machinery cost per acre	136.31	157.11	134.68	128.10
Est. labor hours per acre	2.66	2.87	2.69	2.69

Crop Enterprise Analysis
Area Average
(Farms Sorted By Return to Overhead)

Soybeans on Owned Land

	Avg. Of All Farms	*Low 20%*	*40 - 60%*	*High 20%*
Number of farms	570	114	114	114
Acres	140.08	136.12	121.33	157.66
Yield per acre (bu.)	56.36	47.97	55.95	63.20
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	9.23	9.13	9.17	9.33
Total product return per acre	520.21	438.10	513.15	589.56
Hedging gains/losses per acre	0.53	0.00	-0.83	1.56
Crop insurance per acre	11.22	7.83	8.65	22.99
Other crop income per acre	2.62	1.99	2.65	3.36
Gross return per acre	534.58	447.93	523.63	617.46
Direct Expenses				
Seed	58.28	58.59	58.33	55.84
Fertilizer	22.30	30.58	19.38	16.91
Crop chemicals	48.63	49.98	49.52	44.41
Crop insurance	21.04	22.53	20.48	20.33
Storage	1.05	2.61	0.93	0.17
Fuel & oil	15.20	14.81	14.33	14.88
Repairs	28.62	35.59	26.24	24.15
Repair, machinery	1.48	0.48	1.02	1.71
Custom hire	9.35	16.46	9.86	4.05
Hired labor	2.63	2.91	1.90	1.81
Machinery leases	1.96	1.26	2.07	1.04
Utilities	1.22	1.38	1.29	1.47
Hauling and trucking	0.88	0.80	1.20	0.62
Marketing	1.80	1.79	1.91	1.49
Operating interest	8.06	9.44	8.24	5.57
Miscellaneous	2.90	2.31	2.06	2.59
Total direct expenses per acre	225.39	251.51	218.78	197.06
Return over direct exp per acre	309.19	196.41	304.85	420.40
Overhead Expenses				
Hired labor	6.67	3.97	8.73	9.02
Machinery leases	1.37	1.01	0.41	0.82
Building leases	0.68	0.19	1.26	0.53
RE & pers. property taxes	37.01	32.11	37.09	38.82
Farm insurance	9.38	9.97	9.40	8.45
Utilities	4.11	4.45	4.38	3.61
Dues & professional fees	2.68	2.32	3.66	2.14
Interest	73.79	59.19	66.61	84.19
Mach & bldg depreciation	41.27	42.64	42.43	33.98
Miscellaneous	5.17	5.93	5.43	4.09
Total overhead expenses per acre	182.14	161.78	179.39	185.65
Total dir & ovhd expenses per acre	407.53	413.30	398.17	382.71
Net return per acre	127.05	34.63	125.45	234.75
Government payments	18.05	19.68	15.62	16.34
Net return with govt pmts	145.09	54.30	141.08	251.09
Labor & management charge	36.21	41.42	37.32	32.61
Net return over lbr & mgt	108.88	12.88	103.76	218.48
Cost of Production				
Total direct expense per bu.	4.00	5.24	3.91	3.12
Total dir & ovhd exp per bu.	7.23	8.61	7.12	6.06
Less govt & other income	6.66	8.00	6.65	5.36
With labor & management	7.30	8.86	7.32	5.87
Net value per unit	9.24	9.13	9.16	9.35
Machinery cost per acre	95.41	109.06	91.73	77.71
Est. labor hours per acre	1.87	1.95	1.92	1.77

Crop Enterprise Analysis
Area Average
(Farms Sorted By Return to Overhead)

Soybeans on Cash Rent

	Avg. Of All Farms	***Low 20%***	***40 - 60%***	***High 20%***
Number of farms	828	165	165	166
Acres	301.87	315.25	309.73	237.56
Yield per acre (bu.)	55.28	49.99	55.14	59.48
Operators share of yield %	100.00	100.00	100.00	100.00
Value per bu.	9.25	9.20	9.22	9.29
Other product return per acre	0.01	-	-	0.04
Total product return per acre	511.22	459.83	508.10	552.65
Hedging gains/losses per acre	1.16	0.47	1.11	0.31
Crop insurance per acre	11.73	6.69	9.53	28.33
Other crop income per acre	2.74	2.54	2.69	4.96
Gross return per acre	526.85	469.53	521.44	586.26
Direct Expenses				
Seed	57.18	58.73	58.61	53.03
Fertilizer	18.64	22.47	16.69	12.96
Crop chemicals	46.38	51.58	43.57	42.21
Crop insurance	21.24	21.98	20.84	20.55
Storage	0.89	1.46	0.70	0.46
Fuel & oil	15.05	16.06	15.39	14.32
Repairs	25.52	27.82	24.06	21.72
Repair, machinery	1.56	2.42	1.62	2.35
Custom hire	8.28	10.83	9.86	4.57
Hired labor	3.41	4.44	2.33	1.98
Land rent	216.22	237.48	212.31	183.39
Machinery leases	3.62	5.48	3.57	1.55
Utilities	1.23	1.34	1.19	1.42
Hauling and trucking	1.02	1.64	1.24	0.53
Marketing	1.57	2.09	0.96	0.94
Operating interest	9.49	12.36	10.08	6.13
Miscellaneous	2.35	2.54	2.40	2.12
Total direct expenses per acre	433.65	480.73	425.43	370.24
Return over direct exp per acre	93.19	-11.19	96.01	216.02
Overhead Expenses				
Hired labor	7.17	5.48	6.56	6.84
Machinery leases	2.32	1.65	2.17	1.96
Building leases	1.18	0.77	0.91	0.81
Farm insurance	7.18	7.74	6.99	7.91
Utilities	3.37	3.20	3.45	3.69
Dues & professional fees	2.70	2.56	2.62	2.38
Interest	4.18	4.76	4.37	3.34
Mach & bldg depreciation	32.76	33.41	34.72	30.95
Miscellaneous	4.22	4.35	4.17	4.86
Total overhead expenses per acre	65.09	63.93	65.95	62.73
Total dir & ovhd expenses per acre	498.74	544.65	491.38	432.97
Net return per acre	28.11	-75.12	30.06	153.29
Government payments	17.26	16.83	15.60	14.57
Net return with govt pmts	45.37	-58.30	45.66	167.86
Labor & management charge	31.94	31.53	32.25	32.93
Net return over lbr & mgt	13.43	-89.83	13.40	134.93
Cost of Production				
Total direct expense per bu.	7.84	9.62	7.72	6.22
Total dir & ovhd exp per bu.	9.02	10.90	8.91	7.28
Less govt & other income	8.43	10.36	8.39	6.47
With labor & management	9.00	11.00	8.97	7.02
Net value per unit	9.27	9.21	9.24	9.30
Machinery cost per acre	88.34	96.60	91.04	76.56
Est. labor hours per acre	1.67	1.69	1.61	1.61

Livestock Enterprise Analysis
Area Average
(Farms Sorted By Return to Overhead)

Hogs, Weaning to Finish (Contract Grower) -- Average Per Pig Space

	Avg. Of All Farms		*Low 20%*		*40 - 60%*		*High 20%*	
Number of farms	64		12		13		13	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Transferred out (lb)	15.3	20.40	26.1	19.27	15.7	15.82	4.8	33.45
Other income		18.98		9.65		21.96		15.14
Gross margin		39.38		28.92		37.79		48.60
Direct Expenses								
Supplies		1.33		2.29		1.19		0.48
Fuel & oil		1.53		2.25		0.67		1.06
Repairs		3.67		6.54		3.17		2.08
Repair, livestock equip		0.42		-		-		0.21
Custom hire		1.45		1.11		1.01		0.27
Hired labor		1.18		0.93		2.36		0.27
Utilities		1.32		1.78		2.17		1.23
Operating interest		0.25		0.50		0.07		0.11
Total direct expenses		11.16		15.40		10.63		5.71
Return over direct expense		28.22		13.51		27.15		42.89
Overhead Expenses								
Hired labor		0.51		0.48		0.28		1.23
Building leases		0.61		1.62		-		-
RE & pers. property taxes		0.97		1.38		0.49		0.76
Farm insurance		2.05		2.24		1.57		2.31
Utilities		1.64		0.54		1.03		2.63
Dues & professional fees		0.28		0.72		0.17		0.14
Interest		4.52		1.93		3.17		7.79
Mach & bldg depreciation		7.36		5.48		5.65		11.55
Miscellaneous		0.84		1.35		0.47		1.26
Total overhead expenses		18.78		15.74		12.85		27.68
Total dir & ovhd expenses		29.94		31.14		23.48		33.39
Net return		9.44		-2.22		14.31		15.21
Labor & management charge		6.20		6.77		5.68		6.49
Net return over lbr & mgt		3.24		-8.99		8.63		8.72
Cost of Production Per Pig Space								
Total direct expense per unit		11.16		15.40		10.63		5.71
Total dir& ovhd expense per unit		29.94		31.14		23.48		33.39
Est. labor hours per unit		0.34		0.28		0.26		0.31
Other Information								
Number of pigs		7,164		6,589		6,975		6,036
Pigs per pig space (per year)		2.45		2.96		2.26		2.20
Pigs per 100 sq. ft. (per yr)		32.53		41.52		29.94		27.34
Net return per 100 sq. ft.		125.41		-31.22		189.24		189.31
Net return per labor hour		27.55		-8.00		55.07		48.29
Square feet per pig space		7.52		7.12		7.56		8.03

Participant Number _____ State Abbreviation _____

Participant's Name (please print clearly) _____

Important: Before you start this portion of the event, please write your participant number and state abbreviation on the blanks provided at the top of ***each page***.

2018 NATIONAL FFA
FARM AND AGRIBUSINESS MANAGEMENT
CAREER DEVELOPMENT EVENT

Page Number	Part	Area	Possible Points
3	I	Financial Statements	31
7	II	Budgeting	28
11	III	Cash Flow Planning	33
16	IV	Marketing	33
21	V	Income Tax	32
26	VI	Investment Analysis	12
28	VII	Risk Management	31
33	VIII	Business Organization / Land Measurement	28
38	IX.1	Analyzing the Agricultural Business, Sec. 1	21
41	IX.2	Analyzing the Agricultural Business, Sec. 2	17
44	X	Family Living	16
46	XI	Economic Principles	18
		TOTAL POSSIBLE POINTS	**300**

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Participant Number _____ State Abbreviation _____

Part I - Financial Statements

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Which financial statement summarizes the sources and uses of cash to explain the change in the cash balance reported on the balance sheet?

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

2. Which financial statement summarizes financial data for a specific date in time?

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

3. This financial statement shows the relationship between revenues and expenses.

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

4. This financial statement explains changes in net worth.

   A. Balance sheet
   B. Income statement
   C. Statement of owner equity
   D. Statement of cash flows

5. The Cedar Creek Farms profit for 2017 was

$176,844

6. The Cedar Creek Farms accrual adjusted gross farm income for 2017 is

$589,571

7. The income statement includes

   A. cash receipts, cash expenses, and accrual adjustments.
   B. cash receipts, cash expenses, and current inventory.
   C. assets, liabilities, and accrued interest.
   D. cash receipts, cash expenses, and machinery assets.

8. Which of the following is/are associated with farm revenue? Place the letter(s) in the box on the answer sheet.

   A. Seed purchased during the accounting period.
   B. Interest payments during the accounting period.
   C. Cash received from the sale of grain produced during the accounting period.
   D. A change in the value of crop inventory.

   C, D

9. Which of the following is/are likely found in a revenue ledger?

   A. Date of sale
   B. Buyer
   C. Quantity sold
   D. Unit price and total revenue received
   E. All of the above

10. The Cedar Creek Farms' chart of accounts normally includes

    A. income and expense accounts.
    B. inventory and current liability accounts
    C. depreciable business asset accounts with depreciation schedules.
    D. other accounts necessary to create financial reports needed for good management.
    E. All of the above

11. When using cash accounting records,

    A. income and expense are recorded at the time of actual cash transactions.
    B. income and expense are recorded at the time they are incurred.
    C. income is recorded when it is produced.
    D. expenses are recorded when used in the production process.

12. The net cash income generated by farm operation in 2017 was

    $144,088

13. A major advantage of accrual accounting when compared to cash accounting is it

    A. provides a more accurate calculation of profit.
    B. provides more flexibility in managing taxable income.
    C. provides an easier method of recording financial transactions than cash accounting.
    D. does not require maintaining receipts and expenses.

14. The original cost basis of an asset plus the cost of any improvements extending the life of the asset less accumulated depreciation on the asset is referred to as the

    A. net cost value of the asset.
    B. net market value of the asset.
    C. adjusted basis of the asset.
    D. total amortization value of the asset.

15. The decrease in value of a capital asset that occurs regardless of repair and maintenance due to wear and/or obsolescence is called

    A. amortization.
    B. remaining value.
    C. capitalized value.
    D. depreciation.

16. In order to make accrual adjustments to cash income and cash expenses, it is necessary to have

    A. a balance sheet from each month of the accounting period.
    B. a balance sheet at the beginning, middle and end of the accounting period.
    C. a balance sheet from the beginning and ending of the accounting period.
    D. the most recent balance sheet provided to a lender.

17. Contributed or paid in capital plus retained earnings plus valuation equity is equal to

    A. change in owner equity.
    B. total owner equity.
    C. net farm income from operations.
    D. total assets.

18. The amount of net farm income that has accumulated in a business since it began is

    A. retained earnings.
    B. total net farm income.
    C. one source of owner equity.
    D. Both A and C.

19. In order for retained earnings of a sole proprietorship to increase,

    A. net farm income must be larger than money withdrawn from the business.
    B. the increase in asset value needs to be more than the net farm operating loss.
    C. asset values on the ending balance sheet must be larger than asset values on the beginning balance sheet.
    D. the cash balance on the ending balance sheet must be larger than the cash balance on the beginning balance sheet.

20. How much of the change in owner equity from 2017 to 2018 came from the change in retained earnings? (Refer to **Pages R3 and R4**)

$195,381
$1,546,710 - $1,351,329 = $195,381

How much did items 21, 23, 25 and 27 contribute to the change in retained earnings? Indicate if the contribution was positive or negative. (Refer to **Page R7**)

21. Cash withdrawn from Cedar Creek Farms during 2017 for personal use was

$89,320
$61,641 + $27,679 = $89,320

22. Net farm income contribution is

A. Positive
B. Negative

23. Personal income is

$80,634

24. Personal income contribution is

A. Positive
B. Negative

25. Family living expenses are

$61,641

26. Family living expenses contribution is

A. Positive
B. Negative

27. Income taxes paid are

$27,679

28. Income taxes paid contribution is

A. Positive
B. Negative

29. Net farm income for a farm business organized as a sole proprietorship represents a return to all the following except

A. unpaid operator and family labor.
B. owner's investment in the business.
C. equity capital.
D. personal assets.

Part II - Budgeting

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. The farm has decided that renting land for cash rather than shares of production results in

   A. more risk for both the landlord and the tenant.
   B. less risk for both the landlord and the tenant.
   C. more risk for the landlord and less risk for the tenant.
   D. less risk for the landlord and more risk for the tenant.

2. When considering the production information for the soybean enterprise, the farm is trying to get maximum returns above variable cost (direct expenses). You, as a farm management consultant, should recommend that managers add input until

   A. marginal cost is equal to marginal revenue.
   B. marginal cost is equal to average total revenue.
   C. marginal revenue is equal to average variable costs.
   D. average total cost is equal to average total revenue.

3. If more acres of corn are planted, which of the following costs is least likely to change?

   A. Total variable (direct) costs
   B. Average fixed cost per acre
   C. Average variable (direct) costs per acre
   D. Average total costs per acre

4. Which of the following would be considered a fixed cost?

   A. Hired seasonal labor
   B. Depreciation on machinery
   C. Crop production inputs
   D. Feed purchases

5. When an increase in the level of production of one enterprise causes a reduction in the level of production of another enterprise, these two enterprises are said to be

   A. independent.
   B. complementary.
   C. supplementary.
   D. competitive.

6. The cost of using a resource based on what it could have earned in the next best alternative is

   A. an opportunity cost.
   B. always a variable cost.
   C. always a fixed cost.
   D. an alternative cost.

7. Budgeting is used to

   A. allow for experimentation with possible outcomes before resources are committed.
   B. estimate the amount of credit needed.
   C. estimate the yields necessary to be profitable.
   D. All of the above

8. Partial budgets are used to evaluate

   A. net income.
   B. the useful life of an asset.
   C. expanding an enterprise.
   D. owner equity.

Review the information in the **Corn Combined, Cash Rented enterprise, Page R9**, and the **Hogs, Weaning-to-Finish (Contract Grower) enterprise, Page R10**, when answering questions 9 through 12.

9. What price per bushel did the farm need to receive for the corn to cover direct expenses per acre?

   $2.08 per bushel

10. What was the rate of return on their assets for the Hogs, Weaning-to-Finish enterprise? Round to the nearest tenth (x.x) of a percent.

    12.7%

11. What was the farm's biggest expense for their pig operation?

    Building depreciation

12. If the 2018 interest on long term debt went up to $4.66 per pig, what would the new estimate on net return over labor and management be? Round to the nearest cent.

    $17.24 – ($4.66 - $4.16) = $16.74

Participant Number _____ State Abbreviation _____

Review the information in the **crop budgets for owned corn, both irrigated and dryland, and soybeans, on Page R17** when answering the following questions.

13. What is the long-term expected yield per acre on the dryland corn?

190 bu. per acre

14. What long-range increase in yield per acre does the farm expect from irrigating?

20 bu. per acre

15. What is the estimated price for corn in year 2018?

$4.00 per bushel

16. What is the estimated per acre fertilizer cost for dryland corn in 2018?

$127 per acre

17. What does the farm expect for returns over direct expenses for the dryland corn in year 2018?

$425.50 per acre

18. The list of expenses in the enterprise budget is a complete list of all expenses required for these enterprises.

A. True
B. False

19. What yield would the farm need for the irrigated corn to break even to cover the cost of total direct expenses, if they receive the estimated price for the corn? Round to the nearest tenth (x.x) of a bushel.

110.7 bu. per acre
$415 / $3.75 = 110.7

20. The enterprise budget for soybeans does not include a cash rent expense. If you add a planned cash rent amount of $225 per acre to the total direct expenses for year 2018, what would be the break even yield to cover direct expenses on rented land, if they received the estimated price for their crop? Round to the nearest hundredth (x.xx) of a bushel.

42.31 bu. per acre
($113.5 + $225) / $8 = 42.31

21. What is the farm's long-term expected yield on the dryland soybeans?

55 bu. per acre

22. If the $225 per acre rental cost is included, how much income would be available from soybeans to cover the overhead expense, based on the long range expected yield, 2018 expected price, and 2018 expected cost?

(55 - 42.31) x $8.00 = $101.52

Part III – Cash Flow Planning

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Refer to Pages R14, R15 and R16 for this section.

1. The projected term debt coverage ratio indicates that the Net Farm Income should be sufficient to cover family living, taxes and debt service of existing term debt. What is the term debt coverage ratio?

   1.19

2. What would the term debt coverage ratio be, if operating expenses increased by 10% over those planned?

   0.98

3. Net Farm Income for 2018 is projected to be equal to or even greater than the actual Net Farm Income of 2017.

   A. True
   B. False 2017 $176,844 compared to 2018 $106,337

4. Cedar Creek Farms' liquidity is anticipated to improve in 2018.

   A. True Beginning Current Ratio of 1.4 to Ending Current Ratio of 1.6
   B. False

5. Cedar Creek Farms' solvency is anticipated to improve in 2018.

   A. True Debt - Asset Ratio improving from 45.2% at the Beginning of the Year to 36.3 at the End of the Year
   B. False

6. It is projected that Cedar Creek Farms will have Personal (non-farm) Income that will exceed Family Living Expenses in 2018.

   A. True Compare personal income of $85,000 with family living expenses of $65,000.
   B. False

7. Which cash income item is expected to be the largest contributor to the farm's cash flow in 2018?

   Corn

8. What is the largest projected cash operating expense in 2018?

Seed

9. Excluding the beginning cash balance from the Total Inflow of cash in 2018, what percentage of the inflow is contributed by Contract Livestock income? Round to the nearest tenth of one percent (x.x).

25.6%
154,865 / (643,053 - 37,000)

10. What is the monthly payment amount for the BLDG PYMT loan?

$6,366

11. How many dollars of Family living expense are anticipated for 2018?

$65,000

12. What is the Annual Operating (AO) Loan balance projected to be at the end of 2018?

$84,647

13. In which month will the farm borrow the largest amount on the AO Loan?

December

14. In which month is the Capital Purchase anticipated to happen?

April

15. The debt to asset ratio is a measure of

A. liquidity.
B. solvency.
C. profitability.
D. repayment capacity.
E. efficiency.

16. The ability of the farm's current assets to repay the farm's current liabilities is a measure of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

17. _____ measures the relationship of the total assets, the total debt and the relationship of total debt to total equity (net worth).

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

18. _____ measurements show the distribution of the total revenue among operating expenses, depreciation, interest, and net farm income.

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

19. _____ measures whether there is sufficient adjusted revenue to cover family living expenses, income and FICA taxes, and total principle and interest on term debt

    A. Liquidity
    B. Solvency
    C. Profitability
    D. Repayment capacity
    E. Efficiency

20. Net farm income is a measurement of

    A. liquidity.
    B. solvency.
    C. profitability.
    D. repayment capacity.
    E. efficiency.

21. Working Capital is a measure of

A. liquidity.
B. solvency.
C. profitability.
D. repayment capacity.
E. efficiency.

22. Term debt coverage ratio is a measure of

A. liquidity.
B. solvency.
C. profitability.
D. repayment capacity.
E. efficiency.

23. Rate of Return on Assets is a measure of

A. liquidity.
B. solvency.
C. profitability.
D. repayment capacity.
E. efficiency.

24. A formula for Net Cash Flow is Beginning operating loan balance - Ending operating loan balance + Ending cash balance - Beginning cash balance. Using this formula, what is the 2018 Net Cash Flow? (If a negative number, indicate that.)

- $120,647

25. How much is the Earned Net Worth estimated to change in 2018? (If a negative number, indicate that.)

$95,437

26. What is the expected peak of the operating loan in 2018?

$84,647

27. Before any capital purchases, capital sales, new borrowings, or loan payments are made, how many dollars are available on an annual basis as Operating Surplus? (If a negative number, indicate that.)

$273,042

28. In what month is the largest repair bill anticipated?

October

Use **Page R12** to answer question 29.

29. How many bushels of soybeans were planned to be sold in 2017?

9,300

Part IV - Marketing

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. A _____ is the right to sell an underlying future contract at a specific price.

   A. put option
   B. call option
   C. long option
   D. short option

2. A _____ is a person who attempts to anticipate price changes and makes profits through market activities.

   A. hedger
   B. bull
   C. bear
   D. speculator

3. _____ is the difference in the future's price and the local price.

   A. Equilibrium
   B. Hedge
   C. Basis
   D. Margin

4. The right to buy an underlying futures contract at a specific price is a

   A. put option.
   B. call option.
   C. short option.
   D. long option.

5. Funds deposited with a broker to trade futures contracts are called a/an _____ account.

   A. deposit
   B. escrow
   C. margin
   D. loan

6. A farmer who sells futures contracts to protect production from price fluctuations is called a

   A. bear.
   B. bull.
   C. speculator.
   D. hedger.

7. An increase in the value of the dollar relative to the currency of other countries should

   A. increase exports to other countries.
   B. decrease exports to other countries.
   C. have no impact on exports or imports.
   D. decrease imports to the United States.

8. A producer who decides to use the futures market to hedge the price of corn to be sold at harvest would

   A. buy futures contracts expecting to sell contracts when the corn is sold.
   B. buy futures contracts expecting to buy more contracts when corn is sold.
   C. sell futures contracts expecting to sell more contracts when corn is sold.
   D. sell futures contracts expecting to buy them back when corn is sold.

9. When using options, the futures price you want to fix or lock in is called the

   A. option price.
   B. strike price.
   C. buyer's price.
   D. seller's price.

10. The price quote offered to the producer is a derived price that reflects the

    A. final use value.
    B. value added.
    C. market-related challenges.
    D. cost of production.

11. _____ prompts much of the short-run price variability of agricultural commodities.

    A. A demand shift
    B. Supply variation
    C. The Farm Bill
    D. The producer

12. The purchase of a put option by a producer sets a price

    A. ceiling.
    B. target.
    C. floor.
    D. wall.

13. Producers using hedging should always close out the cash position and futures position

    A. simultaneously.
    B. within a day.
    C. within a week.
    D. within a month.

14. What is specified in a forward corn contract?

    A. Number of bushels
    B. Moisture content
    C. Test weight
    D. All the above

15. Selling through a farmers' market or roadside market is called _____ marketing.

    A. wholesale
    B. contract
    C. direct
    D. drive-through

16. An increase in the quantity of corn exported by the United States will most likely

    A. decrease the price of corn in the U.S.
    B. increase the price of corn in the U.S.
    C. cause ending stocks to increase in the U.S.
    D. both answers A and C

17. This law indicates the rational consumer will purchase more at a lower price.

    A. Supply
    B. Quality
    C. Demand
    D. Quantity

18. How many futures contracts would be needed to sell 100,000 bushels of corn?

    A. 10
    B. 20
    C. 40
    D. 50

19. A price _____ is attached to those products that are not being accepted by consumers.

    A. increase
    B. discount
    C. reference
    D. pattern

A soybean farmer has the option to sell at harvest on October 1 or to store until February 1. Use the information in the table below to answer questions 21 through 26. Make all calculations on a per bushel basis.

Decision Date: October 1

November Futures (Harvest Contract Price)	$9.85 / bushel
Harvest basis for November Contract on Oct 1	-$0.35 / bushel
Storage costs	$0.025 / bushel per month
Interest cost	$0.04 / bushel per month
March Futures Price	$10.40 / bushel
Normal Basis in February	-$0.05 / bushel
March Put: $10.40 strike premium	$0.35 / bushel

20. What is the cash price for soybeans if the farmer sold on October 1?

$9.50
$9.85 - $0.35 = $9.50

21. What is the carrying cost for soybeans stored from October 1 and sold on February 1?

$0.26
4($.025 + $.04) = $0.26

22. What is the expected net price for soybeans hedged with a March futures contract if the grain is stored until February 1?

$10.09
$10.40 - $.05 - $.26 = $10.09

23. If the farmer decided to buy a March put option, what would be the price floor established by the put if the grain is stored until February 1?

$9.74
$10.40 - $.35 - $.05 - $.26 = $9.74

24. What alternative provides the largest net price?

    A. Sell at harvest
    B. Store and hedge with March futures
    C. Store and buy a March put option

25. If the March soybean futures price is $10.85 per bushel when the soybeans are sold on February 1, and the basis is -$0.05, the price received by the farmer who purchased the put option would be

    $10.19
    $10.85 - $.35 - $.05 - $.26 = $10.19

26. A cash contract fixes

    A. the futures price but not the basis.
    B. the basis but not the futures price.
    C. the futures price and the basis.
    D. None of the above

27. Most grains have a marketing time frame of

    A. six months.
    B. twelve months.
    C. eighteen months.
    D. twenty-four months.

28. Producers who use the futures market are able to

    A. shift price risk.
    B. establish cost of production.
    C. set price.
    D. set basis.

Participant Number _____ State Abbreviation _____

Part V - Income Tax

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Answers in this section will be based upon the 2017 Farmer's Tax Guide.

Over the next several years Cedar Creek Farms may purchase a number of depreciable assets. When using the Modified Accelerated Cost Recovery System (MACRS), General Depreciation System (GDS), farm property falls into different Recovery Periods. For questions 1 through 5, how many years would be required to depreciate the listed listed properties?

1. Drainage tile installed in crop land

   15 years

2. Grain storage bin

   7 years

3. A new tractor

   7 years

4. A confinement hog finishing building

   10 years

5. A machine shed that could double as a grain storage facility if needed

   20 years

6. Most farmers keep records and pay their taxes using the cash method of accounting because they find it easier to use than the accrual method.

   A. True
   B. False

7. Under the accrual method, income is counted as income when it is earned regardless of when you receive it.

   A. True
   B. False

8. Under the cash method, a bill that is owed can be considered an expense this tax year even though you intend to pay it next year, because you intend to pay in cash.

   A. True
   B. False

9. Section 179 Expense Deduction allows you to recover a portion (or all) of the purchase cost of certain properties in the year of purchase, rather than depreciating the item over a specific number of years.

   A. True
   B. False

10. In 2017, the Special Depreciation Allowance allowed the farmer to take 50% more depreciation deduction over the class life of the property, than if the item was depreciated over time using MACRS (GDS) depreciation.

    A. True
    B. False

Specific rules apply to depreciating purchased assets. Some are required to be depreciated over a number of years, while others can be depreciated more rapidly using the Section 179 Expense Deduction or by claiming the Special Depreciation Allowance. For questions 11 through 15, select the deduction or combination of deductions listed in A though E that best describes the deduction allowance for the listed items. Answers may be used more than once. **For questions 11 through 15 place the answers in the Answer column on the scoresheet not the A, B, C, D and E column.**

A. Must depreciate the item slowly over the required number of years
B. Could depreciate it slowly or could also utilize Section 179 but not the Special Depreciation Allowance
C. Could depreciate it slowly or could also utilize the Special Depreciation Allowance but not Section 179
D. Could depreciate it slowly or could use either or both Section 179 and the Special Depreciation allowance.
E. Cannot be depreciated

11. Purchase of 80 acres of unimproved farm ground at an auction

E

12. Purchase of a used tractor from a neighbor

B

13. Construction of new machine shed that could also store hay

C

14. Purchase of a used chisel plow from their father

A

15. Purchase of new combine from the local John Deere dealer

D

On September 13, 2017, Thor traded his old ripper (a tillage tool) for a new J.D. 2700 ripper. His old ripper was fully depreciated. He traded his old ripper plus paid $19,339 to boot for the new ripper. He financed $9,750 over 5 years, and paid the rest in cash. Use this information to complete questions 16 through 20. Calculate to the nearest whole dollar.

16. What was the adjusted basis of his old ripper that he traded in?

0 - Zero

17. What is the basis of his new ripper?

$19,339

18. What is the maximum amount that he could expense out in 2017, if he chose to utilize the Sec. 179 expense deduction but not the Special Depreciation?

$19,339

19. What is the maximum amount of Special Depreciation Allowance he could take in 2017 if he was not taking any Sec. 179 expense deduction?

$9,670

20. What is the amount of depreciation for the year 2017 if he used MACRS (GDS) Straight-line depreciation, but did not use any Sec. 179 expense deduction or Special Depreciation Allowance?

$1,381

When Thor and Elsa filed their 2017 Income Tax Return, the financial information was reported on a number of IRS Forms and Schedules. The following is a partial list of forms and schedules that would be used to file a tax return for a sole-proprietor farm couple. Indicate the IRS Form or Schedule that the income or expense is reported on for questions 21 through 25. The Form or Schedule can be used more than once.

Schedule F
Schedule J
Schedule SE
Form 1040
Form 4797

21. The income from custom hog finishing

Schedule F

22. The sale of an old plow no longer used

Form 4797

23. The self-employment income is reported, and the self-employment tax is calculated using

Schedule SE

24. The amount spent on fertilizer

Schedule F

25. The summary form used by individuals to report federal taxable income, adjustments to income, the amount of tax assessed, and tax payments and credits are reported on

Form 1040

26. A sole-proprietor farmer who hires his 17-year-old daughter to work on the farm must withhold federal income tax, social security and Medicare tax.

A. True
B. False

27. Self-Employment Tax is paid by self-employed individuals (who make over $400 of self-employed income) at the rate of 15.3% which covers both social security tax and Medicare tax.

A. True
B. False

28. A farmer must withhold FICA taxes on a person hired as an independent contractor to wire his machine shed.

    A. True
    B. False

29. A person hired by a farmer to run a machine owned by the farmer, when the farmer tells the person when to come and leave, and how to do the task, could be classified as an independent contractor for employment tax purposes, if the person agrees to that status.

    A. True
    B. False

30. A farmer who has two seasonal employees with a combined annual salary of approximately $8,000 would not be required to pay Federal Unemployment (FUTA) Tax on them.

    A. True
    B. False

Part VI – Investment Analysis

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Cedar Creek Farms wants to purchase an 85,000 bu. grain bin from a dealer in the area. They want this particular structure because it fits in with the expansion of their current on-farm grain storage system. The dealer will provide them a seven-year loan with an interest rate of 4%. To purchase this bin, the farm will borrow $14,500. The payments are due in annual installments. Because they are such great customers, the dealer will carry the note in-house.

Year	Annual Payment	Interest	Principal	Balance
0	[redacted]	[redacted]	[redacted]	$14,500.00
1	2,415.84	580.00	1,835.84	12,664.16
2	2,415.84	506.57	1,909.27	10,754.89
3	2,415.84	430.20	1,985.64	8,769.25
4	2,415.84	350.77	2,065.07	6,704.18
5	2,415.84	268.17	2,147.67	4,556.61
6	2,415.84	182.26	2,233.58	2,322.93
7	2,415.85	92.92	2,322.93	0

1. The total interest paid over the term of the loan will be

   $2,410.89

2. The total annual payment for year 2 is

   $2,415.84

3. The loan balance after the payment in year 5 is

   $4,556.61

4. The loan balance after the final payment is made is

   0 - Zero

5. What does the total interest paid on this grain bin loan represent?

   A. The actual amount of money borrowed from the dealer.
   B. The total amount of money you pay to the lender.
   C. The present value of money borrowed.
   D. The amount of money left over
   E. None of the above

6. The promissory note, which a lender provides with the grain bin loan, will show

   A. the amount of money you borrowed.
   B. the amount of principal and interest paid with each payment.
   C. when repayment begins, frequency of repayment, and repayment amount.
   D. the names of the parties involved.
   E. All of the above

7. If the grain bin loan is sold in the secondary market, this will increase the loanable funds available for use by the lender.

   A. True
   B. False

8. The principal amount in each loan payment on the grain bin will always be the same.

   A. True
   B. False

9. What is repossession?

   A. The recovery of collateral for non-payment.
   B. Paying off debt with a revised repayment schedule.
   C. Paying off debt with a fixed repayment schedule.
   D. The ability to repay a loan from the bank with a refinanced loan.

10. What is the usual length of time for the term on the machinery loan?

    A. 5 years
    B. 10 years
    C. 15 years
    D. Match the useful life of the asset but typically not more than seven years

11. An annual loan payment generally consists of

    A. interest.
    B. principal.
    C. balance.
    D. Both A and B

Part VII - Risk Management

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Unexpected circumstances where the probability of an event occurring can be measured is called

   A. certainty.
   B. uncertainty.
   C. risk.
   D. unknown.

2. _____ is the act of managing or controlling exposures to risk in order to meet preset objectives or risk exposure guidelines.

   A. Speculation
   B. Risk Management
   C. Financial Management
   D. Uncertainty Management

3. When the probability of an event occurring cannot be measured, this situation is called

   A. certainty.
   B. uncertainty.
   C. risk.
   D. an unknown.

4. A/an _____ is an economic device where an individual or business substitutes a certain cost for an uncertain financial loss.

   A. government subsidy
   B. premium payment
   C. insurance policy
   D. futures contract

5. The payment to an insurance company by a policyholder to purchase and maintain an insurance policy is an insurance

   A. premium.
   B. indemnity.
   C. subsidy.
   D. annuity.

6. Hedging with commodity futures is an example of risk

   A. avoidance.
   B. control.
   C. transfer.
   D. retention.

A farmer has the following total variable costs and cash rental rate to produce corn and soybeans. Use this information to answer questions 7 and 8.

	Variable Costs ($/acre)	**Cash Rent ($/acre)**	**Planned Yield (bushels/acre)**
Corn	$531	$180	180
Soybeans	$351	$180	65

7. What is the break even price per bushel for corn that covers variable costs plus cash rent? Round to the nearest cent.

$3.95
($531 + $180) / 180

8. If the price of corn is $4.50 per bushel, what soybean price provides the same return over variable costs and cash rent? Round to the nearest cent.

$9.69
($4.50x180-$531-$180+$180+$351)/65

9. Planting a combination of corn, soybeans, and winter wheat is an example of which risk management strategy?

   A. Specialization
   B. Diversification
   C. Loss minimization
   D. Risk transfer

10. Many corn farmers purchase crop revenue insurance to protect against adverse outcomes. This type of crop insurance helps to protect against which of the following?

    A. Low crop prices and yields
    B. High crop prices and yields
    C. Increases in production costs
    D. Failure of grain buyer to make a prompt payment upon delivery.

11. Insurance is an example of

    A. risk avoidance.
    B. diversification.
    C. risk control.
    D. risk transfer.

12. Forward contracting is usually considered a form of risk management. Under what circumstance would a forward contract be a liability to the business?

    A. The harvested yield is greater than the bushels contracted, and the market price at delivery is above the contract price.
    B. The yield is less than the bushels contracted, and the market price at delivery is below the contract price.
    C. The yield is less than the amount contracted, and the price has increased.

13. A young family that just purchased a home with borrowed money should consider which risk management tool?

    A. Diversification
    B. Life insurance
    C. Hedging with futures
    D. None of the above

14. Liability insurance is used to protect against

    A. crop yield loss.
    B. hail damage.
    C. legal action.
    D. livestock price risk.

15. When a **soybean farmer** sells a futures contract, the farmer passes risk to the

    A. broker.
    B. purchaser (speculator).
    C. Chicago Mercantile Exchange (CME).
    D. Commodity Futures Trading Commission (CFTC).

16. A disability, employee work accidents, and an employee not reporting for work are examples of which type of risk?

    A. Human risk
    B. Price risk
    C. Production risk
    D. Financial Risk

17. Risk assessment requires managers to consider the

    A. ways to avoid a bad decision.
    B. likelihood of a bad decision and what to do if you are wrong.
    C. consequences and the probability of a bad outcome.

18. A manager who is willing to take a bigger risk would expect to receive

    A. a smaller average net return.
    B. the same average net return.
    C. a larger average net return.

19. Risk management is the process by which a business

    A. identifies potential risk exposure.
    B. prioritizes the risk faced by the business.
    C. develops a plan to mitigate the risk exposure.
    D. All of the above

20. Which of the following is **not** a market risk?

    A. Changes in input prices
    B. Changes in product prices
    C. Not being able to gain access to a market for a specific specialty crop
    D. Changes in the cost of production per unit due to a reduced yield

21. Lower than average yields are an example of _____ risk.

    A. production
    B. market
    C. human
    D. financial

22. A large amount of debt relative to the value of total assets is an example of _____ risk.

    A. production
    B. market
    C. human
    D. financial

23. What is an example of human risk?

    A. A drought reducing corn yields
    B. A change in interest rates
    C. Hired help injured by farm machinery
    D. A change in regulations regarding pesticide use

24. _____ is/are an example of risk control.

A. Crop insurance — Defined as a transferring risk
B. Hedging with commodity futures — Defined as a transferring risk
C. Fire alarms and fire sprinklers — Would put out or control a fire
D. Both A and B

25. The current ratio is a measure of _____ risk.

A. financial
B. market
C. production
D. human
E. legal

26. Forming an LLC can reduce the business owner's _____ risk.

A. production
B. market
C. human
D. legal

27. An insurance policy deductible is a form of risk

A. avoidance.
B. control.
C. transfer.
D. retention.

28. Which of the following risks should be realistically covered by insurance?

A. A low frequency and low severity risk
B. A low frequency and high severity risk
C. A high frequency and low severity risk
D. All of these risks should be transferred

29. What is an example of an incurred loss to a corn field prevented from planting?

A. Cost of tillage and inputs applied prior to planting
B. The value of corn not harvested and sold
C. The value of inputs not applied to the crop
D. All of the above

Part VIII - Business Organization / Land Measurement

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. Which of the following is a type of cooperative?

   A. Marketing
   B. Credit
   C. Processing
   D. All of these are types of cooperatives.

2. Which of the following statements about trusts is true?

   A. A trust is a legal arrangement by which a person (settlor) transfers ownership of specific assets to a trust. A person or group (trustee) to manages the trust.
   B. Trustees are the people who manage a trust.
   C. A trust can be used to manage estate taxes.
   D. All of the above are true.

3. The parents are planning for retirement. During their farming career, they have grown their farm to 2,000 acres of prime farmland. They are particularly concerned about leaving their family a legacy of farming by protecting and ensuring that their farmland stays in their family for many generations to come.

   Which of the following entities would best suit their goal of leaving their farm for future generations of their family?

   A. A trust
   B. A Sole-Proprietorship
   C. A Cooperative
   D. A partnership
   E. None of these is appropriate.

4. Which of the following is **not** a benefit of a corporate business structure?

   A. Corporate income is not subject to income taxes.
   B. Ownership is easily divided into shares.
   C. A corporation does not dissolve with the death of an owner.
   D. Benefits estate planning.
   E. All of the above are benefits of organizing as a corporation.

5. If a person does not have a will at the time of their death, the disbursement of his or her assets will be guided by

   A. city statutes.
   B. county statutes.
   C. state statutes.
   D. federal statutes.
   E. international laws regarding disbursement of assets.

6. The most commonly used type of business organization for US farms and ranches is the

   A. corporation.
   B. partnership.
   C. sole-proprietorship.
   D. LLC.
   E. Cooperative.

7. Of the types of business organizations listed below, which would provide the least protection from tort liability to the owners?

   A. LLC
   B. S-Corporation
   C. C-Corporation
   D. General Partnership

8. An owner of a corporation is also called a(n)

   A. director.
   B. stockholder.
   C. officer.
   D. member.
   E. trustor.

9. Which of the following statements is **not** a best practice when selecting a business organization structure?

   A. Business owners should select the simplest business organization that still meets their needs and goals.
   B. Partnership agreements should always be written and reviewed by an attorney before they are signed.
   C. The business structure that minimizes taxation the most is always the best choice.
   D. Future plans and aspirations of the business owner should be taken into account when deciding the optimal business structure.

10. An owner of an LLC is also called a

    A. director.
    B. stockholder.
    C. member.
    D. trustee.

11. Owners of an S-Corporation must be US citizens.

    A. True
    B. False

12. In limited partnerships, management duties and liabilities are shared equally by all partners.

    A. True
    B. False

13. Cooperatives are owned and controlled by their member-patrons, and the profits earned by the cooperative are returned to the members based on patronage.

    A. True
    B. False

14. Cooperatives allow farmers and ranchers to gain market power by combining their resources.

    A. True
    B. False

15. Sole-Proprietorships persist after the death of the owner.

    A. True
    B. False

16. How many sections are usually in a township?

    A. 12
    B. 24
    C. 36
    D. 48

17. How many acres are in a section?

    A. 320
    B. 640
    C. 80
    D. 20

18. When reading a legal land description you read it by

    A. reading it from the smallest to the largest parcel.
    B. locating the section in the township.
    C. finding the location in the quarter.
    D. All of the above

19. The range refers to columns of townships running north and south (quadrangle).

    A. True
    B. False

20. Some properties in the U.S. do not have some form of legal land description.

    A. True
    B. False

21. There are approximately _____ acres in a township.

    A. 23,040
    B. 22,050
    C. 19,580
    D. 64,000

22. An acre equals ____ square feet.

    A. 23,040
    B. 43,560
    C. 64,000
    D. 12,346

23. A tier refers to the townships running east and west in six-mile increments.

    A. True
    B. False

24. A typical township is six miles square.

    A. True
    B. False

25. Generally, parcels of land that are irregular in shape are legally described by using

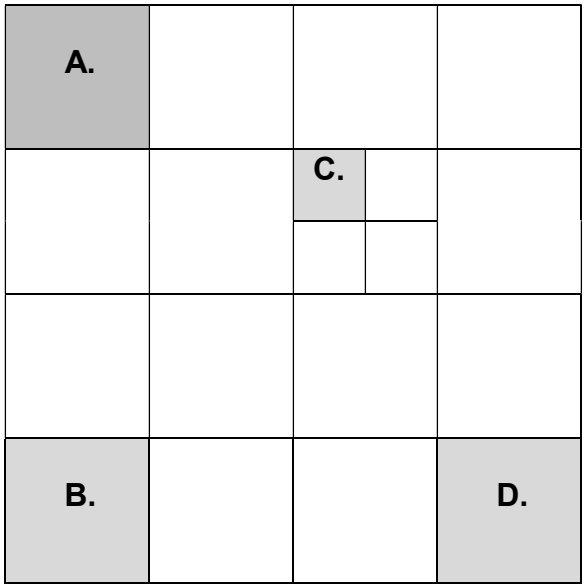
    A. rectangular survey.
    B. metes and bounds.
    C. Either A or B

26. Residential property in towns and cities is generally described by using the recorded plat system.

    A. True
    B. False

Use the chart below of section 9 to answer questions 27 and 28.

Section 9



27. In the illustration above, what is the legal description of parcel **A**?

    A. NE 1/4 of the NW 1/2 of Section 9.
    B. NW 1/2 of the NW 1/2 of the NE 1/4 of Section 9
    C. NW 1/4 of the NW 1/4 of Section 9
    D. NE 1/2 of the NW 1/8 of Section 9

28. How many acres are in parcel **C**?

    A. 80 acres
    B. 40 acres
    C. 20 acres
    D. 10 acres

Part IX, Section 1 - Analyzing the Agricultural Business

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Using the Resource Information for the Cedar Creek Farms 1/1/2017 and the 1/1/2018 Balance Sheets, found on **Pages R3 and R4**, and the Executive Summary **Page R5**, answer questions 1 through 6.

1. What was the amount of the change in the total value of **farm assets** on the Cost Balance Sheet between 1/1/2017 and 1/1/2018?

   ($1,882,362 - $1,809,334) = $73,028

2. What was the increase in Total Current Assets?

   $459,698 - $348,884 = $110,814

3. In the Farm Overview, several goal areas were noted. One of those areas was Solvency, which includes the Debt to Asset Ratio. The stated goal was to improve the Debt to Asset Ratio by at least 2%. Did the farm Debt to Asset Ratio improve by 2% or more?

   A. Yes
   B. No

4. On the Market Balance Sheet, the difference between the Net Worth on 1/1/2018 and 1/1/2017 is the Net Worth Change. Calculate the Net Worth Change.

   $1,696,323 - $1,509,900 = $186,423

5. Is the Net Worth Change in question 5 better than the area average net worth change for **All Farms** on Market Balance Sheet, **Page R21**?

   A. Yes
   B. No

6. Of the major farm asset and farm liability categories listed below, which had greatest negative impact on the Net Worth Change?

   A. Current assets
   B. Long-term assets
   C. Current liabilities
   D. Long-term liabilities

7. Compare the ending working capital for Cedar Creek Farms, **Page R5** Executive Summary, to the working capital for the Area Average, **Page R19**. Is their working capital better than the average?

   A. Yes
   B. No

8. Is the ending working capital as a percentage of gross income better than the average?

   A. Yes
   B. No

9. A second goal area identified in the farm overview was repayment capacity. That includes Term Debt Coverage Ratio. The goal was to be better than the average. Is the farm's ratio better than the Area Average?

   A. Yes
   B. No

10. For every dollar of term debt repayment required in 2017, how many dollars are available to pay on the term debt?

$1.75

Net Farm Income is used to pay for family living, social security and income tax, retirement accounts, health and medical expenses, and loan principal payments. Calculate the "Balance or Net" of net farm income to determine if there is enough net farm income to cover the uses of net farm income. Use data on pages **R3, R5 and R11**, rounded to whole numbers. NOTE: Your answer for items 11-16 **must include a + or – sign** in front of the numbers, to show whether they are added or subtracted in the calculation.

11. **Net Farm Income**	(+ or -)	**+ $176,844**
12. Total Family Living Expense (excluding furnishings and appliances personal savings and investments and income and social security taxes)	(+ or -)	**- $61,641**
13. Social security and Income Tax	(+ or -)	**- $27,679**
14. Other Nonfarm Expenditures, Excluding Taxes	(+ or -)	**- $48,900**

15. Principal Due on Term Loans in 2017 (+ or -) **- $110,499**

16. **Balance or Net** (+ or -) **- $71,875**

A positive balance indicates sufficient net income for business investment or other uses, while a negative balance indicates a need for revenue from other sources.

17. Does this operation require outside revenue to ensure a positive balance?

A. Yes
B. No

Part IX, Section 2 - Analyzing the Agricultural Business

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Answer the following questions that relate to the Corn enterprises, found on **Pages R8 and R23** in the Resource information.

1. What is the primary reason that the gross return per acre for the farm's owned, dryland corn is greater than the average of all farms?

   A. Price
   B. Yield
   C. Direct Cost
   D. Overhead

2. Of the Direct Expenses on the farm's owned, dryland corn, which two expenses are the greatest amount **below** the average for those expenses?

   Seed and Fertilizer

3. What is their break even price per bushel for owned dryland corn with labor and management costs included?

   $2.31

Using the Percentile Rank Report for Owned Soybeans on **page R18,** answer the following questions.

(Note: The Percentile Rank Report provides a unique look at all the data by splitting the information into 10 columns with 10% of the data in each column. The weakest numbers are on the left (10%) and the best numbers to the right (100%) for each individual line. So, each line is unique to itself and is not connected to the line above or below it. The shaded areas are the percentiles where the farm data ranks.)

4. The majority of the factors for the farm appear to be weaker rather than stronger.

   A. True
   B. False

5. Which factor on the farm is at the 50 percentile rank?

   Machinery Cost per Acre

6. Which of the following direct expenses on the farm has the weakest percentile rank?

   A. Seed and plants
   B. Fuel and Oil
   C. Repairs
   D. Crop chemicals

The owners of Cedar Creek Farms are interested in comparing annual financial information. For questions 7-10 use the comparative trend for their business**, Page R13**.

7. Their 2017 net farm income is at the highest level since 2008.

   A. True
   B. False

8. For how many years has their net worth been increasing?

   A. 1
   B. 4
   C. 7
   D. 9

9. In which year did the gross farm income have the greatest reduction from the prior year?

   A. 2011
   B. 2013
   C. 2015
   D. 2016

10. Over each of the last 4 years, the operating profit margin or operating expense ratio has become

    A. better.
    B. worse.

The Planned vs. Actual Income Statement provides a look at the producer's ability to project income and expense for the upcoming year. Review this statement on **Page R12** and answer the following questions.

11. What income item generated a "pleasant surprise" because the actual was significantly greater than planned?

    Soybeans

12. Which non-income item had the greatest impact on the increase in the Actual Net Farm Income compared to the Planned Net Farm Income?

    Inventory Change

13. The local lender prefers that the Actual Income Statement amounts to be within 10% of the Planned Income Statement. Which item listed below was within the 10% guideline?

    A. Gross cash farm income
    B. Total cash farm expense
    C. Net cash farm income
    D. Net farm income

Comparing trend data is also an important aspect of farm business management. Using the Comparative Trends, found on **Page R13** in the Resource Information, indicate whether each of these ratios/factors were better or worse in 2017 versus 2016.

14. Based on the Asset and Liability factors in the trends, did the farm meet its goal to make the overall balance sheet better or did it get worse?

    A. Better
    B. Worse

15. Did the farm meet its goal to make all their efficiency measures better?

    A. Yes
    B. No

16. Based on the yield information for the dryland corn enterprise, do we know that these enterprises were better in 2017, so they met their enterprise improvement goal?

    A. Yes
    B. No

Part X – Family Living

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

Review the **Family Living Expenses, Page R11,** and **Area Average, Page R22** to answer the following questions.

1. What is the total personal expenditure per family member for the Cedar Creek Farms? Round answer to whole dollar.

   $138,220 / 5 = $27,644

2. Cedar Creek Farms spends how much per family member on education?

   A. $1,025
   B. $610
   C. $1,770
   D. $205
   E. $379

3. Which expense listed below would be the most difficult to reduce?

   A. Gifts
   B. Clothing
   C. Medical care
   D. Recreation
   E. Cash donations

4. In which category does Cedar Creek Farms have a larger per person expenditure than the area average?

   A. Food and meals expense
   B. Health insurance
   C. Clothing
   D. Personal care
   E. Medical care

5. Which annual cash family living expense would Cedar Creek Farms find the easiest to reduce?

   A. Recreation
   B. Utilities
   C. Medical care
   D. Health insurance
   E. Life insurance

For each expense category listed below, determine if Cedar Creek Farms is spending more or less than five percent of their total cash family living expense on that category.

6.	Medical care	A. Less	**B. More**	**$3,641/61,641 = 5.9%**
7.	Household supplies	A. Less	**B. More**	**$4,396/61,641 = 7.1%**
8.	Personal care	**A. Less**	B. More	**$2,850/61,641 = 4.6%**
9.	Clothing	**A. Less**	B. More	**$2,379/61,641 = 3.9%**

10. What is the area average total family living dollar amount spent per family member? Round answer to whole dollar.

    A. $60,829
    B. $61,641
    C. $12,128
    D. $20,825
    E. $20,976

11. Cedar Creek Farms is saving for future college education and retirement expenses. What is the amount being saved per person?

    $38,900 / 5 = $7,780

12. The area average per person expenditure on recreation is

    A. $4,060
    B. $1,620
    C. $1,400
    D. $8,100
    E. $979

13. What percent of the Total Cash Family Living Expense is Health Insurance for Cedar Creek Farms? Round to the nearest tenth of a percent (x.x)

    $12,038 / $61,641 = 19.5%

Part XI - Economic Principles

On the answer sheet enter the answer for each question. For Multiple Choice and True/False, shade the appropriate oval. For Calculations and Completion questions, write the answer in the box in the Answer column. Do not make any marks in the C/I column. Multiple Choice, Completion and True/False questions are one point each. Calculation questions are two points each.

1. The concept in economics that explains the magnitude of changes in the production of a product relative to changes in the price of the product is called

   A. Price Elasticity of Demand.
   B. Cross-Price Elasticity.
   C. Income Elasticity.
   D. Price Elasticity of Supply.

2. For a hog production operation, the cost of feed can best be described as

   A. fixed cost.
   B. variable cost.
   C. marginal cost.
   D. total cost.
   E. average total cost.

3. The decision rule for profit maximization is

   A. Marginal Revenue = Marginal Cost.
   B. Marginal Revenue > Marginal Cost.
   C. Marginal Revenue < Marginal Cost.
   D. Marginal Revenue ≠ Marginal Cost.

4. The principle of _____ implies that due to the finite availability of resources, economic decision-makers must make decisions to deploy their resources in an efficient manner.

   A. Opportunity Cost
   B. Scarcity
   C. Comparative Advantage
   D. Economies of Size
   E. The Production Function

5. The branch of economics that studies a business' resource allocation decisions is

   A. Macroeconomics.
   B. Market Economics.
   C. Capitalism Economics.
   D. Microeconomics.

6. The principle of _____ states that producers should produce the products that they are best able to produce and purchase products that they produce less efficiently.

   A. Opportunity Cost
   B. Scarcity
   C. Comparative Advantage
   D. Economies of Size
   E. The Production Function

7. The Federal Reserve raising interest rates is an example of _____ policy that affects agricultural businesses.

   A. monetary
   B. fiscal
   C. farm
   D. trade
   E. foreign

8. If the supply of corn were to increase while demand remained constant, what would happen to the price?

   A. The price would increase.
   B. The price would decrease.
   C. There would be no change in the price.
   D. The effects of supply and demand on the price are indeterminable.

9. Congress lowering taxes is an example of a change in _____ policy that affects agricultural businesses.

   A. monetary
   B. fiscal
   C. farm
   D. trade
   E. foreign

10. Of the following descriptions, which best describes a perfectly competitive market?

    A. A market with four major firms that control 85% of all sales.
    B. A market in which all firms are price takers.
    C. A market in which firms sell similar, but differentiated products.
    D. A market in which the government allows a single producer to market goods.

11. This stage of production is characterized by negative marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

12. This stage of production is characterized by increasing marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

13. This stage of production is characterized by decreasing marginal product.

    A. Stage One
    B. Stage Two
    C. Stage Three
    D. Stage Four

Use the table below to complete questions 14 through 16.

Lbs of Fertilizer Applied per acre	Yield of Feed Grain in bushels per acre	Cost of Fertilizer per acre	Marginal Cost	Marginal Revenue
60	43	30	$1.43	$8.60
80	47	40	$2.50	$8.60
100	50	50	$3.33	$8.60
120	53	60	$3.33	$8.60
140	54	70	$10.00	$8.60

14. At (or between) which level(s) of fertilizer input is total revenue maximized?

    140

15. At (or between) which level(s) of fertilizer input is profit maximized?

    120 and 140

16. At (or between) which level(s) of fertilizer input does the farmer begin to see a decline in profit?

    120 and 140

17. If a producer can gain 2 additional bushels per acre by applying a fungicide that costs $18 per acre to apply, what is the increase or decrease in profit per acre if the crop can be sold for $10.30 per bushel?

    $2.60