NATIONAL FFA

# FARM BUSINESS MANAGEMENT

CAREER DEVELOPMENT EVENT

2016

JOHN DEERE

# 2016 NATIONAL FFA
# FARM BUSINESS MANAGEMENT CDE

# CAREER DEVELOPMENT EVENT

# RESOURCE INFORMATION FOR ABC ORGANIC FARM

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Andy and Barb Colson began their farming adventure in 1999 when they purchased 8 Registered Black Angus beef heifers. They expanded from that small start to 120 beef cow/calf pairs over the next few years. During that time, both Andy and Barb were maintaining full time, off-the-farm jobs.

In April of 2004, they made the decision to add a dairy operation of 20 cows to the beef operation. They also made the decision that both of them would stay home full time to manage the farm. They both had fond memories of growing up on dairy farms and wanted their children to have that same opportunity, and way of life. The Colsons have 7 children, with the oldest being 13 and interested in farming with his parents in the future.

In 2005, Andy and Barb made the decision to transition to an organic farm, increase the dairy herd to 70 cows, and decrease the beef to 40 cows. In the spring of 2005 they began the 3-year process of transitioning their land and dairy herd to organic. This involved following the approved organic standards for land use and maintaining comprehensive documentation about the steps taken to gain organic certification. The herd fully transitioned to organic in the third year, and Colsons began to sell organic milk to Central States Organic around the middle of the 2007 calendar year. It was at this point that the farm name became ABC Organic Farm.

They also remodeled the existing parlor to their current swing 15 parlor; sold the remaining beef herd; and expanded the dairy herd to 120 cows. They continued to grow and expand the operation with their own replacement heifers. In 2013 the Colsons purchased another small herd of 40 organic cows. With the combination of building on their herd using raised heifers and purchased cows, Colsons have increased their dairy herd to over 280 milk cows.

The farm they purchased and currently operate has been in Barb's family for 5 generations. Over the years the Colsons have also made many improvements to the facilities, the farm house, and the farm site in general. As they increased the size of the dairy operation, they also purchased additional land, totaling 373 acres. Last year was the largest increase in owned land when they purchased three small acreages near their home farm, totaling 183 acres.

They have managed the growth in their crop acres by purchasing/renting additional acreage. This was necessary to ensure adequate feed supplies and better control over achieving organic crop certification. They currently manage almost 1300 acres, as listed below:

| | | | |
|---|---|---|---|
| Total Acres Owned | 526 | Total Crop Acres | 993 |
| Crop Acres Owned | 228 | Crop Acres Rented | 765 |
| Pasture & Other | | Irrigated Acres | 703 |
| Acres Owned | 298 | Dryland Acres | 290 |

ABC Organic Farm produces Corn, Alfalfa (as Haylage), Corn Silage, Barley, Soybeans, Oatlage, Mixed Hay, and pasture (in paddocks). The prior year winter season was colder than normal for the region, with little protection on the alfalfa crop land. As a result, the plant population was reduced on some fields, resulting in significantly reduced yields. Corn silage value per ton is only slightly greater than non-organic corn silage because the local market will not bear full organic value, and corn silage is not easily transported or sold beyond the local area. For the upcoming year, they

have considered purchasing a soybean head for their John Deere Combine and may also consider purchasing a small John Deere tractor for general use around the farm.

The Dairy operation has increased in size from the initial 20 cows in 2005 to the current herd size of 287 milking cows. The increase has generally been gradual with a couple of years where they purchased a small herd of dairy cows to add to the operation. As an organic producer, they are fortunate that their milk is in demand and the processing plant covers the cost of trucking the milk from their farm to the plant; even though the plant is over 100 miles away.

The price per unit of most organic products on the farm is significantly different than non-organic product prices. This can be attributed to the demand for organic products, which could be described as a niche market. The added cost of converting from conventional practices to certified organic practices is a limiting factor for farmers to move to organic production. Currently, the demand for organic products has been strong, but not strong enough to result in more farmers converting to organic production and thereby increasing supply.

Prior to this year, and for past several years, agriculture in the region has been very profitable for crop farmers. Beef and Hog producers have done quite well also. All dairy producers have had ups and downs in profitability, with 2014 and 2015 showing that variability. All production agriculture is currently experiencing a tightening of profit margins and generally weak outlook on commodity prices. Because of the operation is organic, the Colson's have experienced a slightly different environment for milk and crop prices.

ABC Organic Farm has been managed well in recent years. They have been successful in retaining employees, but there is a concern about retaining new employees as current employees retire. Living in a rural area, it is normal to be concerned about the safety of the products you produce; so the Colsons are establishing a plan to limit exposure to damage from hazards outside of their operation. Andy is active in the community, and Barb is continually considering new ways to engage the community in discussions of organic production.

One of their goals is to build a profitable business that will enable their children to become a part of the farm business; if they are interested. They have a young family and need to consider options that will ensure that their children will have a good childhood, a quality education, and opportunities to join the business at a future date or have the necessary tools to move into another profession of their choosing. All areas of planning will be important for them to consider as both they and their children advance in age.

Andy and Barb have been enrolled in the local Farm Business Management program at the area Community College for over 10 years. They understand the importance of quality farm records and the need to analyze those records to support decision making in managing their business. The Colson's use balance sheets, a business analysis, cash flow planning, and goal statements to continue to move there farm business forward.

***ABC Organic Farm***
***1/1/2015 Balance Sheet***

| ***Current Assets*** | | | Value | ***Current Liabilities*** | | | | Balance |
|---|---|---|---|---|---|---|---|---|
| Cash and checking (Schd A) | | | 47,673 | Accrued interest | | | | 7,462 |
| Prepaid expenses and supplies | | | - | Accounts payable and other accrued expenses | | | | - |
| Growing crops | | | - | | | | | |
| Accounts receivable (Schd D) | | | 450,000 | | Int | P & I | | Principal |
| Hedging accounts | | | - | Current loans (Schd U) | Rate | Due | | Balance |
| Other current assets (Schd F) | | | 18,000 | AgriMax-1 | 4.00 | - | | 141,520 |
| Crops (Schd G) | Quantity | Value/Unit | | Government crop loans | | | | - |
| Org C Silage | 3,500 | 45.00/ton | 157,500 | Principal due within 12 months on term liabilities | | | | 198,864 |
| Straw | 126 | 100.00/ton | 12,600 | | | | | |
| Additional crops | | | 593,100 | | | | | |
| Crops under gov't loan | | | - | | | | | |
| Mkt lvst (Schd H) | No. | Value/Unit | | | | | | |
| Dairy Feeder | 83 | 260.96/cwt. | 123,825 | | | | | |
| Bull Calves | 13 | 100.00/head | 1,300 | | | | | |
| **Total Current Assets** | | | **1,403,998** | **Total Current Liabilities** | | | | **347,846** |

| ***Intermediate Assets*** | | | | ***Intermediate Liabilities (Schd V)*** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Cost | Market | | Int | Principal | P & I | Principal | Intermed |
| Brdg lvst (Schd I) | No. | Value | Value | Loan | Rate | Balance | Due | Due | Balance |
| Dairy Cows | 281 | 463,650 | 463,650 | FSA-Bunker | 3.375 | 99,336 | 15,000 | 11,638 | 87,698 |
| Springers | 52 | 62,400 | 62,400 | AgriMax-12 | 6.20 | 23,982 | 10,860 | 9,646 | 14,336 |
| Heifers Short Bred | 44 | 44,000 | 44,000 | AgriMax-123 | 5.75 | 338,775 | 50,000 | 31,344 | 307,431 |
| Addl Brdg lvst (Schd I) | | 102,950 | 102,950 | AgriMax-1234 | 8.07 | 108,684 | 55,000 | 47,988 | 60,696 |
| | | | | John Deere Credit-Baler | 3.00 | 61,574 | 8,400 | 5,649 | 55,925 |
| Machinery (Schd J) | | 1,396,574 | 1,467,109 | Addl loans | | 440,243 | 100,298 | 84,699 | 355,544 |
| Titled vehicles (Schd K) | | 102,494 | 148,081 | | | | | | |
| Other intermediate assets | | - | - | | | | | | |
| **Total Intermediate Assets** | | **2,172,068** | **2,288,190** | **Total Intermediate Liabilities** | | | | | **881,630** |

| ***Long Term Assets*** | | | | ***Long Term Liabilities (Schd W)*** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Cost | Market | | Int | Principal | P & I | Principal | Lg Term |
| Land (Schd M) | Acres | Value | Value | Loan | Rate | Balance | Due | Due | Balance |
| The Farm | 153 | 153,000 | 191,250 | FSA-0123 | 4.875 | 155,429 | 7,722 | 1,976 | 153,453 |
| McNally Land | 80 | 88,000 | 88,000 | FSA-1234 | 5.00 | 82,504 | 7,722 | 1,045 | 81,459 |
| Addl Land (Schd M) | | 294,821 | 321,821 | FNB-Johans Farm | 4.90 | 115,724 | 10,440 | 4,879 | 110,845 |
| Bldgs & improve. (Schd N) | | 980,570 | 1,062,387 | | | | | | |
| Other long term (Schd O) | | 116,394 | 150,000 | | | | | | |
| **Total Long Term Assets** | | **1,632,785** | **1,813,458** | **Total Long Term Liabilities** | | | | | **345,757** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Farm Assets** | | **5,208,851** | **5,505,645** | **Total Farm Liabilities** | | | **1,575,233** |
| Personal Assets (Schd P) | | 297,820 | 339,820 | Personal Liabilities | | | - |
| | | | | | | Cost | Market |
| | | | | Total Liabilities (d)(e) | | 1,575,233 | 1,575,233 |
| | | | | Retained Earnings/Contributed Capital | [a-d] | 3,931,438 | |
| | | | | Market valuation equity | [b-a] | | 338,794 |
| **Total Assets** (a)(b) | | **5,506,671** | **5,845,465** | **Net Worth** | [b-e] | | **4,270,232** |

***ABC Organic Farm***
***1/1/2016 Balance Sheet***

| ***Current Assets*** | | | Value | ***Current Liabilities*** | | | | Balance |
|---|---|---|---|---|---|---|---|---|
| Cash and checking (Schd A) | | | 2,949 | Accrued interest | | | | 6,815 |
| Prepaid expenses and supplies | | | - | Payables & accr exp (Schd T) | | | | - |
| Growing crops | | | - | | | | | |
| Accounts receivable (Schd D) | | | 178,000 | | Int | P & I | | Principal |
| Hedging accounts | | | - | Current loans (Schd U) | Rate | Due | | Balance |
| Other current assets (Schd F) | | | 13,600 | AgriMax-1 | 4.00 | - | | 140,961 |
| Crops (Schd G) | Quantity | Value/Unit | | Government crop loans | | | | - |
| Org C Silage | 2,500 | 45.00/ton | 112,500 | Principal due within 12 months on term liabilities | | | | 203,695 |
| Straw | 147 | 100.00/ton | 14,700 | | | | | |
| Additional crops | | | 568,500 | | | | | |
| Crops under gov't loan | | | - | | | | | |
| Mkt lvst (Schd H) | No. | Value/Unit | | | | | | |
| Bull Calves | 7 | 450.00/head | 3,150 | | | | | |
| **Total Current Assets** | | | **893,399** | **Total Current Liabilities** | | | | **351,471** |

| ***Intermediate Assets*** | | | | ***Intermediate Liabilities (Schd V)*** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Cost | Market | | Int | Principal | P & I | Principal | Intermed |
| Brdg lvst (Schd I) | No. | Value | Value | Loan | Rate | Balance | Due | Due | Balance |
| Dairy Cows | 293 | 483,450 | 483,450 | AgriMax-12 | 6.20 | 14,814 | 15,318 | 14,814 | - |
| Springers | 50 | 60,000 | 60,000 | AgriMax-123 | 5.75 | 296,852 | 63,600 | 47,737 | 249,115 |
| Heifers Short Bred | 31 | 31,000 | 31,000 | AgriMax-1234 | 8.07 | 52,950 | 10,860 | 6,826 | 46,124 |
| Addl Brdg lvst (Schd I) | | 122,250 | 122,250 | John Deere Credit-Baler | 3.00 | 46,967 | 8,400 | 6,349 | 40,618 |
| | | | | JDCC-8310 JD | 3.90 | 49,235 | 8,400 | 6,592 | 42,643 |
| Machinery (Schd J) | | 1,465,495 | 1,510,164 | Addl loans | | 345,706 | 93,050 | 79,197 | 266,509 |
| Titled vehicles (Schd K) | | 92,245 | 148,081 | | | | | | |
| Other intermediate assets | | - | - | | | | | | |
| **Total Intermediate Assets** | | **2,254,440** | **2,354,945** | **Total Intermediate Liabilities** | | | | | **645,009** |

| ***Long Term Assets*** | | | | ***Long Term Liabilities (Schd W)*** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Cost | Market | | Int | Principal | P & I | Principal | Lg Term |
| Land (Schd M) | Acres | Value | Value | Loan | Rate | Balance | Due | Due | Balance |
| The Farm | 153 | 153,000 | 191,250 | First-2015 Refinan | 4.80 | 728,838 | 70,932 | 36,658 | 692,180 |
| McNally Land | 80 | 88,000 | 88,000 | First-SouthFarm | 5.50 | 171,122 | 14,820 | 5,522 | 165,600 |
| Johansen Farm-2013 | 40 | 165,000 | 192,000 | | | | | | |
| Addl Land (Schd M) | | 596,371 | 621,371 | | | | | | |
| Bldgs & improve. (Schd N) | | 1,261,267 | 1,331,772 | | | | | | |
| Other long term (Schd O) | | 116,394 | 150,000 | | | | | | |
| **Total Long Term Assets** | | **2,380,032** | **2,574,393** | **Total Long Term Liabilities** | | | | | **857,780** |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Total Farm Assets** | | **5,527,870** | **5,822,737** | **Total Farm Liabilities** | | | **1,854,260** |
| Personal Assets (Schd P) | | 260,618 | 302,618 | Personal Liabilities | | | - |
| | | | | | | Cost | Market |
| | | | | Total Liabilities (d)(e) | | 1,854,260 | 1,854,260 |
| | | | | Retained Earnings/Contributed Capital | [a-d] | 3,934,229 | |
| | | | | Market valuation equity | [b-a] | | 336,866 |
| **Total Assets** (a)(b) | | **5,788,488** | **6,125,355** | **Net Worth** | [b-e] | | **4,271,095** |

# *2015 Financial Analysis Executive Summary*

## *Income Statement*

| | | |
|---|---|---|
| Crop sales | 781,802 | |
| Crop inventory change | -67,500 | |
| Gross crop income | | 714,302 |
| Livestock sales | 2,005,426 | |
| Livestock inventory change | -121,975 | |
| Gross livestock income | | 1,883,451 |
| Government payments | | 22,508 |
| Other cash farm income | | 153,060 |
| Change in accounts receivable | | -272,000 |
| Gain or loss on hedging accts | | - |
| Change in other assets | | -4,400 |
| Gain or loss on breeding lvst | | -20,525 |
| **Gross farm income** | | **2,476,396** |
| | | |
| Cash operating expense | 2,117,022 | |
| Change in prepaid exp and supplies | - | |
| Change in growing crops | - | |
| Change in accounts payable | - | |
| Depreciation | 196,777 | |
| Total operating expense | | 2,313,799 |
| Interest paid | 74,114 | |
| Change in accrued interest | -648 | |
| Total interest expense | | 73,466 |
| **Total expenses** | | **2,387,265** |
| | | |
| **Net farm income** | | **89,131** |

## *Other Measures*

| | | |
|---|---|---|
| Total crop acres | | 1,213 |
| Dairy Cows | | 287 |
| Dairy Replac sold or transferred out | | 258 |
| | | |
| Change in earned net worth | 2,791 | 0 % |
| Change in market value net worth | 47,771 | 1 % |

## *Financial Standards Measures*

| **Liquidity** | **Beg** | **End** |
|---|---|---|
| Current ratio | 4.04 | 2.54 |
| Working capital | 1,056,152 | 541,928 |
| Working capital to gross revenues | 42.6 % | 21.9 % |
| | | |
| **Solvency (market)** | **Beg** | **End** |
| Debt to asset ratio | 32 % | 34 % |
| Debt to equity ratio | 0.47 | 0.52 |
| | | |
| **Profitability** | **Cost** | **Market** |
| Net farm income | 89,131 | 134,111 |
| Rate of return on assets | 2.1 % | 2.8 % |
| Rate of return on equity | 1.1 % | 2.2 % |
| Operating profit margin | 5.8 % | 8.1 % |
| | | |
| **Repayment Capacity** | | |
| Term debt coverage ratio (farm only) | | 0.99 |
| Replacement margin coverage ratio | | 0.99 |
| | | |
| **Efficiency** | **Cost** | **Market** |
| Asset turnover rate | 36.1 % | 34.3 % |
| Operating expense ratio | | 85.5 % |
| Depreciation expense ratio | | 7.9 % |
| Interest expense ratio | | 3.0 % |
| Net farm income ratio | | 3.6 % |
| | | |
| **Other** | | |
| Term debt coverage (farm+personal) | | 0.99 |
| Term debt to EBITDA | | 3.42 |

## *Information Accuracy*

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

## *Income Statement*

| ***Income*** | Quantity | Price | Amount | ***Expense*** | Amount |
|---|---|---|---|---|---|
| Soybeans, Organic | 3,150 bu. | 24.50/bu. | 77,175 | Seed | 103,016 |
| Corn, Organic | 57,520 bu. | 12.25/bu. | 704,627 | Fertilizer | 245,480 |
| Milk | 5,219,067 lb. | 34.15/cwt. | 1,782,177 | Crop insurance | 2,309 |
| Bull Calves, Started | 43 head | 404.02/head | 17,373 | Irrigation energy | 29,328 |
| Dairy Feeder | 138 head | 157.00/cwt. | 205,876 | Packaging and supplies | 28,115 |
| Cull breeding livestock | | | 123,237 | Crop Hauling and trucking | 17,960 |
| Direct & CC govt payments | | | 22,508 | Crop Consultants | 11,634 |
| Crop insurance income | | | 8,320 | Purchased feed | 536,272 |
| Insurance income | | | 18,265 | Breeding fees | 11,522 |
| Other farm income | | | 3,238 | Veterinary | 17,319 |
| | | | | Supplies | 67,720 |
| | | | | DHIA | 7,806 |
| | | | | Livestock Hauling and trucking | 4,820 |
| | | | | Livestock Marketing | 12,829 |
| | | | | Bedding | 84,900 |
| | | | | Interest | 74,114 |
| | | | | Fuel & oil | 124,546 |
| | | | | Repairs | 255,645 |
| | | | | Custom hire | 67,868 |
| | | | | Hired labor | 235,761 |
| | | | | Land rent | 99,909 |
| | | | | Machinery leases | 66,821 |
| | | | | Real estate taxes | 7,448 |
| | | | | Farm insurance | 17,482 |
| | | | | Utilities | 41,047 |
| | | | | Dues & professional fees | 13,633 |
| | | | | Organic certification | 3,072 |
| | | | | Miscellaneous | 2,760 |
| Gross cash income | | | 2,962,796 | Total cash expense | 2,191,136 |
| | | | | Net cash income | 771,660 |

| **Inventory Changes** | Beginning Inventory | Purchases | Sales | Ending Inventory | Inventory Change | |
|---|---|---|---|---|---|---|
| Accounts receivable | 450,000 | | | 178,000 | -272,000 | |
| Other current assets | 18,000 | | | 13,600 | -4,400 | |
| Crops and feed | 763,200 | | | 695,700 | -67,500 | |
| Market livestock | 125,125 | | | 3,150 | -121,975 | |
| Breeding livestock | 673,000 | 45,725 | 1,500 | 696,700 | -20,525 | |
| Other assets | 116,394 | - | - | 116,394 | - | |
| Accrued interest | 7,462 | | | 6,815 | 648 | |
| Total inventory change | | | | | | -485,752 |
| Net operating profit | | | | | | 285,908 |

| **Depreciation** | Beginning Inventory | Purchases | Sales | Ending Inventory | Depreciation | |
|---|---|---|---|---|---|---|
| Machinery and equipment | 1,396,574 | 189,100 | - | 1,465,495 | -120,179 | |
| Titled vehicles | 102,494 | 7,500 | - | 92,245 | -17,749 | |
| Buildings and improvement | 980,570 | 339,545 | - | 1,261,267 | -58,849 | |
| Total depreciation | | | | | | -196,777 |

| **Net farm income** | **89,131** |
|---|---|

| | ***Profitability Measures*** | | ***Cost*** | ***Market*** |
|---|---|---|---|---|
| (A) | Net farm income from operations | | 89,131 | 134,111 |
| | Rate of return on assets | (E/F) | 2.1 % | 2.8 % |
| | Rate of return on equity | (G/H) | 1.1 % | 2.2 % |
| | Operating profit margin | (E/I) | 5.8 % | 8.1 % |
| | Asset turnover rate | (I/F) | 36.1 % | 34.3 % |
| | EBITDA | | 359,374 | 404,354 |
| (B) | Change in market valuation | | - | 44,981 |
| (C) | Interest expense | | 73,466 | 73,466 |
| (D) | Value of unpaid oper labor & mgmt | | 50,000 | 50,000 |
| (E) | Return on farm assets | (A+C-D) | 112,597 | 157,578 |
| (F) | Average farm assets | | 5,368,361 | 5,664,191 |
| (G) | Return on farm equity | (A-D) | 39,131 | 84,111 |
| (H) | Average farm net worth | | 3,653,614 | 3,778,653 |
| (I) | Value of farm production | | 1,940,124 | 1,940,124 |

| | ***Liquidity Measures*** | | ***Begin*** | ***End*** |
|---|---|---|---|---|
| (J) | Current assets | | 1,403,998 | 893,399 |
| (K) | Current liabilities | | 347,846 | 351,471 |
| | Current ratio | (J/K) | 4.04 | 2.54 |
| | Working capital | (J-K) | 1,056,152 | 541,928 |
| | Working capital to gross revenues | | 42.6 % | 21.9 % |

| | ***Solvency Measures (Market)*** | | ***Begin*** | ***End*** |
|---|---|---|---|---|
| (L) | Total assets | | 5,845,465 | 6,125,355 |
| (M) | Total liabilities | | 1,777,878 | 2,009,996 |
| | Net worth | (L-M) | 4,067,587 | 4,115,358 |
| | Net worth change | | 47,772 | |
| | Current debt to assets | (K/J) | 25 % | 39 % |
| | Intermediate debt to assets | | 39 % | 27 % |
| | Long term debt to assets | | 19 % | 33 % |
| | Total debt to assets ratio | (M/L) | 30 % | 33 % |

| | ***Repayment Capacity*** | | |
|---|---|---|---|
| | Net farm income from operations | | 89,131 |
| | Depreciation | (+) | 196,777 |
| | Personal income | (+) | 5,393 |
| | Family living expense | (-) | 69,950 |
| | Income taxes accrued | (-) | 25,156 |
| | Interest on term debt | (+) | 66,578 |
| (N) | Capital debt repayment capacity | (=) | 262,773 |
| (O) | Scheduled term debt payments | | 265,442 |
| (P) | Capital debt repayment margin | (N-O) | -2,669 |
| (Q) | Cash replacement allowance | | - |
| | Replacement margin | (P-Q) | -2,669 |
| | Term debt coverage ratio | (N/O) | 0.99 |
| | Replacement coverage ratio | (N/O+Q) | 0.99 |

| | ***Statement of Owner's Equity*** | | |
|---|---|---|---|
| (a) | Beginning net worth | | 4,067,587 |
| | Net farm income | | 89,131 |
| | Personal income | (+) | 5,393 |
| | Family living expense | (-) | 69,950 |
| | Income taxes accrued | (-) | 25,156 |
| | Change in personal assets | (+) | 3,373 |
| | Change in nonfarm accounts payable | (+) | - |
| (b) | Total change in retained earnings | (=) | 2,791 |
| | Change in market value of capital assets | | -1,927 |
| | Change in deferred liabilities | - | -46,908 |
| (d) | Total change in market valuation | = | 44,981 |
| (e) | Total change in net worth | (b+d) | 47,771 |
| | Ending net worth | | 4,115,358 |

| | ***Statement of Cash Flows*** | | |
|---|---|---|---|
| (f) | Beginning cash balance (farm & personal) | | 93,523 |
| | Gross cash farm income | | 2,962,796 |
| | Cash farm expenses | (-) | 2,191,136 |
| (g) | Cash provided by operating activities | (=) | 771,660 |
| | Sale of breeding livestock | | 1,500 |
| | Purchase of breeding livestock | (-) | 45,725 |
| | Purchase of machinery and equipment | (-) | 189,100 |
| | Purchase of titled vehicles | (-) | 7,500 |
| | Purchase of farm land | (-) | 466,550 |
| | Purchase of farm buildings | (-) | 339,545 |
| | Purchase of personal assets | (-) | 3,175 |
| (h) | Cash provided by investing activities | (=) | -1,050,095 |
| | Money borrowed | | 977,000 |
| | Principal payments | (-) | 697,326 |
| | Personal income | (+) | 5,393 |
| | Family living expense | (-) | 69,950 |
| | Income taxes paid | (-) | 25,156 |
| (i) | Cash provided by financing activities | (=) | 189,961 |
| | Net change in cash | (g+h+i) | -88,474 |
| | Ending cash balance (farm and personal) | | 5,049 |

## *Crop Enterprise Analysis*

| | *Organic Corn Irrigated Rented Cash Rented* | *Organic Corn Dryland Rented Cash Rented* | *Org C Silage Irrigated Owned* | *Soybeans Irrigated Cash Rented* | *Alf Haylage Establish Organic Owned* | *Alf Haylage Establish Organic Cash Rented* | *Oatlage Double Crop Peas Underse Owned* |
|---|---|---|---|---|---|---|---|
| **Returns** | | | | | | | |
| Acres | 315.00 | 80.00 | 138.00 | 50.00 | 140.00 | 80.00 | 140.00 |
| Unit | bu. | bu. | ton | bu. | ton | ton | ton |
| Yield per acre | 190.00 | 100.00 | 29.00 | 63.00 | 3.00 | 3.00 | 10.09 |
| Share of production (%) | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Value per unit | 11.00 | 11.00 | 45.00 | 25.00 | 100.00 | 100.00 | 40.00 |
| Total product value | 2090.00 | 1100.00 | 1305.00 | 1575.00 | 300.00 | 300.00 | 403.64 |
| Crop insurance | - | - | - | - | 19.81 | 19.81 | - |
| Other crop income | - | - | - | - | - | - | - |
| Gross return per acre | 2090.00 | 1100.00 | 1305.00 | 1575.00 | 319.81 | 319.81 | 403.64 |
| **Direct Expenses** | | | | | | | |
| Seed | 96.00 | 96.00 | 96.00 | 60.00 | 94.00 | 94.00 | 30.00 |
| Fertilizer | 348.00 | 348.00 | 348.00 | 50.00 | 125.00 | 125.00 | 125.00 |
| Crop insurance | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | - |
| Drying expense | 15.19 | 15.19 | - | - | - | - | - |
| Packaging and supplies | - | - | - | - | 54.07 | 54.07 | - |
| Custom hire | 16.16 | 16.16 | 18.12 | 16.16 | 15.36 | 15.36 | 16.16 |
| Hired labor | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 |
| Land rent | 108.01 | 108.01 | - | 108.01 | - | 108.01 | - |
| Machinery leases | 11.66 | 11.66 | 11.66 | 11.66 | 11.66 | 11.66 | 11.66 |
| Utilities | 3.19 | 3.19 | 3.19 | - | - | - | - |
| Hauling and trucking | 30.81 | 30.81 | 30.81 | 30.81 | - | - | - |
| Consultants | 8.12 | 8.12 | 8.12 | 8.12 | 8.12 | 8.12 | 8.12 |
| Organic certification | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 |
| Irrigation energy | 35.42 | - | 35.42 | 35.42 | - | - | - |
| Fuel & oil | 84.27 | 84.27 | 91.93 | 45.97 | 61.29 | 61.29 | 61.29 |
| Repairs | 140.54 | 140.54 | 153.32 | 76.66 | 102.21 | 102.21 | 102.21 |
| Operating interest | 13.28 | 13.28 | 14.49 | 7.24 | 9.66 | 9.66 | 9.66 |
| Total direct expenses | 1010.61 | 975.19 | 911.02 | 550.01 | 581.33 | 689.34 | 441.06 |
| Return over direct expenses | 1079.39 | 124.81 | 393.98 | 1024.99 | -261.52 | -369.53 | -37.43 |
| **Overhead Expenses** | | | | | | | |
| Hired labor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Machinery leases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Real estate taxes | - | - | 6.60 | - | 4.40 | - | 4.40 |
| Farm insurance | 10.35 | 10.35 | 11.29 | 5.65 | 7.53 | 7.53 | 7.53 |
| Utilities | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dues & professional fees | 5.77 | 5.77 | 6.29 | 3.14 | 4.19 | 4.19 | 4.19 |
| Interest on interm. debt | 16.66 | 16.66 | 18.18 | 9.09 | 12.12 | 12.12 | 12.12 |
| Interest on lng term debt | - | - | 26.59 | - | 17.73 | - | 17.73 |
| Machinery depreciation | 104.99 | 104.99 | 114.53 | 57.27 | 76.36 | 76.36 | 76.36 |
| Building depreciation | 24.89 | 24.89 | 27.15 | 13.57 | 18.10 | 18.10 | 18.10 |
| Miscellaneous | 1.17 | 1.17 | 1.27 | 0.64 | 0.85 | 0.85 | 0.85 |
| Total overhead expenses | 163.82 | 163.82 | 211.90 | 89.36 | 141.27 | 119.14 | 141.27 |
| Total dir & ovhd expenses | 1174.44 | 1139.02 | 1122.92 | 639.37 | 722.60 | 808.49 | 582.33 |
| Net return per acre | 915.56 | -39.02 | 182.08 | 935.63 | -402.79 | -488.68 | -178.70 |
| Government payments | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 |
| Net return with govt pmts | 930.01 | -24.57 | 196.53 | 950.08 | -388.35 | -474.23 | -164.25 |
| Labor & management charge | 8.46 | 8.46 | 9.23 | 4.61 | 6.15 | 6.15 | 6.15 |
| Net return over lbr & mgt | 921.55 | -33.03 | 187.30 | 945.46 | -394.50 | -480.38 | -170.40 |
| **Cost of Production Per Unit** | | | | | | | |
| Total direct expenses | 5.32 | 9.75 | 31.41 | 8.73 | 193.78 | 229.78 | 43.71 |
| Total dir & ovhd expenses | 6.18 | 11.39 | 38.72 | 10.15 | 240.87 | 269.50 | 57.71 |
| Less govt & other income | 6.11 | 11.25 | 38.22 | 9.92 | 229.45 | 258.08 | 56.28 |
| With labor & management | 6.15 | 11.33 | 38.54 | 9.99 | 231.50 | 260.13 | 56.89 |
| Net value per unit | 11.00 | 11.00 | 45.00 | 25.00 | 100.00 | 100.00 | 40.00 |
| Machinery cost per acre | 374.28 | 374.28 | 407.73 | 216.79 | 278.99 | 278.99 | 279.79 |
| Est. labor hours per acre | 2.28 | 2.28 | 2.49 | 1.25 | 1.66 | 1.66 | 1.66 |

## *CROP ENTERPRISE ANALYSIS (continued)*

| | *Oatlage Double Crop Peas Underse Cash Rented* | *Alf Haylage Irrigated Organic Owned* | *Alf Haylage Irrigated Organic Cash Rented* | *Alf Haylage Irrigated Organic Cash Rented* | *Org Mixd Hay Dryland Owned* | *Org Mixd Hay Dryland Cash Rented* | *Org. Pasture Irrigated Owned* |
|---|---|---|---|---|---|---|---|
| **Returns** | | | | | | | |
| Acres | 80.00 | 40.00 | 45.00 | 115.00 | 50.00 | 50.00 | 125.00 |
| Unit | ton | ton | ton | ton | ton | ton | aum |
| Yield per acre | 10.09 | 2.50 | 2.50 | 12.00 | 0.94 | 0.94 | 10.27 |
| Share of production (%) | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Value per unit | 40.00 | 120.00 | 120.00 | 120.00 | 60.00 | 60.00 | 18.00 |
| Total product value | 403.64 | 300.00 | 300.00 | 1440.00 | 56.25 | 56.25 | 184.90 |
| Crop insurance | - | 19.81 | 19.81 | 19.81 | - | - | - |
| Other crop income | - | - | - | - | - | - | - |
| Gross return per acre | 403.64 | 319.81 | 319.81 | 1459.81 | 56.25 | 56.25 | 184.90 |
| **Direct Expenses** | | | | | | | |
| Seed | 30.00 | - | - | - | - | - | - |
| Fertilizer | 125.00 | 125.00 | 125.00 | 125.00 | - | - | - |
| Crop insurance | - | - | - | - | - | - | - |
| Drying expense | - | - | - | - | - | - | - |
| Packaging and supplies | - | 54.07 | 54.07 | 54.07 | 54.07 | 54.07 | - |
| Custom hire | 16.16 | 16.16 | 16.16 | 15.36 | 15.36 | 15.36 | - |
| Hired labor | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 | 75.66 |
| Land rent | 108.01 | - | 108.01 | 108.01 | - | 108.01 | - |
| Machinery leases | 11.66 | 11.66 | 11.66 | 11.66 | 11.66 | 11.66 | - |
| Utilities | - | - | - | - | - | - | - |
| Hauling and trucking | - | - | - | - | - | - | - |
| Consultants | 8.12 | 8.12 | 8.12 | 8.12 | 8.12 | 8.12 | - |
| Organic certification | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 | 1.31 |
| Irrigation energy | - | 35.42 | 35.42 | 35.42 | - | - | 35.42 |
| Fuel & oil | 61.29 | 61.29 | 61.29 | 61.29 | 61.29 | 61.29 | 7.66 |
| Repairs | 102.21 | 102.21 | 102.21 | 102.21 | 102.21 | 102.21 | 12.78 |
| Operating interest | 9.66 | 9.66 | 9.66 | 9.66 | 9.66 | 9.66 | 1.21 |
| Total direct expenses | 549.07 | 500.55 | 608.56 | 607.76 | 339.33 | 447.34 | 134.04 |
| Return over direct expenses | -145.44 | -180.74 | -288.75 | 852.05 | -283.08 | -391.09 | 50.86 |
| **Overhead Expenses** | | | | | | | |
| Hired labor | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Machinery leases | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Real estate taxes | - | 4.40 | - | - | 4.40 | - | 0.55 |
| Farm insurance | 7.53 | 7.53 | 7.53 | 7.53 | 7.53 | 7.53 | 0.94 |
| Utilities | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Dues & professional fees | 4.19 | 4.19 | 4.19 | 4.19 | 4.19 | 4.19 | 0.52 |
| Interest on interm. debt | 12.12 | 12.12 | 12.12 | 12.12 | 12.12 | 12.12 | 1.51 |
| Interest on lng term debt | - | 17.73 | - | - | 17.73 | - | 2.22 |
| Machinery depreciation | 76.36 | 76.36 | 76.36 | 76.36 | 76.36 | 76.36 | 9.54 |
| Building depreciation | 18.10 | 18.10 | 18.10 | 18.10 | 18.10 | 18.10 | 2.26 |
| Miscellaneous | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.11 |
| Total overhead expenses | 119.14 | 141.27 | 119.14 | 119.14 | 141.27 | 119.14 | 17.66 |
| Total dir & ovhd expenses | 668.22 | 641.82 | 727.70 | 726.91 | 480.60 | 566.49 | 151.70 |
| Net return per acre | -264.58 | -322.01 | -407.89 | 732.90 | -424.35 | -510.24 | 33.20 |
| Government payments | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 | 14.45 |
| Net return with govt pmts | -250.13 | -307.56 | -393.45 | 747.35 | -409.90 | -495.79 | 47.64 |
| Labor & management charge | 6.15 | 6.15 | 6.15 | 6.15 | 6.15 | 6.15 | 0.77 |
| Net return over lbr & mgt | -256.28 | -313.71 | -399.60 | 741.20 | -416.05 | -501.94 | 46.88 |
| **Cost of Production Per Unit** | | | | | | | |
| Total direct expenses | 54.41 | 200.22 | 243.42 | 50.65 | 361.95 | 477.16 | 13.05 |
| Total dir & ovhd expenses | 66.22 | 256.73 | 291.08 | 60.58 | 512.64 | 604.25 | 14.77 |
| Less govt & other income | 64.79 | 243.03 | 277.38 | 57.72 | 497.23 | 588.84 | 13.36 |
| With labor & management | 65.40 | 245.49 | 279.84 | 58.23 | 503.79 | 595.40 | 13.44 |
| Net value per unit | 40.00 | 120.00 | 120.00 | 120.00 | 60.00 | 60.00 | 18.00 |
| Machinery cost per acre | 279.79 | 279.79 | 279.79 | 278.99 | 278.99 | 278.99 | 31.50 |
| Est. labor hours per acre | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 1.66 | 0.21 |

## *LIVESTOCK ENTERPRISE ANALYSIS -- Dairy*

| | Per Cwt. Of Milk | | Per Cow | | Enterprise Total | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| **Returns** | | | | | | |
| Milk sold | 100.00 lb. | 34.15 | 18184.90 lb. | 6209.67 | 5219067.0 lb. | 1782177 |
| Cull sales | 0.00 head | 2.36 | 0.22 head | 429.40 | 62.0 head | 123237 |
| Inventory change | 0.00 head | 0.38 | 0.04 head | 68.99 | 12.0 head | 19800 |
| Other income | | - | | - | | - |
| Gross return | | 36.89 | | 6708.06 | | 1925214 |
| Purchased | 0.00 head | -0.35 | -0.02 head | -64.46 | -6.0 head | -18500 |
| Dairy Replac net cost | | -1.85 | | -336.15 | | -96475 |
| Gross margin | | 34.69 | | 6307.45 | | 1810238 |
| **Direct Expenses** | | | | | | |
| Haylage, Alfalfa | 90.32 lb. | 3.39 | 16425.09 lb. | 615.94 | 2357.0 | 176775 |
| Protein Vit Minerals | 4.91 lb. | 2.65 | 891.99 lb. | 481.85 | 128.0 | 138290 |
| Corn Silage, Organic | 70.24 lb. | 1.58 | 12773.52 lb. | 287.44 | 1833.0 | 82494 |
| Corn | 0.43 | 4.30 | 78.21 | 782.14 | 22447.0 | 224475 |
| Oatlage, Organic | 22.99 lb. | 0.46 | 4181.18 lb. | 83.62 | 600.0 | 24000 |
| Hay, Grass | 3.87 lb. | 0.19 | 703.83 lb. | 35.19 | 101.0 | 10100 |
| Pasture | 0.02 | 0.37 | 3.78 | 67.99 | 1084.0 | 19512 |
| Breeding fees | | 0.15 | | 26.90 | | 7720 |
| Veterinary | | 0.30 | | 54.01 | | 15500 |
| Supplies | | 1.26 | | 228.22 | | 65500 |
| DHIA | | 0.15 | | 27.20 | | 7806 |
| Custom hire | | 0.34 | | 61.39 | | 17620 |
| Hired labor | | 1.44 | | 261.32 | | 75000 |
| Machinery leases | | 0.35 | | 64.01 | | 18371 |
| Utilities | | 0.67 | | 121.95 | | 35000 |
| Hauling and trucking | | 0.03 | | 5.23 | | 1500 |
| Marketing | | 0.25 | | 44.70 | | 12829 |
| Bedding | | 1.34 | | 243.90 | | 70000 |
| Organic certification | | 0.01 | | 2.44 | | 700 |
| Fuel & oil | | 0.41 | | 74.91 | | 21499 |
| Repairs | | 1.48 | | 269.08 | | 77225 |
| Operating interest | | 0.09 | | 15.74 | | 4517 |
| Total direct expenses | | 21.20 | | 3855.16 | | 1106432 |
| Return over direct expenses | | 13.49 | | 2452.29 | | 703806 |
| **Overhead Expenses** | | | | | | |
| Hired labor | | 0.00 | | 0.00 | | 0 |
| Machinery leases | | 0.29 | | 53.17 | | 15260 |
| Real estate taxes | | 0.08 | | 14.56 | | 4178 |
| Farm insurance | | 0.09 | | 15.77 | | 4527 |
| Utilities | | 0.00 | | 0.00 | | 1 |
| Dues & professional fees | | 0.11 | | 20.50 | | 5883 |
| Interest on interm. debt | | 0.11 | | 19.75 | | 5668 |
| Interest on lng term debt | | 0.11 | | 19.74 | | 5667 |
| Machinery depreciation | | 0.23 | | 41.48 | | 11904 |
| Building depreciation | | 0.49 | | 88.49 | | 25396 |
| Miscellaneous | | 0.02 | | 4.15 | | 1191 |
| Total overhead expenses | | 1.53 | | 277.61 | | 79675 |
| Total dir & ovhd expense | | 22.73 | | 4132.78 | | 1186107 |
| Net return | | 11.96 | | 2174.67 | | 624131 |
| Labor & management charge | | 0.66 | | 120.29 | | 34523 |
| Net return over lbr & mgt | | 11.30 | | 2054.38 | | 589608 |
| Est. labor hours per unit | | 0.18 | | 32.48 | | 9321 |

**Cost of Prod Per Cwt. Of Milk**

| | |
|---|---|
| Total direct expenses | 21.20 |
| Total dir & ovhd expenses | 22.73 |
| With other revenue adjustments | 22.19 |
| With labor & management | 22.85 |

**Other Information**

| | | | |
|---|---|---|---|
| Number of cows | 287.0 | Avg age at first calf (mo) | 25.0 |
| Milk produced per cow | 18,185 | Pregnancy rate | 13.0 |
| Total milk sold | 5,219,067 | Avg calving interval (mo) | 13.3 |
| Lb. of milk sold per FTE | 1,567,745 | Feed cost per day | 6.45 |
| Culling percentage | 21.6 | Feed cost per cwt. of milk | 12.95 |
| Turnover rate | 24.7 | Feed cost per cow | 2,354.17 |
| Cow death loss percent | 3.1 | Hired labor per cow | 261.33 |
| Percent of barn capacity | 111.7 | Avg. milk price per cwt. | 34.15 |
| Average SCC | 258,000 | Milk price / feed margin | 21.20 |
| Average DIM | 175 | | |

## *LIVESTOCK ENTERPRISE ANALYSIS -- Dairy Replacement Heifers*

| | Per Head Per Day | | Per Head | | Enterprise Total | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| **Returns** | | | | | | |
| Replacements | 0.00 head | 3.06 | 0.91 head | 1116.24 | 181.0 head | 223249 |
| Transferred out | 0.00 head | 2.11 | 0.39 head | 770.00 | 77.0 head | 154000 |
| Inventory change | 0.00 head | 0.05 | 0.06 head | 19.50 | 11.0 head | 3900 |
| Other income | | - | | - | | - |
| Gross return | 0.00 head | 5.22 | 1.35 head | 1905.75 | 269.0 head | 381149 |
| Transferred in | 0.00 head | -1.31 | -1.37 head | -477.75 | -273.0 head | -95550 |
| Gross margin | 0.00 head | 3.91 | -0.02 head | 1427.99 | -4.0 head | 285599 |
| **Direct Expenses** | | | | | | |
| Protein Vit Minerals | 1.25 lb. | 0.81 | 455.90 lb. | 296.34 | 45.6 ton | 59267 |
| Corn Silage, Organic | 27.40 lb. | 0.62 | 10000.00 lb. | 225.00 | 1000.0 ton | 45000 |
| Oatlage, Organic | 38.36 lb. | 0.77 | 14000.00 lb. | 280.00 | 1400.0 ton | 56000 |
| Hay, Grass | 10.00 lb. | 0.50 | 3650.00 lb. | 182.50 | 365.0 ton | 36500 |
| Pasture | 0.00 aum | 0.07 | 1.40 aum | 25.20 | 280.0 aum | 5040 |
| Breeding fees | | 0.05 | | 19.01 | | 3802 |
| Veterinary | | 0.02 | | 9.10 | | 1819 |
| Supplies | | 0.03 | | 11.10 | | 2220 |
| Hired labor | | 0.59 | | 214.40 | | 42880 |
| Machinery leases | | 0.19 | | 70.32 | | 14064 |
| Utilities | | 0.05 | | 19.97 | | 3994 |
| Hauling and trucking | | 0.05 | | 16.60 | | 3320 |
| Bedding | | 0.20 | | 74.50 | | 14900 |
| Organic certification | | 0.00 | | 1.62 | | 324 |
| Fuel & oil | | 0.05 | | 17.05 | | 3411 |
| Repairs | | 0.17 | | 61.25 | | 12251 |
| Operating interest | | 0.01 | | 3.58 | | 717 |
| Total direct expenses | | 4.19 | | 1527.54 | | 305508 |
| Return over direct expenses | | -0.27 | | -99.54 | | -19909 |
| **Overhead Expenses** | | | | | | |
| Hired labor | | 0.00 | | 0.00 | | 0 |
| Machinery leases | | 0.03 | | 12.10 | | 2421 |
| Real estate taxes | | 0.01 | | 3.31 | | 663 |
| Farm insurance | | 0.01 | | 3.59 | | 718 |
| Utilities | | 0.00 | | 0.00 | | 0 |
| Dues & professional fees | | 0.01 | | 4.67 | | 933 |
| Interest on interm. debt | | 0.01 | | 4.50 | | 899 |
| Interest on lng term debt | | 0.01 | | 4.49 | | 899 |
| Machinery depreciation | | 0.03 | | 9.44 | | 1888 |
| Building depreciation | | 0.06 | | 20.14 | | 4029 |
| Miscellaneous | | 0.00 | | 0.94 | | 189 |
| Total overhead expenses | | 0.17 | | 63.20 | | 12640 |
| Total dir & ovhd expense | | 4.36 | | 1590.74 | | 318148 |
| Net return | | -0.45 | | -162.74 | | -32549 |
| Labor & management charge | | 0.08 | | 27.38 | | 5477 |
| Net return over lbr & mgt | | -0.52 | | -190.13 | | -38025 |
| Est. labor hours per unit | | 0.02 | | 7.39 | | 1479 |

| **Cost of Prod Per Head Per Day** | | **Other Information** | | | |
|---|---|---|---|---|---|
| Total direct expenses | 5.44 | No. purchased or trans in | 273 | Hired labor per average head | 214.40 |
| Total dir & ovhd expenses | 5.61 | Number sold or trans out | 258 | Feed cost/head sold/trans | 782.20 |
| With other revenue adjustments | 5.61 | Average number of head | 200 | Total cost/head sold/trans | 1,609.59 |
| With labor & management | 5.69 | Percentage death loss | 1.5 | Feed cost per head per day | 2.76 |
| | | Feed cost per average head | 1,009.04 | Avg. sales price / head | 1,233.42 |

**Contributions to Overhead Expenses**

| Enterprise | Units | Contribution Per Unit | Total Contribution |
|---|---|---|---|
| Organic Corn, Irrigated | 315 Acres | 1,093.83 | 344,557 |
| Corn, Organic, Dryland | 80 Acres | 139.25 | 11,140 |
| Org C Silage, Irrigated | 138 Acres | 408.43 | 56,363 |
| Soybeans, Irrigated | 50 Acres | 1,039.44 | 51,972 |
| Barley, Organic, Dryland | 110 Acres | 52.47 | 5,772 |
| Alf Haylage, Establish | 220 Acres | -286.35 | -62,998 |
| Oatlage, Double Crop | 220 Acres | -62.26 | -13,696 |
| Alf Haylage, Irrigated | 200 Acres | 403.26 | 80,651 |
| Hay, Mixed, Organic, Dryland | 100 Acres | -322.64 | -32,264 |
| Org. Pasture, Irrigated | 125 Acres | 65.3 | 8,163 |
| Dairy | 287 Cow | 2,584.78 | 741,831 |
| Dairy Replac | 200 Head | -99.54 | -19,909 |
| Total contributions | | | 1,171,583 |
| | | | |
| **Overhead expenses** | | | |
| | | | |
| Machinery leases | | | 17,681 |
| Real estate taxes | | | 7,448 |
| Farm insurance | | | 17,482 |
| Dues & professional fees | | | 13,633 |
| Interest on interm. debt | | | 26,271 |
| Interest on lng term debt | | | 17,071 |
| Machinery depreciation | | | 137,928 |
| Building depreciation | | | 58,849 |
| Miscellaneous | | | 2,760 |
| Total overhead expense | | | 299,124 |
| | | | |
| Total return over overhead exp | | | 872,459 |

**Nonfarm Summary**

| Personal Income | Amount |
|---|---|
| Personal wages & salary | - |
| Personal business income | - |
| Personal rental income | - |
| Personal interest income | - |
| Personal cash dividends | - |
| Tax refunds | 5,393 |
| Other personal income | - |
| | |
| Total personal income | 5,393 |
| | |
| **Family Living Expenses** | |
| | |
| Food and meals expense | 11,547 |
| Medical care | 4,840 |
| Health insurance | 10,640 |
| Cash donations | 2,985 |
| Household supplies | 3,753 |
| Clothing | 2,247 |
| Personal care | 4,428 |
| Gifts | 2,495 |
| Education | 1,765 |
| Recreation | 2,057 |
| Utilities (household share) | 5,963 |
| Personal vehicle operating expenses | 5,050 |
| Household real estate taxes | 850 |
| Household repairs | 1,958 |
| Disability / Long term care insurance | 647 |
| Life insurance payments | 3,475 |
| Miscellaneous | 5,250 |
| Total cash family living expense | 69,950 |
| Family living from the farm | - |
| Total family living | 69,950 |
| | |
| Furnishings and appliances | - |
| Personal vehicles | 1,651 |
| Personal business investment | - |
| Other intermediate assets | - |
| Personal real estate | 1,524 |
| Other long term assets | - |
| Personal savings and investments | - |
| Income and social security tax | 25,156 |
| Total cash family living, investment, and Non farm capital purchases | 98,281 |

## *Planned vs Actual*

### *Income Statement*

| Cash Farm Income | Unit | Planned Quantity | Planned Value | Actual Quanitity | Actual Value |
|---|---|---|---|---|---|
| Barley | bu. | - | 6,593 | - | - |
| Soybeans | bu. | 2,000 | 56,000 | - | - |
| Soy, Organic | bu. | - | - | 3,150 | 77,175 |
| Organic Corn | bu. | 40,000 | 440,000 | 57,520 | 704,627 |
| Milk | lb. | 5,454,000 | 1,926,520 | 5,219,067 | 1,782,177 |
| Bull Calves | head | - | - | 43 | 17,373 |
| Dairy Feeder | lb. | - | - | 131,131 | 205,876 |
| Cull breeding livestock | | | 81,810 | | 123,237 |
| Misc. livestock income | | | 10,226 | | - |
| Direct & CC govt payments | | | 10,000 | | 22,508 |
| Patronage dividends, cash | | | 1,100 | | - |
| Crop insurance income | | | - | | 8,320 |
| Insurance income | | | - | | 18,265 |
| Other farm income | | | - | | 3,238 |
| Gross cash farm income | | | 2,532,249 | | 2,962,796 |
| | | | | | |
| Seed | | | 90,866 | | 103,016 |
| Fertilizer | | | 238,125 | | 245,480 |
| Crop insurance | | | 19,798 | | 2,309 |
| Irrigation energy | | | 38,090 | | 29,328 |
| Packaging and supplies | | | - | | 28,115 |
| Custom hire | | | 51,800 | | 67,868 |
| Hauling and trucking | | | - | | 22,780 |
| Purchased feed | | | 363,542 | | 536,272 |
| | | | 27,000 | | - |
| Breeding fees | | | 15,150 | | 11,522 |
| Veterinary | | | 6,058 | | 17,319 |
| Supplies | | | 30,288 | | 67,720 |
| DHIA | | | - | | 7,806 |
| Marketing | | | 15,150 | | 12,829 |
| Bedding | | | - | | 84,900 |
| Interest | | | 74,819 | | 74,114 |
| Fuel & oil | | | 67,000 | | 124,546 |
| Repairs | | | 175,000 | | 255,645 |
| Hired labor | | | 180,000 | | 235,761 |
| Land rent | | | 108,000 | | 99,909 |
| Machinery leases | | | 4,500 | | 66,821 |
| Real estate taxes | | | 5,000 | | 7,448 |
| Farm insurance | | | 15,000 | | 17,482 |
| Utilities | | | 21,000 | | 41,047 |
| Dues & professional fees | | | 1,500 | | 13,633 |
| Organic certification | | | 3,500 | | 3,072 |
| Miscellaneous | | | 27,400 | | 2,760 |
| Consultants | | | 8,500 | | 11,634 |
| Total cash farm expense | | | 1,587,085 | | 2,191,136 |
| | | | | | |
| Net cash farm income | | | 945,164 | | 771,660 |
| Inventory change | | | 143,081 | | -485,752 |
| Depreciation | | | -332,400 | | -196,777 |
| Net farm income | | | 755,845 | | 89,131 |

### *Cash Flows*

| Cash Inflows | Planned | Actual |
|---|---|---|
| Beginning cash balance | 50,000 | 47,673 |
| Gross cash farm income | 2,532,249 | 2,962,796 |
| Personal income | - | 5,393 |
| Capital sales | - | 1,500 |
| Money borrowed | 214,231 | 977,000 |
| Beg personal savings | 3,550 | 45,850 |
| Total inflows | 2,800,030 | 4,040,212 |
| | | |
| ***Cash Outflows*** | | |
| Cash farm expense | 1,587,085 | 2,191,136 |
| Family living | 55,000 | 69,950 |
| Income taxes | 5,300 | 25,156 |
| Capital purchases | 25,000 | 1,051,595 |
| Principal payments | 558,721 | 697,326 |
| Ending personal savings | 3,550 | 2,100 |
| Ending cash balance | 565,374 | 2,949 |
| Total outflows | 2,800,030 | 4,040,212 |

### *Livestock*

| | | |
|---|---|---|
| Dairy Cows | 303 | 287 |
| Milk sold (lb.) | 5,454,000 | 5,219,067 |
| Bull Calves sold | - | 43 |
| Dairy Feeder sold | - | 138 |

### *Ending Inventories*

| | | |
|---|---|---|
| Silage | 3,850 | 3,300 |
| Hay | 1,175 | 594 |
| Straw | 6 | 147 |
| Organic Corn | 25,980 | 41,000 |
| Bull Calves | - | 7 |

## *Crop Production*

| Crop | Unit | Planned Acres | Planned Yield | Planned Production | Actual Acres | Actual Yield | Actual Production |
|---|---|---|---|---|---|---|---|
| Hay, Alfalfa, Dryland | ton | 225.0 | 5.0 | 1,125 | - | - | - |
| Pasture, Irrigated | aum | 180.0 | 5.5 | 990 | - | - | - |
| Org C Silage, Irrigated | ton | 128.0 | 18.0 | 2,304 | 138.0 | 29.0 | 4,002 |
| Hay, Grass, Dryland | ton | 100.0 | 2.0 | 195 | - | - | - |
| Organic Corn, Irrigated | bu. | 313.0 | 160.0 | 50,080 | 315.0 | 190.0 | 59,850 |
| Alfalfa Hay, Establish | ton | 212.0 | 2.0 | 424 | - | - | - |
| Org Oatlage, Double Crop | ton | 212.0 | 5.0 | 1,060 | - | - | - |
| Corn, Organic, Dryland | bu. | 91.0 | 150.0 | 13,650 | 80.0 | 100.0 | 8,000 |
| Barley, Irrigated | bu. | 125.0 | 40.0 | 5,000 | - | - | - |
| Soybeans, Irrigated | bu. | 50.0 | 40.0 | 2,000 | 50.0 | 63.0 | 3,150 |
| Barley, Organic, Dryland | bu. | - | - | - | 110.0 | 60.0 | 6,600 |
| Alf Haylage, Establish | ton | - | - | - | 220.0 | 3.0 | 660 |
| Oatlage, Double Crop | ton | - | - | - | 220.0 | 10.1 | 2,220 |
| Alf Haylage, Irrigated | ton | - | - | - | 200.0 | 8.0 | 1,593 |
| Hay, Mixed, Organic, Dryland | ton | - | - | - | 100.0 | 0.9 | 94 |
| Org. Pasture, Irrigated | aum | - | - | - | 125.0 | 10.3 | 1,284 |

**Comparative Trend**

| | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Profitability** | | | | | | | | | | |
| Gross farm income (accrual) | 229,890 | 416,798 | 626,797 | 961,775 | 1,165,791 | 1,450,360 | 1,395,207 | 1,840,961 | 2,990,855 | 2,476,396 |
| Total farm expense (accrual) | 216,035 | 242,354 | 504,158 | 623,520 | 877,545 | 957,613 | 979,101 | 1,210,092 | 1,658,569 | 2,387,265 |
| Net farm income from oper. | 13,855 | 174,444 | 122,639 | 338,255 | 288,247 | 492,747 | 416,106 | 630,869 | 1,332,286 | 89,131 |
| | | | | | | | | | | |
| Rate of return on assets | 0.0% | 23.0% | 10.9% | 21.3% | 17.4% | 21.0% | 16.9% | 20.5% | 31.6% | 2.1% |
| Rate of return on equity | -4.9% | 49.7% | 19.4% | 47.2% | 29.5% | 33.7% | 24.9% | 31.5% | 47.0% | 1.1% |
| Operating profit margin | 0.0% | 38.8% | 21.9% | 36.2% | 30.9% | 37.5% | 35.4% | 39.7% | 52.6% | 5.8% |
| Asset turnover rate | 33.7% | 59.3% | 49.8% | 59.0% | 56.2% | 55.9% | 47.6% | 51.6% | 60.1% | 36.0% |
| | | | | | | | | | | |
| **Liquidity** | | | | | | | | | | |
| Current ratio | 1.39 | 1.18 | 1.05 | 1.47 | 5.44 | 2.81 | 2.79 | 2.57 | 5.05 | 2.54 |
| Working capital | 22,789 | 24,541 | 6,866 | 90,661 | 348,330 | 477,784 | 460,878 | 572,640 | 947,421 | 541,928 |
| Working cap. to gross rev. | 9.9% | 5.9% | 1.1% | 9.4% | 29.9% | 32.9% | 33.0% | 31.1% | 31.7% | 21.9% |
| | | | | | | | | | | |
| Solvency (market) | | | | | | | | | | |
| Total assets | 822,930 | 1,193,454 | 1,583,467 | 2,061,749 | 2,457,489 | 3,165,968 | 3,662,635 | 4,717,664 | 6,217,404 | 6,125,355 |
| Total liabilities | 451,450 | 574,657 | 820,267 | 977,465 | 1,083,115 | 1,272,344 | 1,341,395 | 1,720,693 | 1,966,227 | 2,009,996 |
| Net worth | 371,480 | 618,797 | 763,200 | 1,084,284 | 1,374,374 | 1,893,624 | 2,321,240 | 2,996,971 | 4,251,177 | 4,115,358 |
| Debt to asset ratio | 54% | 50% | 54% | 49% | 45% | 41% | 33% | 39% | 33% | 34% |
| Net worth change % | - | - | 23% | 42% | 27% | 38% | 27% | 29% | 42% | 1% |
| | | | | | | | | | | |
| **Repayment Capacity** | | | | | | | | | | |
| Term debt coverage ratio | 0.03 | 4.18 | 3.85 | 3.50 | 2.53 | 4.75 | 3.30 | 3.37 | 4.68 | 0.99 |
| Replacement coverage ratio | - | - | 3.85 | 3.50 | 2.53 | 3.46 | 3.30 | 3.37 | 4.68 | 0.99 |
| | | | | | | | | | | |
| **Efficiency** | | | | | | | | | | |
| Operating expense ratio | 85.5% | 66.4% | 69.4% | 58.5% | 65.0% | 52.8% | 53.1% | 57.9% | 50.4% | 85.5% |
| Interest expense ratio | 5.2% | 5.3% | 5.0% | 1.6% | 4.4% | 3.9% | 4.6% | 3.2% | 2.6% | 3.0% |
| | | | | | | | | | | |
| **Other Cash Flows** | | | | | | | | | | |
| Personal income | 8,097 | 31,809 | 7,247 | 4,383 | 6,422 | 5,990 | 5,198 | - | 710 | 5,393 |
| Owner draws/Adj. family living | 37,570 | 34,532 | 37,274 | 49,224 | 46,145 | 29,845 | 59,819 | 72,203 | 88,370 | 69,950 |
| | | | | | | | | | | |
| **Crop and Livestock Summary** | | | | | | | | | | |
| Total crop acres | 305 | 345 | 480 | 505 | 732 | 643 | 918 | 993 | 1,096 | 1,213 |
| Crop acres owned | 110 | 105 | 185 | 86 | 138 | 98 | 85 | 157 | 157 | 368 |
| Crop acres cash rented | 195 | 240 | 295 | 419 | 594 | 545 | 833 | 836 | 939 | 845 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| **Organic Dairy** | | | | | | | | | | |
| Average number of cows | 80 | 82 | 120 | 180 | 211 | 170 | 181 | 206 | 257 | 287 |
| Milk (lb.) / Cow | 15,596 | 16,659 | 18,456 | 16,376 | 15,535 | 17,751 | 17,819 | 18,035 | 17,603 | 18,185 |
| Price / cwt. | 12.04 | 21.38 | 26.4 | 25.97 | 26.32 | 25.81 | 27.69 | 29.47 | 31 | 34.15 |
| --- PER COW --- | | | | | | | | | | |
| Gross margin | - | - | - | - | - | 4,923.01 | 5,052.11 | 5,090.07 | 5,057.82 | 6,307.45 |
| Total direct expenses | - | - | - | - | - | 3,832.68 | 4,254.60 | 3,517.71 | 3,592.85 | 3,855.16 |
| Total overhead expenses | - | - | - | - | - | 477.01 | 242.80 | 195.62 | 195.52 | 277.61 |
| Total dir & ovhd expenses | - | - | - | - | - | 4,309.69 | 4,497.40 | 3,713.33 | 3,788.37 | 4,132.78 |
| Net return | - | - | - | - | - | 613.32 | 554.71 | 1,376.74 | 1,269.45 | 2,174.67 |
| Net return over lbr & mgt | - | - | - | - | - | 289.78 | 393.17 | 1,236.45 | 1,133.83 | 2,054.38 |

# *Monthly Cash Flow Plan Executive Summary*

## *Projected Cash Flow Summary*

| | | |
|---|---|---|
| Total operating inflow | | 2,730,021 |
| Total operating outflow | (-) | 1,968,543 |
| Capital purchases | (-) | 25,000 |
| Capital sales | (+) | - |
| New credit | (+) | - |
| Loan payments | (-) | 294,189 |
| **Net cash flow** | **(=)** | **442,289** |
| | | |
| Beginning cash balance | (+) | 2,949 |
| Operating loan borrowings | (+) | 300,630 |
| Operating loan principal payments | (-) | 441,591 |
| Ending cash balance | (=) | 304,277 |
| | | |
| Beginning operating loan balance | | 140,961 |
| Peak operating loan balance (Sep) | | 276,400 |
| Ending operating loan balance | | - |

## *Projected Change in Working Capital*

| | | |
|---|---|---|
| Change in cash | | 301,328 |
| Change in current inventories | (+) | 411,094 |
| Change in operating loan balance | (-) | -140,961 |
| Change in princ due on term loans | (-) | -2,790 |
| Estimated change in working capital | (=) | 856,172 |

## *Projected Income Statement*

| | | |
|---|---|---|
| Gross cash farm income | | 2,730,021 |
| Inventory change - income items | (+) | 407,516 |
| Gross revenue | (=) | 3,137,537 |
| | | |
| Cash farm operating expense | | 1,888,543 |
| Interest expense | (+) | 90,829 |
| Depreciation | (+) | 304,583 |
| Inventory change - expense items | (+) | -3,578 |
| Total farm expense | (=) | 2,280,377 |
| Net farm income | | 857,159 |

## *Projected Earned Net Worth Change*

| | | |
|---|---|---|
| Net farm income | | 857,159 |
| Family living expense | (-) | 55,000 |
| Income taxes accrued | (-) | 25,000 |
| Personal asset depreciation | (-) | 2,371 |
| Earned net worth change | (=) | 774,788 |

## *Term Debt Coverage*

| | | |
|---|---|---|
| Net farm income from operations | | 857,159 |
| Depreciation | (+) | 304,583 |
| Personal income | (+) | - |
| Family living expense | (-) | 55,000 |
| Income taxes accrued | (-) | 25,000 |
| Interest on term debt | (+) | 77,938 |
| Capital debt repayment capacity | (=) | 1,159,680 |
| Term debt payments | | 284,876 |
| Capital debt repayment margin | | 874,804 |
| Term debt coverage ratio | | 4.07 |

## *Financial Standards Measures*

| **Liquidity** | **Beginning** | **Ending** |
|---|---|---|
| Current ratio | 2.5 | 7.8 |
| Working capital | 541,928 | 1,398,101 |
| Working capital to gross revenue | 17.3 % | 44.6 % |
| **Solvency (market)** | | |
| Debt to asset ratio | 31.8 % | 24.1 % |
| Debt to equity ratio | 0.5 | 0.3 |
| **Profitability (market)** | | |
| Net farm income | | 857,159 |
| Rate of return on assets | | 14.8 % |
| Rate of return on equity | | 18.5 % |
| Operating profit margin | | 35.3 % |
| EBITDA | | 1,248,993 |
| **Repayment Capacity** | | |
| Term debt coverage ratio (farm) | | 4.07 |
| Replacement margin coverage ratio | | 3.21 |
| **Efficiency** | | |
| Asset turnover rate (market) | | 42.0 |
| Operating expense ratio | | 60.2 % |
| Depreciation ratio | | 9.7 % |
| Interest expense ratio | | 2.8 % |
| Net farm income ratio | | 27.3 % |
| **Other** | | |
| Term debt coverage (farm+personal) | | 4.07 |
| Term debt to EBITDA | | 1.20 |

## *Shocks to Farm Term Debt Coverage Ratio*

| | |
|---|---|
| 10% decrease in gross income | 2.97 |
| 10% increase in operating expenses | 3.41 |
| 3% increase in interest rates | 3.47 |

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***CASH INFLOWS*** | | | | | | | | | | | | | |
| Beg cash bal | 2949 | - | 4893 | - | 30676 | - | - | - | - | - | - | 242842 | 2949 |
| Soybeans | - | - | - | - | - | - | - | - | - | 56000 | - | - | 56000 |
| Organic Corn | - | 77500 | - | 77500 | - | - | - | - | - | - | 440000 | - | 595000 |
| Milk | 151826 | 151826 | 156704 | 157314 | 161406 | 161406 | 161406 | 161406 | 167662 | 175795 | 183302 | 183302 | 1973353 |
| Cull stock | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 7005 | 84060 |
| Misc. lvstk | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 876 | 10508 |
| DCP payments | - | - | - | - | - | - | - | - | - | 10000 | - | - | 10000 |
| Pat dividend | - | 1100 | - | - | - | - | - | - | - | - | - | - | 1100 |
| Total inflow | 162656 | 238307 | 169478 | 242694 | 199963 | 169286 | 169286 | 169286 | 175542 | 249675 | 631183 | 434024 | 2732970 |
| ***CASH OUTFLOWS*** | | | | | | | | | | | | | |
| Seed | - | - | - | 37704 | 53860 | - | - | - | - | - | - | - | 91564 |
| Fertilizer | - | - | - | 8250 | 176575 | - | 24150 | 24150 | - | - | 1800 | - | 234925 |
| Crop insur. | - | - | - | - | - | - | - | 15457 | 4200 | - | - | - | 19657 |
| Irrig energy | - | - | - | - | - | 7689 | 13558 | 12733 | 3240 | - | - | - | 37220 |
| C. Cust hire | - | - | - | - | - | 360 | 720 | 720 | - | - | - | - | 1800 |
| Pur. Corn | 18782 | 18782 | 19308 | 19442 | 19442 | 19442 | - | 164 | 20204 | 21175 | 22108 | 22108 | 200959 |
| Pur. Organic | - | - | - | - | - | 9000 | 9000 | 9000 | - | - | - | - | 27000 |
| Purch. feed | 29267 | 29267 | 30111 | 30302 | 30302 | 30302 | 30302 | 30302 | 31486 | 33003 | 34448 | 34448 | 373540 |
| Breeding | 1376 | 1434 | 1434 | 1219 | 1219 | 1258 | 1263 | 1263 | 1263 | 1263 | 1263 | 1312 | 15567 |
| Veterinary | 488 | 488 | 500 | 505 | 505 | 505 | 505 | 505 | 525 | 550 | 575 | 575 | 6224 |
| Supplies | 2441 | 2441 | 2499 | 2524 | 2524 | 2524 | 2524 | 2524 | 2624 | 2749 | 2874 | 2874 | 31121 |
| L. Marketing | 1227 | 1227 | 1262 | 1266 | 1266 | 1266 | 1266 | 1266 | 1310 | 1368 | 1421 | 1421 | 15567 |
| Fuel & oil | 20000 | - | 20000 | - | 20000 | - | 20000 | - | 20000 | - | 20000 | - | 120000 |
| Repairs | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 14583 | 175000 |
| Cust hire | - | - | - | 21667 | 21667 | - | - | - | 21667 | - | - | - | 65000 |
| Labor | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 16667 | 200000 |
| Land rent | - | - | - | - | 54000 | - | - | - | - | - | 54000 | - | 108000 |
| Mach leases | - | - | - | - | - | 10000 | 10000 | 10000 | 10000 | 10000 | - | - | 50000 |
| RE taxes | - | - | - | - | 3750 | - | - | - | - | - | 3750 | - | 7500 |
| Farm insur. | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 1250 | 15000 |
| Utilities | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 3333 | 40000 |
| Marketing | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 12000 |
| Dues & fees | - | - | - | - | 750 | - | - | - | 750 | - | - | - | 1500 |
| Org certific | 875 | - | - | 875 | - | - | 875 | - | - | 875 | - | - | 3500 |
| Misc. | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 2283 | 27400 |
| Consultants | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 708 | 8500 |
| Living/Draw | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 4583 | 55000 |
| Income taxes | - | - | 25000 | - | - | - | - | - | - | - | - | - | 25000 |
| Min end bal | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Tot. outflow | 118864 | 98048 | 144523 | 168162 | 430268 | 126754 | 158571 | 152492 | 161677 | 115390 | 186647 | 107146 | 1968543 |
| Opr. surplus | 43792 | 140259 | 24955 | 74533 | -230305 | 42532 | 10715 | 16794 | 13865 | 134285 | 444535 | 326878 | 764427 |

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ***CAPITAL PURCHASES*** | | | | | | | | | | | | | |
| Bean Head | - | - | - | - | - | - | 25000 | - | - | - | - | - | 25000 |
| Tot. cap pur | - | - | - | - | - | - | 25000 | - | - | - | - | - | 25000 |
| ***LOAN PAYMENTS*** | | | | | | | | | | | | | |
| AgriMax-12 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 14814 |
| AgriMax-123 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 5300 | 63600 |
| AgriMax-1234 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 905 | 10860 |
| JDCC-2 Gra.. | - | - | - | - | - | - | - | - | - | 5412 | - | - | 5412 |
| JDCC-2 Mey.. | - | - | - | - | - | - | - | - | 7446 | - | - | - | 7446 |
| JDCC-8230 JD | - | - | - | 24000 | - | - | - | - | - | - | - | - | 24000 |
| JDCC-8310 JD | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 8400 |
| North-Arte.. | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 735 | 8820 |
| North-Arte.. | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 806 | 9672 |
| JDCC-Baler | - | - | - | - | - | - | 4200 | - | - | - | - | 4200 | 8400 |
| AgCnt-Case.. | - | - | 8000 | - | - | - | - | - | - | - | - | - | 8000 |
| JDCC-Chopper | - | - | - | - | - | - | - | - | - | 10800 | - | - | 10800 |
| JDCC-JD332D | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 672 | 8064 |
| Unite-Semi.. | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 903 | 10836 |
| First-2015.. | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 5911 | 70932 |
| First-Sout.. | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 1235 | 14820 |
| Tot loan pay | 18402 | 18402 | 26402 | 42402 | 18402 | 18402 | 22602 | 18402 | 25848 | 34614 | 18402 | 22602 | 284876 |
| **Surp. or def** | **25390** | **121857** | **-1447** | **32131** | **-248707** | **24130** | **-36886** | **-1608** | **-11983** | **99672** | **426134** | **304277** | **454551** |
| ***ANNUAL OPERATING LOAN TRANSACTIONS & BALANCES*** | | | | | | | | | | | | | |
| Beg AO bal | 140961 | 116334 | - | 1447 | - | 248707 | 225923 | 262810 | 264417 | 276400 | 182305 | - | 140961 |
| AO borrowing | - | - | 1447 | - | 248707 | - | 36886 | 1608 | 11983 | - | - | - | 300630 |
| AO int. pay | 764 | 630 | - | 8 | - | 1347 | - | - | - | 5577 | 987 | - | 9313 |
| AO prin. pay | 24627 | 116334 | - | 1447 | - | 22783 | - | - | - | 94095 | 182305 | - | 441591 |
| **End AO bal.** | **116334** | **-** | **1447** | **-** | **248707** | **225923** | **262810** | **264417** | **276400** | **182305** | **-** | **-** | **-** |
| Accrued int. | - | - | - | - | - | - | 1224 | 2647 | 4080 | - | - | - | - |
| End cash bal | - | 4893 | - | 30676 | - | - | - | - | - | - | 242842 | 304277 | 304277 |

## BALANCE SHEETS

| | 1/1/2016 | | Projected 1/1/2017 |
|---|---|---|---|
| **ASSETS** | | | |
| **Current Assets** | | | |
| Cash and checking | 2,949 | | 304,277 |
| Accounts receivable | 178,000 | | 80,000 |
| Other current assets | 13,600 | | ######000 |
| Crops | 695,700 | | 1,210,966 |
| Mkt lvst | 3,150 | | - |
| Total current assets | 893,399 | | 1,602,242 |
| **Intermediate Assets** | | | |
| Brdg lvst | 696,700 | | 627,030 |
| Machinery | 1,510,164 | | 1,381,648.00 |
| Titled vehicles | 148,081 | | 133,273 |
| Total intermediate assets | 2,354,945 | | 2,141,951 |
| **Long Term Assets** | | | |
| Land | 1,092,621 | | 1,092,621 |
| Bldgs & improve. | 1,331,772 | | 1,265,183 |
| Other long term | 150,000 | | 150,000 |
| Total long term assets | 2,574,393 | | 2,507,804 |
| Total farm assets | 5,822,737 | | 6,251,997 |
| Personal assets | 302,618 | | 300,247 |
| Total assets | 6,125,355 | | 6,552,244 |
| **LIABILITIES** | | | |
| **Current Liabilities** | | | |
| Accrued interest | 6,815 | | 3,236 |
| Prin due on term loans | 203,695 | | 200,905 |
| Operating loan(s) | 140,961 | | - |
| Total current liabilities | 351,471 | | 204,142 |
| **Intermediate Liabilities** | | | |
| AgriMax-123 | 249,115 | | 198,477 |
| Northland-ArtexSpd,TMR | 54,974 | | 47,699 |
| Northland-ArtexSpd2015 | 40,730 | | 32,496 |
| John Deere Credit-8230 JD | 90,888 | | 70,441 |
| John Deere Credit-Chopper | 14,970 | | 4,751 |
| AgCountry-Case Finishe | 14,885 | | 7,481 |
| United Lease-Semi 2006 | 20,790 | | 9,954 |
| John Deere Credit-JD332D | 9,960 | | 1,896 |
| JDCC-2 MeyBoxes | 14,074 | | 7,682 |
| JDCC-2 GravBoxes | 5,238 | | 217 |
| John Deere Credit-8310 JD | 42,643 | | 35,779 |
| John Deere Credit-Baler | 40,618 | | 33,389 |
| AgriMax-1234 | 46,124 | | 38,705 |
| Total inter. liabilities | 645,009 | | 488,967 |
| **Long Term Liabilities** | | | |
| First-2015 Refinan | 692,180 | | 653,536 |
| First National-SouthFarm | 165,600 | | 159,716 |
| Total long term liab. | 857,780 | | 813,252 |
| Total farm liabilities | 1,854,260 | | 1,506,361 |
| Personal liabilities | - | | - |
| Total liabilities | 1,854,260 | | 1,506,361 |
| Net worth | 4,271,095 | | 5,045,884 |
| Net worth change | | 774,788 | |
| Total debt to asset ratio | 30% | | 23% |

## *Financial Summary*
## *Area Farm Business Management Data*
## *(Farms Sorted By Net Farm Income)*

| | *Avg. Of All Farms* | *Low 20%* | *40 - 60%* | *High 20%* |
|---|---|---|---|---|
| **Income Statement** | | | | |
| Gross cash farm income | 551,703 | 620,333 | 276,643 | 1,122,087 |
| Total cash farm expense | 469,847 | 593,073 | 240,496 | 890,566 |
| Net cash farm income | 81,857 | 27,259 | 36,147 | 231,521 |
| Inventory change | -5,368 | -82,585 | 10,272 | 42,014 |
| Depreciation | -40,070 | -49,058 | -22,131 | -74,889 |
| Net farm income from operations | 36,419 | -104,383 | 24,288 | 198,646 |
| Gain or loss on capital sales | 763 | -479 | -152 | 4,104 |
| Average net farm income | 37,182 | -104,862 | 24,136 | 202,750 |
| Median net farm income | 23,730 | -52,504 | 21,107 | 145,215 |
| **Profitability (cost)** | | | | |
| Rate of return on assets | 1.4 % | -6.2 % | 1.2 % | 5.9 % |
| Rate of return on equity | -0.9 % | -22.1 % | -1.4 % | 6.9 % |
| Operating profit margin | 4.7 % | -25.0 % | 4.5 % | 17.5 % |
| Asset turnover rate | 29.8 % | 24.9 % | 26.1 % | 33.9 % |
| **Profitability (market)** | | | | |
| Rate of return on assets | 2.1 % | -3.3 % | 2.1 % | 5.3 % |
| Rate of return on equity | 0.9 % | -13.2 % | 1.2 % | 6.8 % |
| Operating profit margin | 8.3 % | -16.4 % | 10.2 % | 18.0 % |
| Asset turnover rate | 24.6 % | 20.4 % | 20.8 % | 29.4 % |
| **Liquidity & Repayment (end of year)** | | | | |
| Current assets | 362,417 | 429,792 | 189,732 | 731,888 |
| Current liabilities | 223,790 | 384,179 | 123,920 | 292,926 |
| Current ratio | 1.62 | 1.12 | 1.53 | 2.50 |
| Working capital | 138,627 | 45,613 | 65,811 | 438,961 |
| Working capital to gross inc | 24.7 % | 7.9 % | 22.3 % | 37.4 % |
| Term debt coverage ratio | 0.88 | -0.38 | 1.04 | 1.75 |
| Replacement coverage ratio | 0.76 | -0.34 | 0.87 | 1.46 |
| Term debt to EBITDA | 4.33 | -55.87 | 5.11 | 2.18 |
| **Solvency (end of year at cost)** | | | | |
| Number of farms | 588 | 117 | 117 | 118 |
| Total assets | 1,665,278 | 1,817,177 | 1,069,539 | 3,050,030 |
| Total liabilities | 726,975 | 1,069,949 | 482,771 | 1,008,198 |
| Net worth | 938,303 | 747,227 | 586,768 | 2,041,831 |
| Net worth change | 14,662 | -109,146 | 18,553 | 133,136 |
| Farm debt to asset ratio | 46 % | 63 % | 49 % | 34 % |
| Total debt to asset ratio | 44 % | 59 % | 45 % | 33 % |
| Change in earned net worth % | 2 % | -13 % | 3 % | 7 % |
| **Solvency (end of year at market)** | | | | |
| Number of farms | 588 | 117 | 117 | 118 |
| Total assets | 2,003,026 | 2,209,958 | 1,322,157 | 3,504,564 |
| Total liabilities | 895,016 | 1,252,677 | 582,158 | 1,334,090 |
| Net worth | 1,108,011 | 957,282 | 739,999 | 2,170,474 |
| Total net worth change | 30,645 | -74,890 | 32,784 | 138,386 |
| Farm debt to asset ratio | 47 % | 60 % | 48 % | 39 % |
| Total debt to asset ratio | 45 % | 57 % | 44 % | 38 % |
| Change in total net worth % | 3 % | -7 % | 5 % | 7 % |
| **Nonfarm Information** | | | | |
| Net nonfarm income | 28,964 | 37,732 | 25,912 | 20,450 |
| Farms reporting living expenses | 76 | 24 | 13 | 9 |
| Total family living expense | 48,783 | 46,415 | 39,178 | 69,336 |
| Total living, invest, cap. purch | 74,687 | 60,973 | 51,177 | 181,455 |
| **Crop Acres** | | | | |
| Total crop acres | 688 | 821 | 405 | 1,175 |
| Total crop acres owned | 248 | 286 | 175 | 400 |
| Total crop acres cash rented | 428 | 521 | 224 | 754 |
| Total crop acres share rented | 12 | 14 | 6 | 21 |
| Machinery value per crop acre | 611 | 585 | 573 | 664 |

***Financial Standards Measures***
***Area Farm Business Management Data***
***(Farms Sorted By Net Farm Income)***

| | *Avg. Of All Farms* | *Low 20%* | *40 - 60%* | *High 20%* |
|---|---|---|---|---|
| **Liquidity** | | | | |
| Current ratio | 1.62 | 1.12 | 1.53 | 2.50 |
| Working capital | 138,627 | 45,613 | 65,811 | 438,961 |
| Working capital to gross inc | 24.7 % | 7.9 % | 22.3 % | 37.4 % |
| **Solvency (market)** | | | | |
| Farm debt to asset ratio | 47 % | 60 % | 48 % | 39 % |
| Farm equity to asset ratio | 53 % | 40 % | 52 % | 61 % |
| Farm debt to equity ratio | 0.89 | 1.50 | 0.91 | 0.65 |
| **Profitability (cost)** | | | | |
| Rate of return on farm assets | 1.4 % | -6.2 % | 1.2 % | 5.9 % |
| Rate of return on farm equity | -0.9 % | -22.1 % | -1.4 % | 6.9 % |
| Operating profit margin | 4.7 % | -25.0 % | 4.5 % | 17.5 % |
| Net farm income | 37,182 | -104,862 | 24,136 | 202,750 |
| EBITDA | 104,332 | -10,711 | 63,628 | 312,504 |
| **Repayment Capacity** | | | | |
| Capital debt repayment capacity | 70,274 | -37,110 | 47,456 | 235,678 |
| Capital debt repayment margin | -9,279 | -134,422 | 2,030 | 101,229 |
| Replacement margin | -22,698 | -147,120 | -6,923 | 74,457 |
| Term debt coverage ratio | 0.88 | -0.38 | 1.04 | 1.75 |
| Replacement coverage ratio | 0.76 | -0.34 | 0.87 | 1.46 |
| **Efficiency** | | | | |
| Asset turnover rate (cost) | 29.8 % | 24.9 % | 26.1 % | 33.9 % |
| Operating expense ratio | 81.4 % | 101.9 % | 78.4 % | 73.4 % |
| Depreciation expense ratio | 7.1 % | 8.5 % | 7.5 % | 6.4 % |
| Interest expense ratio | 5.0 % | 7.7 % | 5.8 % | 3.3 % |
| Net farm income ratio | 6.6 % | -18.1 % | 8.2 % | 17.3 % |

***Household and Personal Expenses***
***Area Farm Business Management Data***
***(Farms Sorted By Net Farm Income)***

| | *Avg. Of All Farms* | *Low 20%* | *40 - 60%* | *High 20%* |
|---|---|---|---|---|
| Average family size | 3.5 | 3.3 | 3.2 | 4.3 |
| Family Living Expenses | | | | |
| Food and meals expense | 8,439 | 9,017 | 6,579 | 9,740 |
| Medical care | 3,078 | 2,879 | 1,123 | 6,780 |
| Health insurance | 3,869 | 3,744 | 1,811 | 5,178 |
| Cash donations | 1,340 | 412 | 1,466 | 1,988 |
| Household supplies | 3,125 | 1,467 | 3,151 | 2,621 |
| Clothing | 1,558 | 1,152 | 1,056 | 3,819 |
| Personal care | 2,843 | 4,545 | 1,933 | 3,335 |
| Child / Dependent care | 771 | 713 | 715 | 1,149 |
| Alimony and child support | 5 | - | 32 | - |
| Gifts | 1,603 | 1,103 | 1,639 | 3,665 |
| Education | 1,632 | 1,233 | 1,833 | 1,149 |
| Recreation | 2,815 | 2,421 | 1,497 | 6,238 |
| Utilities (household share) | 2,721 | 2,835 | 3,074 | 3,022 |
| Personal vehicle operating exp | 4,156 | 3,196 | 4,138 | 4,126 |
| Household real estate taxes | 260 | 188 | 274 | 153 |
| Dwelling rent | 564 | 525 | - | 1,988 |
| Household repairs | 1,544 | 1,694 | 1,472 | 4,255 |
| Personal interest | 1,488 | 1,357 | 916 | 1,497 |
| Disability / Long term care ins | 270 | 411 | 96 | 502 |
| Life insurance payments | 1,476 | 1,822 | 1,753 | 1,777 |
| Personal property insurance | 196 | 237 | 56 | 74 |
| Miscellaneous | 4,685 | 4,841 | 4,565 | 5,684 |
| Total cash family living expense | 48,439 | 45,791 | 39,178 | 68,740 |
| Family living from the farm | 344 | 624 | - | 597 |
| Total family living | 48,783 | 46,415 | 39,178 | 69,336 |
| Other Nonfarm Expenditures | | | | |
| Income taxes | 7,714 | 6,221 | 4,487 | 35,410 |
| Furnishing & appliance purchases | 181 | - | 102 | - |
| Nonfarm vehicle purchases | 3,004 | 1,536 | 2,046 | 10,325 |
| Nonfarm real estate purchases | 10,241 | 696 | -2,222 | 51,722 |
| Other nonfarm capital purchases | 1,185 | - | 1,185 | 8,182 |
| Nonfarm savings & investments | 3,923 | 6,728 | 6,402 | 7,077 |
| Total other nonfarm expenditures | 26,248 | 15,182 | 11,999 | 112,715 |
| Total cash family living investment & nonfarm capital purch | 74,687 | 60,973 | 51,177 | 181,455 |

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

| | Organic Corn | Organic Alfafa Haylage |
|---|---|---|
| Acres | 47 | 111.63 |
| Yield per acre | 116.22 | 5.14 |
| Operators share of yield % | 100 | 100 |
| Value | 10.65 | 72.28 |
| Crop insurance per acre | 4.07 | 5.71 |
| Gross return per acre | 1241.99 | 377.07 |
| **Direct Expenses** | | |
| Seed | 86.15 | 4.40 |
| Fertilizer | 148.09 | 14.54 |
| Non-chemical crop protect | - | 1.54 |
| Crop insurance | 30.11 | 1.18 |
| Storage | | 0.16 |
| Drying Expense | 6.46 | |
| Packaging and supplies | | 2.15 |
| Fuel & oil | 43.12 | 23.16 |
| Repairs | 83.00 | 31.80 |
| Custom hire | 6.88 | 40.55 |
| Hired labor | 35.54 | 0.55 |
| Land rent | 73.86 | 27.16 |
| Machinery leases | 4.96 | - |
| Utilities | 1.36 | - |
| Hauling and trucking | 13.11 | - |
| Organic Certification | 3.50 | 0.77 |
| Operating interest | 10.81 | 1.62 |
| Miscellaneous | 3.45 | 0.67 |
| Total direct expenses per acre | 550.40 | 150.26 |
| Return over direct exp per acre | 691.59 | 226.81 |
| **Overhead Expenses** | | |
| Hired labor | 1.06 | 46.40 |
| Machinery leases | 0.13 | 2.43 |
| RE & pers. property taxes | 6.45 | 4.21 |
| Farm insurance | 10.17 | 5.86 |
| Utilities | 4.21 | 4.98 |
| Dues & professional fees | 3.51 | 1.90 |
| Interest | 15.34 | 22.53 |
| Mach & bldg depreciation | 88.71 | 15.54 |
| Miscellaneous | 1.96 | 3.83 |
| Total overhead expenses per acre | 131.54 | 107.68 |
| Total dir & ovhd expenses per acre | 681.94 | 257.94 |
| Net return per acre | 560.05 | 119.13 |
| Government payments | 33.64 | 8.51 |
| Net return with govt payments | 593.69 | 127.65 |
| Labor & Management charge | 41.21 | 31.02 |
| Net return over lbr & mgt | 552.48 | 96.62 |
| **Cost of Production** | | |
| Total direct expense | 4.74 | 29.23 |
| Total dir & ovhd exp | 5.87 | 50.18 |
| Less govt & other income | 5.58 | 47.44 |
| With labor & management | 5.93 | 53.47 |
| Net value per unit | 10.65 | 72.28 |
| Machinery cost per acre | 249.54 | 126.81 |
| Est. labor hours per acre | 2.65 | 3.08 |

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***
***Irrigated Crops ****

| | Corn | Corn Silage | Hay, Alfalfa | Soybeans |
|---|---|---|---|---|
| Acres | 193.00 | 100.63 | 75.38 | 125.71 |
| Yield per acre | 186.85 | 25.42 | 4.97 | 52.97 |
| Operators share of yield % | 100.00 | 100.00 | 100.00 | 100.00 |
| Value | 3.37 | 34.85 | 146.90 | 8.34 |
| Total product return per acre | 618.86 | 885.89 | 729.93 | 441.98 |
| Crop insurance per acre | 4.76 | - | - | 12.07 |
| Other crop income per acre | 3.10 | 1.84 | 0.06 | 1.37 |
| Gross return per acre | 626.72 | 887.72 | 729.99 | 455.43 |
| **Direct Expenses** | | | | |
| Seed | 98.35 | 100.70 | 2.59 | 54.22 |
| Fertilizer | 146.45 | 114.17 | 80.29 | 28.32 |
| Crop chemicals | 27.13 | 33.43 | 3.12 | 27.56 |
| Crop insurance | 18.04 | 12.23 | 0.66 | 13.20 |
| Marketing | 1.19 | - | - | 1.36 |
| Storage | 0.99 | - | 2.84 | 0.08 |
| Irrigation energy | 25.50 | 18.57 | 16.89 | 22.89 |
| Packaging and supplies | 0.43 | 12.89 | 17.13 | 0.34 |
| Fuel & oil | 29.23 | 47.94 | 34.51 | 13.74 |
| Repairs | 44.98 | 80.56 | 56.54 | 29.40 |
| Custom hire and Trucking | 17.40 | 53.20 | 48.70 | 10.47 |
| Hired labor | 2.01 | - | 1.01 | 3.92 |
| Land Rent | 69.98 | 19.12 | 73.76 | 63.78 |
| Operating interest | 8.65 | 6.93 | 5.02 | 7.82 |
| Miscellaneous | 3.16 | 7.72 | 8.36 | 3.75 |
| Total direct expenses per acre | 509.53 | 507.45 | 351.42 | 286.12 |
| Return over direct exp per acre | 117.19 | 380.28 | 378.58 | 169.31 |
| **Overhead Expenses** | | | | |
| Hired labor | 27.08 | 40.86 | 22.60 | 13.64 |
| Mach and bldg leases | 10.35 | 10.62 | 6.19 | 2.89 |
| RE & pers. property taxes | 8.03 | 10.81 | 4.48 | 7.04 |
| Farm insurance | 10.88 | 13.31 | 5.91 | 7.94 |
| Utilities | 4.88 | 8.30 | 3.29 | 3.36 |
| Dues & professional fees | 4.17 | 4.13 | 2.16 | 1.57 |
| Interest | 29.05 | 53.50 | 23.40 | 20.67 |
| Mach & bldg depreciation | 67.00 | 72.18 | 62.02 | 32.51 |
| Miscellaneous | 6.46 | 4.29 | 3.80 | 4.17 |
| Total overhead expenses per acre | 167.91 | 218.01 | 133.84 | 93.80 |
| Total dir & ovhd expenses per acre | 677.44 | 725.46 | 485.26 | 379.91 |
| Net return per acre | -50.72 | 162.27 | 244.73 | 75.51 |
| Government payments | 38.06 | 39.27 | 37.05 | 40.40 |
| Net return with govt pmts | -12.66 | 201.54 | 281.78 | 115.91 |
| Labor & management charge | 51.94 | 47.35 | 38.43 | 31.23 |
| Net return over lbr & mgt | -64.60 | 154.19 | 243.35 | 84.68 |
| **Cost of Production** | | | | |
| Total direct expense per bu. | 2.73 | 19.96 | 70.72 | 5.40 |
| Total dir & ovhd exp per bu. | 3.63 | 28.54 | 97.66 | 7.17 |
| Less govt & other income | 3.34 | 26.92 | 90.19 | 6.16 |
| With labor & management | 3.62 | 28.79 | 97.93 | 6.75 |
| Net value per unit | 3.27 | 34.85 | 146.90 | 8.34 |
| Machinery cost per acre | 170.82 | 269.62 | 212.74 | 90.40 |
| Est. labor hours per acre | 4.22 | 4.67 | 2.81 | 2.60 |

** Combined data for rented and owned land. Actual land cost is the sum of: Land Rent, Interest, & RE taxes.*

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

***Corn on Cash Rent***

| | ***Avg. Of All Farms*** | ***40 - 60%*** | ***High 20%*** |
|---|---|---|---|
| Acres | 159.28 | 201.41 | 114.44 |
| Yield per acre (bu.) | 164.17 | 158.52 | 179.77 |
| Operators share of yield % | 100.00 | 100.00 | 100.00 |
| Value per bu. | 3.32 | 3.37 | 3.33 |
| Other product return per acre | 4.40 | 4.50 | 11.87 |
| Total product return per acre | 548.80 | 539.20 | 610.38 |
| Hedging gains/losses per acre | 0.51 | - | 3.64 |
| Crop insurance per acre | 6.82 | 8.68 | 1.56 |
| Other crop income per acre | 2.10 | 2.01 | 2.06 |
| Gross return per acre | 558.23 | 549.88 | 617.65 |
| **Direct Expenses** | | | |
| Seed | 94.78 | 95.10 | 85.91 |
| Fertilizer | 124.86 | 135.31 | 99.36 |
| Crop chemicals | 27.35 | 24.64 | 24.88 |
| Crop insurance | 20.88 | 22.13 | 18.51 |
| Drying expense | 10.30 | 11.52 | 10.48 |
| Storage | 0.90 | 0.58 | 0.41 |
| Packaging and supplies | 1.29 | 0.04 | 1.86 |
| Fuel & oil | 25.19 | 23.34 | 27.76 |
| Repairs | 45.82 | 52.37 | 37.07 |
| Custom hire | 12.91 | 9.78 | 10.79 |
| Hired labor | 1.49 | 1.67 | 0.63 |
| Land rent | 102.00 | 87.26 | 81.42 |
| Machinery leases | 3.73 | 1.65 | 3.16 |
| Utilities | 0.33 | 0.88 | 0.00 |
| Hauling and trucking | 2.24 | 1.54 | 1.57 |
| Marketing | 0.88 | 1.35 | 1.00 |
| Operating interest | 6.47 | 7.49 | 4.70 |
| Miscellaneous | 2.41 | 0.74 | 2.06 |
| Total direct expenses per acre | 483.83 | 477.39 | 411.55 |
| Return over direct exp per acre | 74.40 | 72.49 | 206.09 |
| **Overhead Expenses** | | | |
| Hired labor | 15.83 | 15.48 | 15.03 |
| Machinery leases | 6.92 | 9.75 | 4.45 |
| Building leases | 0.59 | 0.52 | 1.94 |
| Farm insurance | 7.54 | 7.14 | 5.78 |
| Utilities | 4.91 | 3.57 | 4.96 |
| Dues & professional fees | 3.14 | 3.31 | 2.58 |
| Interest | 7.83 | 8.59 | 6.86 |
| Mach & bldg depreciation | 50.05 | 47.44 | 48.92 |
| Miscellaneous | 4.91 | 6.43 | 4.50 |
| Total overhead expenses per acre | 101.75 | 102.22 | 95.00 |
| Total dir & ovhd expenses per acre | 585.59 | 579.61 | 506.56 |
| Net return per acre | -27.36 | -29.73 | 111.09 |
| Government payments | 33.02 | 29.81 | 31.09 |
| Net return with govt pmts | 5.66 | 0.09 | 142.18 |
| Labor & management charge | 45.09 | 43.74 | 50.40 |
| Net return over lbr & mgt | -39.43 | -43.65 | 91.79 |
| **Cost of Production** | | | |
| Total direct expense per bu. | 2.95 | 3.01 | 2.29 |
| Total dir & ovhd exp per bu. | 3.57 | 3.66 | 2.82 |
| Less govt & other income | 3.28 | 3.37 | 2.54 |
| With labor & management | 3.56 | 3.65 | 2.82 |
| Net value per unit | 3.32 | 3.37 | 3.35 |
| Machinery cost per acre | 146.94 | 149.16 | 135.23 |
| Est. labor hours per acre | 3.79 | 3.82 | 4.54 |

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

***Hay, Alfalfa on Owned Land***

| | Avg. Of All Farms | 40 - 60% | High 20% |
|---|---|---|---|
| Acres | 53.47 | 48.87 | 50.18 |
| Yield per acre (ton) | 3.92 | 3.92 | 5.65 |
| Operators share of yield % | 100.00 | 100.00 | 100.00 |
| Value per ton | 153.84 | 168.48 | 174.95 |
| Other product return per acre | 0.09 | 0.48 | - |
| Total product return per acre | 602.43 | 660.27 | 989.20 |
| Crop insurance per acre | 17.10 | 0.49 | 66.22 |
| Other crop income per acre | 1.95 | 2.60 | 3.31 |
| Gross return per acre | 621.48 | 663.36 | 1,058.73 |
| **Direct Expenses** | | | |
| Seed | 0.41 | 1.65 | - |
| Fertilizer | 34.89 | 50.67 | 25.30 |
| Crop chemicals | 5.89 | 2.38 | 6.85 |
| Non-chemical crop protect | 0.43 | 2.01 | - |
| Crop insurance | 3.70 | 4.24 | 6.12 |
| Storage | 0.66 | 1.64 | 0.41 |
| Packaging and supplies | 5.29 | 3.10 | 5.88 |
| Fuel & oil | 31.30 | 32.93 | 33.59 |
| Repairs | 51.80 | 70.38 | 65.72 |
| Custom hire | 21.45 | 48.73 | 29.68 |
| Hired labor | 0.11 | 0.58 | - |
| Machinery leases | 1.49 | 3.70 | 1.22 |
| Operating interest | 5.11 | 2.62 | 2.79 |
| Miscellaneous | 2.28 | 5.52 | 1.27 |
| Total direct expenses per acre | 164.80 | 230.15 | 178.84 |
| Return over direct exp per acre | 456.68 | 433.21 | 879.89 |
| **Overhead Expenses** | | | |
| Hired labor | 18.70 | 14.99 | 21.50 |
| Machinery leases | 4.84 | 0.53 | 5.06 |
| RE & pers. property taxes | 13.76 | 14.47 | 14.61 |
| Farm insurance | 10.67 | 12.37 | 9.81 |
| Utilities | 6.78 | 7.26 | 7.64 |
| Dues & professional fees | 3.03 | 2.77 | 4.09 |
| Interest | 48.44 | 45.07 | 59.53 |
| Mach & bldg depreciation | 50.95 | 50.24 | 69.54 |
| Miscellaneous | 7.29 | 9.22 | 8.03 |
| Total overhead expenses per acre | 164.45 | 156.91 | 199.79 |
| Total dir & ovhd expenses per acre | 329.25 | 387.06 | 378.62 |
| Net return per acre | 292.23 | 276.30 | 680.10 |
| Government payments | 27.91 | 28.04 | 35.09 |
| Net return with govt pmts | 320.15 | 304.34 | 715.19 |
| Labor & management charge | 55.40 | 59.60 | 67.96 |
| Net return over lbr & mgt | 264.75 | 244.74 | 647.23 |
| **Cost of Production** | | | |
| Total direct expense per ton | 42.09 | 58.77 | 31.63 |
| Total dir & ovhd exp per ton | 84.09 | 98.84 | 66.96 |
| Less govt & other income | 72.08 | 90.77 | 48.46 |
| With labor & management | 86.22 | 105.99 | 60.48 |
| Net value per unit | 153.84 | 168.48 | 174.95 |
| Machinery cost per acre | 164.47 | 211.83 | 204.90 |
| Est. labor hours per acre | 5.19 | 7.25 | 5.19 |

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

***Hay, Alfalfa on Cash Rent***

| | Avg. Of All Farms | 40 - 60% | High 20% |
|---|---|---|---|
| Acres | 57.73 | 54.34 | 61.88 |
| Yield per acre (ton) | 3.80 | 3.47 | 5.15 |
| Operators share of yield % | 100.00 | 100.00 | 100.00 |
| Value per ton | 153.93 | 162.41 | 163.46 |
| Other product return per acre | 0.30 | 1.59 | - |
| Total product return per acre | 585.12 | 565.91 | 841.10 |
| Crop insurance per acre | 12.81 | 4.69 | 44.17 |
| Other crop income per acre | 2.18 | 0.06 | 4.93 |
| Gross return per acre | 600.12 | 570.66 | 890.19 |
| **Direct Expenses** | | | |
| Seed | 0.74 | 0.37 | 1.51 |
| Fertilizer | 39.57 | 44.31 | 38.40 |
| Crop chemicals | 7.17 | 1.14 | 2.96 |
| Crop insurance | 2.92 | 1.01 | 4.33 |
| Storage | 0.82 | 0.68 | 2.23 |
| Packaging and supplies | 7.14 | 1.14 | 7.91 |
| Fuel & oil | 30.46 | 24.94 | 27.57 |
| Repairs | 48.00 | 39.68 | 50.22 |
| Custom hire | 17.99 | 25.88 | 11.92 |
| Land rent | 86.20 | 112.92 | 77.79 |
| Machinery leases | 2.69 | 0.50 | 3.36 |
| Operating interest | 4.61 | 2.79 | 3.19 |
| Miscellaneous | 2.96 | 6.44 | 1.09 |
| Total direct expenses per acre | 251.29 | 261.81 | 232.47 |
| Return over direct exp per acre | 348.83 | 308.85 | 657.72 |
| **Overhead Expenses** | | | |
| Hired labor | 23.33 | 30.72 | 29.65 |
| Machinery leases | 4.09 | 0.44 | 3.28 |
| Building leases | 0.37 | 0.01 | 0.87 |
| Farm insurance | 7.92 | 8.29 | 6.60 |
| Utilities | 5.72 | 4.01 | 6.05 |
| Dues & professional fees | 3.59 | 3.23 | 3.74 |
| Interest | 8.85 | 5.87 | 10.32 |
| Mach & bldg depreciation | 45.02 | 45.06 | 57.94 |
| Miscellaneous | 4.03 | 3.83 | 4.19 |
| Total overhead expenses per acre | 102.90 | 101.47 | 122.63 |
| Total dir & ovhd expenses per acre | 354.19 | 363.28 | 355.09 |
| Net return per acre | 245.93 | 207.39 | 535.10 |
| Government payments | 26.59 | 31.18 | 31.09 |
| Net return with govt pmts | 272.52 | 238.57 | 566.19 |
| Labor & management charge | 42.63 | 38.90 | 41.47 |
| Net return over lbr & mgt | 229.89 | 199.67 | 524.72 |
| **Cost of Production** | | | |
| Total direct expense per ton | 66.14 | 75.35 | 45.18 |
| Total dir & ovhd exp per ton | 93.22 | 104.55 | 69.01 |
| Less govt & other income | 82.20 | 93.75 | 53.43 |
| With labor & management | 93.42 | 104.94 | 61.49 |
| Net value per unit | 153.93 | 162.41 | 163.46 |
| Machinery cost per acre | 151.74 | 136.74 | 157.63 |
| Est. labor hours per acre | 4.59 | 4.44 | 5.36 |

***Crop Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

***Soybeans on Cash Rent***

| | ***Avg. Of All Farms*** | ***40 - 60%*** | ***High 20%*** |
|---|---|---|---|
| Acres | 315.84 | 369.28 | 258.32 |
| Yield per acre (bu.) | 40.08 | 37.44 | 46.82 |
| Operators share of yield % | 100.00 | 100.00 | 100.00 |
| Value per bu. | 8.37 | 8.28 | 8.42 |
| Other product return per acre | 0.02 | - | 0.10 |
| Total product return per acre | 335.50 | 310.22 | 394.38 |
| Hedging gains/losses per acre | -0.02 | -0.37 | - |
| Crop insurance per acre | 9.24 | 8.93 | 20.60 |
| Other crop income per acre | 2.87 | 3.71 | 2.01 |
| Gross return per acre | 347.59 | 322.49 | 416.99 |
| **Direct Expenses** | | | |
| Seed | 62.71 | 65.66 | 57.93 |
| Fertilizer | 29.51 | 26.14 | 19.56 |
| Crop chemicals | 25.33 | 24.35 | 26.14 |
| Crop insurance | 14.66 | 15.30 | 15.08 |
| Fuel & oil | 14.82 | 15.18 | 11.50 |
| Repairs | 22.02 | 21.71 | 20.42 |
| Custom hire | 6.43 | 4.47 | 5.36 |
| Hired labor | 1.21 | 1.54 | 1.48 |
| Land rent | 78.29 | 74.88 | 69.83 |
| Machinery leases | 3.12 | 1.58 | 3.18 |
| Hauling and trucking | 0.57 | 0.41 | 0.62 |
| Marketing | 0.64 | 0.91 | 1.00 |
| Operating interest | 4.66 | 5.46 | 4.53 |
| Miscellaneous | 2.08 | 1.97 | 1.57 |
| Total direct expenses per acre | 266.05 | 259.59 | 238.20 |
| Return over direct exp per acre | 81.55 | 62.90 | 178.79 |
| **Overhead Expenses** | | | |
| Hired labor | 7.31 | 6.74 | 5.46 |
| Machinery leases | 2.31 | 2.11 | 0.66 |
| Building leases | 1.31 | 0.71 | 1.61 |
| Farm insurance | 5.19 | 4.92 | 4.56 |
| Utilities | 3.66 | 4.20 | 2.39 |
| Dues & professional fees | 2.01 | 1.77 | 1.43 |
| Interest | 4.03 | 2.63 | 5.51 |
| Mach & bldg depreciation | 26.59 | 23.01 | 25.87 |
| Miscellaneous | 2.46 | 2.20 | 1.89 |
| Total overhead expenses per acre | 54.87 | 48.29 | 49.38 |
| Total dir & ovhd expenses per acre | 320.92 | 307.88 | 287.57 |
| Net return per acre | 26.67 | 14.61 | 129.41 |
| Government payments | 18.42 | 13.75 | 25.29 |
| Net return with govt pmts | 45.09 | 28.36 | 154.70 |
| Labor & management charge | 27.22 | 29.69 | 23.50 |
| Net return over lbr & mgt | 17.88 | -1.33 | 131.20 |
| **Cost of Production** | | | |
| Total direct expense per bu. | 6.64 | 6.93 | 5.09 |
| Total dir & ovhd exp per bu. | 8.01 | 8.22 | 6.14 |
| Less govt & other income | 7.25 | 7.53 | 5.12 |
| With labor & management | 7.92 | 8.32 | 5.62 |
| Net value per unit | 8.37 | 8.27 | 8.42 |
| Machinery cost per acre | 77.27 | 68.50 | 70.73 |
| Est. labor hours per acre | 1.65 | 1.54 | 1.83 |

***Livestock Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***
***Organic Dairy - per CWT & per Cow***

| | | PER CWT | | PER COW |
|---|---|---|---|---|
| **Returns** | Quantity | Value | Quantity | Value |
| Milk sold (hd) | 96.72 | 33.34 | 13,916.8 | 4,797.07 |
| Dairy Calves sold (hd) | 0.00 | 0.31 | 0.1 | 45.18 |
| Transferred out (hd) | 0.01 | 0.45 | 0.9 | 64.34 |
| Cull sales (hd) | 0.00 | 2.01 | 0.2 | 288.89 |
| Other income | | 1.00 | | 143.88 |
| Purchased (hd) | 0.00 | -0.10 | 0.0 | -14.06 |
| Transferred in (hd) | 0.00 | -0.57 | 0.3 | -81.94 |
| Inventory change (hd) | 0.00 | 0.63 | 0.1 | 91.21 |
| Dairy repl net cost | | -3.93 | | -564.98 |
| Gross margin | | 33.21 | | 4,779.43 |
| **Direct Expenses** | | | | |
| Protein Vit Minerals (lb.) | 5.39 | 2.15 | 776.2 | 309.56 |
| Complete Ration (lb.) | 0.57 | 0.41 | 82.6 | 59.11 |
| Corn (bu.) | 0.16 | 1.63 | 23.4 | 234.47 |
| Hay, Alfalfa (lb.) | 5.80 | 0.37 | 834.6 | 52.99 |
| Hay, Grass (lb.) | 4.45 | 0.26 | 640.0 | 37.48 |
| Haylage, Alfalfa (lb.) | 24.90 | 0.93 | 3,583.2 | 134.37 |
| Triticale (bu.) | 0.01 | 0.13 | 2.0 | 19.42 |
| Corn, Organic (bu.) | 0.16 | 1.65 | 23.4 | 237.79 |
| Corn Silage, Organic (lb.) | 58.50 | 1.44 | 8,417.5 | 206.95 |
| Hay, Alfalfa, Organic (lb.) | 26.55 | 2.03 | 3,820.3 | 292.47 |
| Pasture, Organic (aum) | 0.02 | 0.64 | 2.6 | 92.57 |
| Hay, Mixed, Organic (lb.) | 9.94 | 0.28 | 1,430.5 | 39.85 |
| Other feed stuffs (lb) | 26.58 | 1.35 | 3,824.1 | 195.24 |
| Supplies | | 2.81 | | 404.6 |
| Repairs | | 1.21 | | 174.55 |
| Custom hire | | 0.47 | | 67.12 |
| Hired labor | | 0.45 | | 65.37 |
| Bedding | | 0.61 | | 87.6 |
| Total direct expenses | | 18.84 | | 2,711.54 |
| Return over direct expense | | 14.37 | | 2,067.89 |
| **Overhead Expenses** | | | | |
| Hired labor | | 1.41 | | 202.9 |
| Interest | | 0.46 | | 66.46 |
| Mach & bldg depreciation | | 0.94 | | 134.96 |
| Miscellaneous | | 1.47 | | 211.76 |
| Total overhead expenses | | 4.28 | | 616.08 |
| Total dir & ovhd expenses | | 23.13 | | 3,327.62 |
| Net return | | 10.09 | | 1,451.81 |
| Labor & management charge | | 1.82 | | 262.04 |
| Net return over lbr & mgt | | 8.27 | | 1,189.77 |
| **Cost of Production Per Cwt. Of Milk** | | | | |
| Total direct expense per unit | | 18.84 | | 18.84 |
| Total dir& ovhd expense per unit | | 23.13 | | 23.13 |
| With other revenue adjustments | | 24.18 | | 24.18 |
| With labor and management | | 26 | | 26 |
| Est. labor hours per unit | | 0.25 | | 35.54 |
| **Other Information** | | | | |
| Number of cows | | | 101.2 | |
| Milk produced per cow | | | 14,389 | |
| Total milk sold | | | 1,408,384 | |
| Lb. of milk sold per FTE | | | 1,096,297 | |
| Culling percentage | | | 20.8 | |
| Turnover rate | | | 25.6 | |
| Cow death loss percent | | | 3.8 | |
| Percent of barn capacity | | | 104.2 | |
| Feed cost per day | | | 5.24 | |
| Feed cost per cwt. of milk | | | 13.29 | |
| Feed cost per cow | | | 1,912.28 | |
| Avg. milk price per cwt. | | | 34.47 | |
| Milk price / feed margin | | | 21.18 | |

***Livestock Enterprise Analysis***
***Area Farm Business Management Data***
***(Farms Sorted By Return to Overhead)***

***Organic Dairy Replacement Heifers -- Average Per Head***

| | Avg. Of All Farms | |
|---|---|---|
| | Quantity | Value |
| Replacements sold (hd) | 0.2 | 250.26 |
| Transferred out (hd) | 0.4 | 572.80 |
| Other income | | 6.58 |
| Transferred in (hd) | 0.7 | -202.99 |
| Inventory change (hd) | 0.0 | 5.02 |
| Gross margin | | 631.66 |
| **Direct Expenses** | | |
| Protein Vit Minerals (lb.) | 254.3 | 107.00 |
| Milk (lb.) | 348.5 | 101.38 |
| Creep / Starter (lb.) | 13.6 | 6.56 |
| Hay, Alfalfa (lb.) | 677.6 | 43.55 |
| Hay, Grass (lb.) | 807.2 | 40.88 |
| Barley Silage (lb.) | 112.8 | 3.38 |
| Corn Silage, Organic (lb.) | 2,629.3 | 60.85 |
| Hay, Alfalfa, Organic (lb.) | 289.0 | 20.23 |
| Pasture, Organic (aum) | 0.9 | 31.41 |
| Sorghum Silage, Organic (lb.) | 1,096.2 | 19.18 |
| Hay, Grass, Organic (lb.) | 538.1 | 27.56 |
| Oatlage, Organic (lb.) | 3,806.7 | 70.55 |
| Hay, Mixed, Organic (lb.) | 1,140.5 | 36.54 |
| Other feed stuffs (lb) | 877.3 | 44.47 |
| Supplies | | 47.55 |
| Repairs | | 34.58 |
| Custom hire | | 10.54 |
| Hired labor | | 43.76 |
| Machinery leases | | 26.29 |
| Bedding | | 19.84 |
| Total direct expenses | | 796.10 |
| Return over direct expense | | -164.44 |
| **Overhead Expenses** | | |
| Hired labor | | 30.85 |
| Utilities | | 12.99 |
| Mach & bldg depreciation | | 26.76 |
| Miscellaneous | | 40.64 |
| Total overhead expenses | | 111.24 |
| Total dir & ovhd expenses | | 907.35 |
| Net return | | -275.69 |
| Labor & management charge | | 50.07 |
| Net return over lbr & mgt | | -325.75 |
| **Cost of Production Per Head Per Day** | | |
| Total direct expense per unit | | 2.71 |
| Total dir& ovhd expense per unit | | 3.01 |
| With other revenue adjustments | | 3.01 |
| With labor and management | | 3.15 |
| Est. labor hours per unit | | 6.77 |
| **Other Information** | | |
| No. purchased or trans in | | 69 |
| Number sold or trans out | | 63 |
| Average number of head | | 100 |
| Percentage death loss | | 3.2 |
| Feed cost per average head | | 613.54 |
| Feed cost/head sold/trans | | 981.95 |
| Total cost/head sold/trans | | 1,838.64 |
| Feed cost per head per day | | 1.68 |

## *Livestock Enterprise Analysis*
## *Area Farm Business Management Data*
## *(Farms Sorted By Return to Overhead)*

### *Dairy -- Average Per Cow*

| | *Avg. Of All Farms* | | *40 - 60%* | | *High 20%* | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Milk sold (hd) | 23,844.5 | 4,231.96 | 23,494.1 | 4,150.66 | 26,031.5 | 4,749.25 |
| Dairy Calves sold (hd) | 0.3 | 140.90 | 0.4 | 162.53 | 0.3 | 137.85 |
| Transferred out (hd) | 0.6 | 47.26 | 0.6 | 34.97 | 0.6 | 68.23 |
| Cull sales (hd) | 0.3 | 355.40 | 0.3 | 347.93 | 0.3 | 398.13 |
| Other income | | 49.68 | | 44.02 | | 45.53 |
| Purchased (hd) | 0.0 | -26.73 | 0.0 | -17.61 | 0.0 | -8.83 |
| Transferred in (hd) | 0.4 | -88.83 | 0.4 | -30.29 | 0.4 | -176.95 |
| Inventory change (hd) | 0.0 | 48.48 | 0.0 | 43.64 | 0.0 | 69.09 |
| Dairy repl net cost | | -572.12 | | -645.55 | | -438.23 |
| Gross margin | | 4,186.66 | | 4,090.95 | | 4,844.06 |
| **Direct Expenses** | | | | | | |
| Protein Vit Minerals (lb.) | 3,453.0 | 782.64 | 2,848.8 | 677.05 | 4,055.5 | 833.27 |
| Complete Ration (lb.) | 1,592.9 | 297.32 | 2,011.0 | 476.54 | 1,705.5 | 188.40 |
| Corn (bu.) | 68.2 | 239.17 | 63.6 | 228.38 | 75.3 | 260.60 |
| Corn Silage (lb.) | 18,876.3 | 332.46 | 18,957.7 | 334.95 | 20,214.9 | 363.88 |
| Hay, Alfalfa (lb.) | 2,663.3 | 188.85 | 2,782.9 | 196.19 | 2,400.5 | 168.34 |
| Haylage, Alfalfa (lb.) | 4,080.7 | 141.27 | 4,489.3 | 151.32 | 4,504.3 | 152.29 |
| Other feed stuffs (lb) | 2,676.6 | 126.05 | 1,874.6 | 81.11 | 2,807.5 | 172.29 |
| Breeding fees | | 53.40 | | 50.17 | | 53.10 |
| Veterinary | | 109.20 | | 104.02 | | 111.48 |
| BST | | 49.95 | | 35.71 | | 59.59 |
| Supplies | | 255.35 | | 230.06 | | 260.11 |
| Fuel & oil | | 72.39 | | 60.60 | | 81.63 |
| Repairs | | 156.98 | | 146.85 | | 163.39 |
| Custom hire | | 61.29 | | 53.99 | | 74.83 |
| Hired labor | | 221.17 | | 260.75 | | 87.80 |
| Marketing | | 46.63 | | 51.60 | | 47.55 |
| Bedding | | 78.58 | | 94.84 | | 80.74 |
| Total direct expenses | | 3,212.70 | | 3,234.14 | | 3,159.28 |
| Return over direct expense | | 973.96 | | 856.81 | | 1,684.78 |
| **Overhead Expenses** | | | | | | |
| Hired labor | | 208.98 | | 111.70 | | 398.94 |
| Building leases | | 50.19 | | 30.09 | | 62.28 |
| Utilities | | 71.98 | | 76.41 | | 73.67 |
| Interest | | 79.86 | | 90.48 | | 72.87 |
| Mach & bldg depreciation | | 170.63 | | 167.22 | | 223.18 |
| Miscellaneous | | 102.85 | | 104.16 | | 103.59 |
| Total overhead expenses | | 684.48 | | 580.06 | | 934.52 |
| Total dir & ovhd expenses | | 3,897.18 | | 3,814.20 | | 4,093.80 |
| Net return | | 289.48 | | 276.74 | | 750.26 |
| Labor & management charge | | 215.66 | | 208.85 | | 253.44 |
| Net return over lbr & mgt | | 73.82 | | 67.90 | | 496.82 |
| **Cost of Production Per Cwt. Of Milk** | | | | | | |
| Total direct expense per unit | | 13.37 | | 13.64 | | 12.07 |
| Total dir& ovhd expense per unit | | 16.22 | | 16.09 | | 15.64 |
| With other revenue adjustments | | 16.52 | | 16.46 | | 15.37 |
| With labor and management | | 17.42 | | 17.34 | | 16.34 |
| Est. labor hours per unit | | 41.26 | | 39.58 | | 41.30 |
| **Other Information** | | | | | | |
| Number of cows | | 189.6 | | 163.7 | | 258.4 |
| Milk produced per cow | | 24,034 | | 23,703 | | 26,173 |
| Total milk sold | | 4,521,665 | | 3,847,052 | | 6,726,171 |
| Lb. of milk sold per FTE | | 1,618,202 | | 1,661,967 | | 1,764,852 |
| Culling percentage | | 30.5 | | 29.3 | | 33.3 |
| Turnover rate | | 37.5 | | 36.7 | | 39.1 |
| Cow death loss percent | | 6.5 | | 6.8 | | 5.6 |
| Percent of barn capacity | | 111.2 | | 110.5 | | 112.7 |
| Feed cost per day | | 5.77 | | 5.88 | | 5.86 |
| Feed cost per cwt. of milk | | 8.77 | | 9.05 | | 8.17 |
| Feed cost per cow | | 2,107.76 | | 2,145.55 | | 2,139.07 |
| Avg. milk price per cwt. | | 17.75 | | 17.67 | | 18.24 |
| Milk price / feed margin | | 8.98 | | 8.62 | | 10.07 |

## *Livestock Enterprise Analysis*
## *Area Farm Business Management Data*
## *(Farms Sorted By Return to Overhead)*

### *Dairy Replacement Heifers -- Average Per Head*

| | *Avg. Of All Farms* | | *40 - 60%* | | *High 20%* | |
|---|---|---|---|---|---|---|
| | Quantity | Value | Quantity | Value | Quantity | Value |
| Replacements sold (hd) | 0.1 | 58.26 | 0.1 | 54.27 | 0.1 | 67.70 |
| Transferred out (hd) | 0.5 | 641.49 | 0.4 | 628.64 | 0.4 | 764.72 |
| Cull sales (hd) | 0.0 | 5.81 | 0.0 | 3.69 | 0.0 | 11.68 |
| Other income | | 1.39 | | 0.68 | | 2.52 |
| Purchased (hd) | 0.0 | -28.66 | 0.0 | -0.17 | 0.0 | -46.47 |
| Transferred in (hd) | 0.6 | -160.59 | 0.6 | -138.03 | 0.6 | -155.25 |
| Inventory change (hd) | 0.0 | 24.94 | 0.0 | 1.35 | 0.1 | 87.43 |
| Gross margin | | 542.63 | | 550.43 | | 732.34 |
| **Direct Expenses** | | | | | | |
| Protein Vit Minerals (lb.) | 504.3 | 72.74 | 302.3 | 73.03 | 227.9 | 49.39 |
| Milk Replacer (lb.) | 10.6 | 13.55 | 15.4 | 16.54 | 9.6 | 11.63 |
| Milk (lb.) | 135.3 | 20.66 | 173.7 | 21.76 | 189.9 | 34.20 |
| Complete Ration (lb.) | 326.7 | 62.02 | 282.2 | 52.28 | 522.5 | 73.07 |
| Corn (bu.) | 5.0 | 17.23 | 3.0 | 10.53 | 5.2 | 18.75 |
| Corn Silage (lb.) | 4,295.6 | 73.97 | 4,191.6 | 73.75 | 2,808.1 | 47.74 |
| Hay, Alfalfa (lb.) | 810.0 | 52.26 | 897.8 | 60.41 | 596.9 | 38.07 |
| Hay, Grass (lb.) | 668.7 | 29.22 | 656.9 | 27.39 | 516.3 | 22.04 |
| Haylage, Alfalfa (lb.) | 1,034.6 | 32.55 | 2,014.0 | 61.14 | 586.8 | 20.18 |
| DDGS, wet (lb.) | 363.0 | 16.64 | 1,308.3 | 62.71 | 228.3 | 7.07 |
| Other feed stuffs (lb) | 1,039.7 | 28.76 | 1,104.6 | 31.58 | 1,504.3 | 25.68 |
| Breeding fees | | 16.23 | | 15.12 | | 14.48 |
| Veterinary | | 16.87 | | 11.77 | | 17.34 |
| Supplies | | 20.20 | | 15.94 | | 16.70 |
| Contract production exp. | | 108.47 | | 65.27 | | 32.15 |
| Fuel & oil | | 12.42 | | 11.13 | | 12.10 |
| Repairs | | 26.69 | | 20.08 | | 28.87 |
| Hired labor | | 23.75 | | 26.33 | | 9.34 |
| Bedding | | 18.47 | | 18.97 | | 14.65 |
| Total direct expenses | | 662.70 | | 675.76 | | 493.44 |
| Return over direct expense | | -120.08 | | -125.33 | | 238.89 |
| **Overhead Expenses** | | | | | | |
| Hired labor | | 35.17 | | 34.36 | | 36.22 |
| Utilities | | 12.68 | | 10.37 | | 16.70 |
| Interest | | 13.77 | | 13.98 | | 17.27 |
| Mach & bldg depreciation | | 27.83 | | 25.77 | | 33.88 |
| Miscellaneous | | 26.47 | | 23.29 | | 31.33 |
| Total overhead expenses | | 115.93 | | 107.77 | | 135.40 |
| Total dir & ovhd expenses | | 778.63 | | 783.53 | | 628.84 |
| Net return | | -236.00 | | -233.10 | | 103.49 |
| Labor & management charge | | 35.65 | | 29.78 | | 43.58 |
| Net return over lbr & mgt | | -271.66 | | -262.88 | | 59.91 |
| **Cost of Production Per Head Per Day** | | | | | | |
| Total direct expense per unit | | 2.25 | | 2.21 | | 1.63 |
| Total dir& ovhd expense per unit | | 2.56 | | 2.51 | | 2.00 |
| With other revenue adjustments | | 2.56 | | 2.51 | | 2.00 |
| With labor and management | | 2.66 | | 2.59 | | 2.12 |
| Est. labor hours per unit | | 7.05 | | 6.43 | | 6.54 |
| **Other Information** | | | | | | |
| No. purchased or trans in | | 109 | | 121 | | 90 |
| Number sold or trans out | | 95 | | 106 | | 80 |
| Average number of head | | 173 | | 211 | | 150 |
| Percentage death loss | | 7.6 | | 6.7 | | 5.8 |
| Feed cost per average head | | 419.60 | | 491.14 | | 347.83 |
| Feed cost/head sold/trans | | 759.94 | | 978.00 | | 650.00 |
| Total cost/head sold/trans | | 1,759.29 | | 1,883.33 | | 1,443.57 |
| Feed cost per head per day | | 1.15 | | 1.35 | | 0.95 |

## Area Averages - Selected Sorts within the Dairy Enterprise

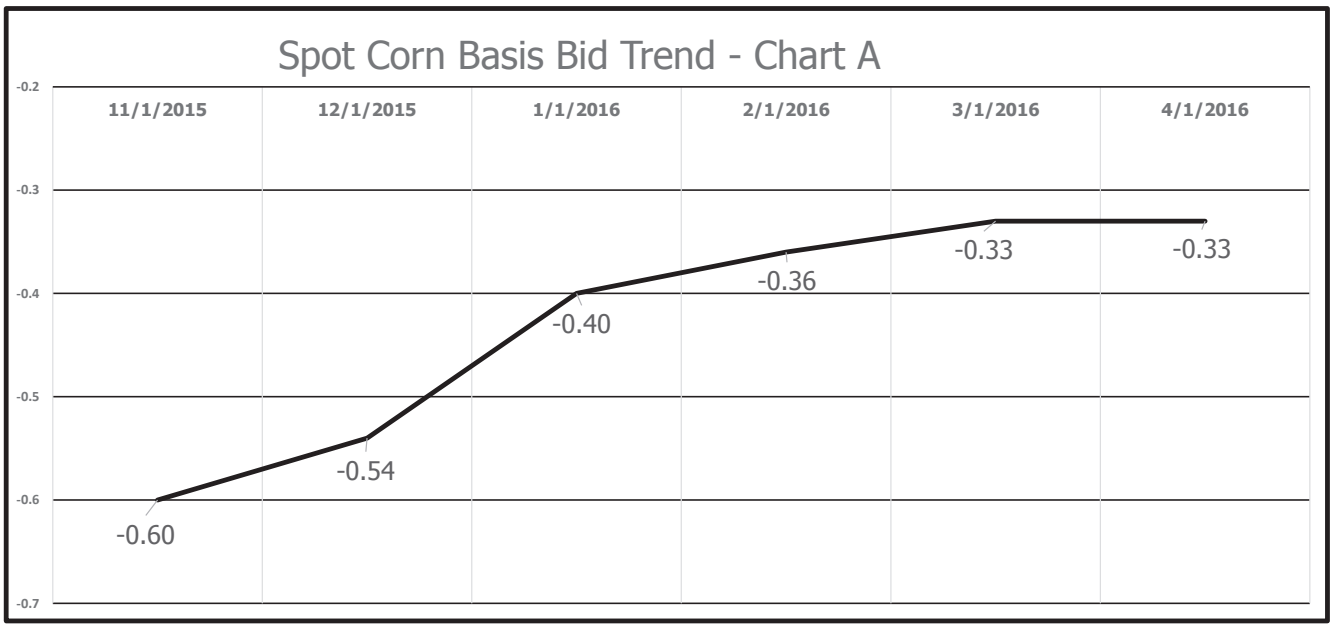
The Area Database includes data from hundreds of dairy farms which provides the opportunity to use special markers on farms to compare different practices. Below is a sample of the sorts which provide a different comparative look at Dairy Data. "Sort - Includes" identifies that types of production practices that are included in each column and "Sort - Excludes" identifies the production practives that are non included in each column.

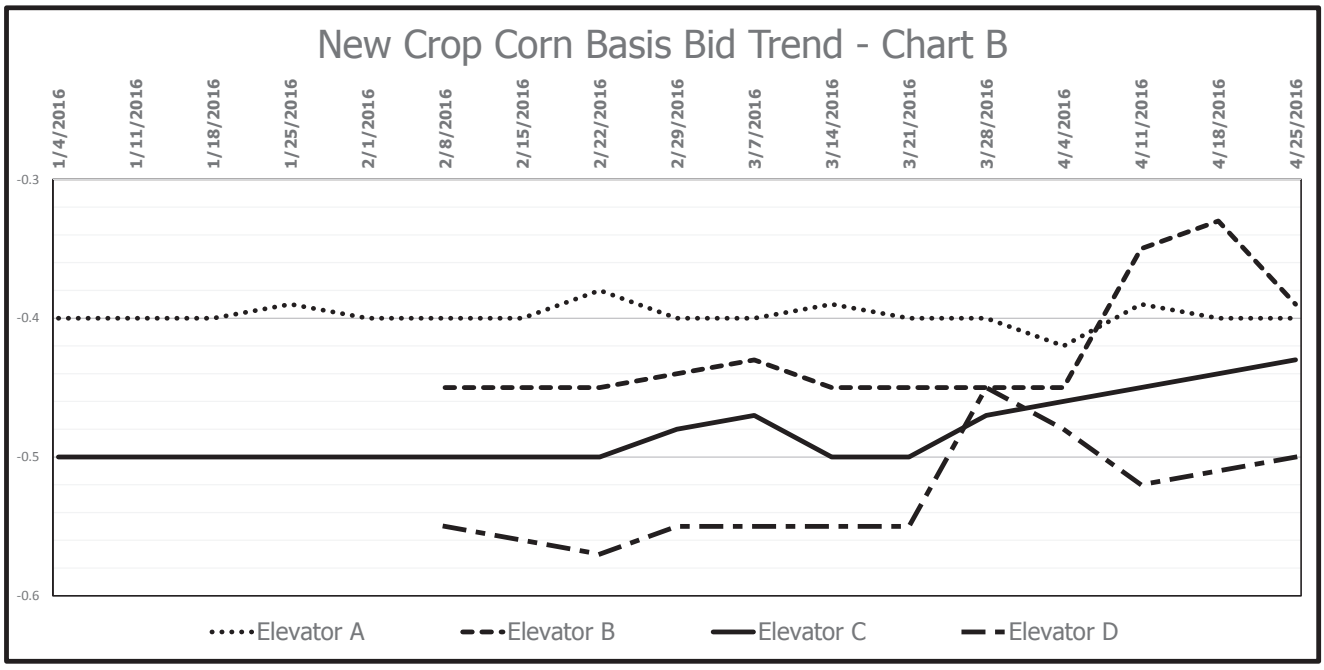
| Year | Sort - Includes | **All** | **Robotic Dairy** | **Non-Robotic Traditional** | **Non-Robotic 3X Milking** | **Organic** | **Dairy Initiatives** |
|---|---|---|---|---|---|---|---|
| | Sort - Excludes | NA | All non-robotic herds | Organic, Org. Transition, 3X Milking, Rot. Grazing, Robotics | Organic, Org. Transition, Rot. Grazing, Robotics, non-3X milk herds | All non-organic herds | All non-Dairy Initiative herds |
| 2014 | Number of Cows | 180.4 | 179.6 | 151.0 | 558.5 | 87.7 | 158.6 |
| | Milk Produced per Cow | 23,556 | 24,742 | 22,923 | 26,075 | 13,041 | 22,518 |
| | Product/Animals Sold | $5,716.23 | $5,871.18 | $5,582.60 | $6,229.11 | $3,978.38 | $5,488.87 |
| | Gross Margin | $5,581.78 | $5,749.94 | $5,423.43 | $6,159.86 | $3,807.30 | $5,368.08 |
| | Feed Cost per Cow | $2,420.33 | $2,378.86 | $2,369.73 | $2,607.94 | $1,967.27 | $2,308.10 |
| | Veterinary | $112.47 | $144.85 | $107.21 | $129.98 | $35.24 | $105.77 |
| | BST | $48.82 | $36.56 | $40.73 | $75.96 | $0.00 | $34.60 |
| | Repairs | $181.12 | $246.46 | $162.05 | $207.55 | $161.25 | $177.79 |
| | Hired Labor-Dir&Ovhd | $437.62 | $204.02 | $383.98 | $623.30 | $228.92 | $371.63 |
| | Interest | $84.90 | $219.92 | $87.43 | $67.78 | $76.46 | $78.48 |
| | Depreciation | $168.16 | $391.13 | $155.93 | $182.55 | $88.58 | $155.29 |
| | Total Dir &Ovhd Cost | $4,345.28 | $4,506.81 | $4,194.56 | $4,850.70 | $3,176.84 | $4,098.57 |
| | Net Return | $1,236.50 | $1,243.13 | $1,228.87 | $1,309.16 | $630.46 | $1,269.51 |
| | Cost of Prod - O&D | $18.45 | $18.22 | $18.30 | $18.60 | $24.36 | $18.20 |
| | Culling Percentage | 30.3 | 27.8 | 29.1 | 33.7 | 28.9 | 29.8 |
| | Turnover Rate | 37.4 | 36.1 | 36.5 | 40.2 | 33.6 | 36.8 |
| | Feed Cost per CWT | $10.27 | $9.61 | $10.34 | $10.00 | $15.09 | $10.25 |
| | Average Milk Price | $24.43 | $23.98 | $24.48 | $24.10 | $31.25 | $24.56 |
| 2015 | Number of Cows | 186.3 | 132.1 | 165.7 | 449.9 | 101.2 | 158.4 |
| | Milk Produced per Cow | 23,840 | 25,062 | 23,381 | 26,355 | 14,389 | 22,671 |
| | Milk Sold | $4,240.55 | $4,139.40 | $4,112.80 | $4,675.56 | $4,797.07 | $4,020.94 |
| | Gross Margin | $4,195.60 | $4,022.41 | $4,038.99 | $4,732.37 | $4,779.43 | $4,004.49 |
| | Feed Cost per Cow | $2,103.09 | $2,022.41 | $2,053.46 | $2,316.20 | $1,912.28 | $2,004.56 |
| | Veterinary | $107.77 | $135.37 | $100.80 | $136.07 | $38.21 | $104.41 |
| | BST | $48.95 | $14.45 | $45.36 | $69.93 | $0.00 | $35.28 |
| | Repairs | $157.39 | $197.43 | $146.38 | $191.23 | $174.55 | $153.65 |
| | Hired Labor-Dir&Ovhd | $426.73 | $118.27 | $381.12 | $629.54 | $268.27 | $353.72 |
| | Interest | $79.56 | $249.27 | $79.88 | $66.11 | $66.46 | $75.39 |
| | Depreciation | $169.84 | $367.94 | $153.22 | $213.74 | $134.96 | $147.00 |
| | Total Dir &Ovhd Cost | $3,884.50 | $4,046.10 | $3,741.06 | $4,446.00 | $3,327.62 | $3,625.08 |
| | Net Return | $311.11 | -$23.69 | $297.93 | $286.37 | $1,451.81 | $379.40 |
| | Cost of Prod - O&D | $16.29 | $16.14 | $16.00 | $16.87 | $23.13 | $15.99 |
| | Culling Percentage | 30.3 | 25.5 | 30.2 | 32.4 | 20.8 | 29.3 |
| | Turnover Rate | 37.2 | 31.6 | 37.5 | 38.2 | 25.6 | 36.0 |
| | Feed Cost per CWT | $8.82 | $8.07 | $8.78 | $8.79 | $13.29 | $8.84 |
| | Average Milk Price | $17.93 | $16.64 | $17.69 | $18.01 | $34.47 | $17.93 |

***Livestock Enterprise Analysis***
***(Farms Sorted By Years)***

***Dairy -- Average Per Cow***

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Number of farms | 67 | 64 | 64 | 64 | 59 |
| Milk sold | 4,521.15 | 4,528.96 | 4,603.66 | 5,839.72 | 4,244.99 |
| Dairy Calves sold | 37.86 | 47.08 | 39.81 | 75.76 | 126.69 |
| Transferred out | 50.58 | 38.56 | 54.56 | 68.92 | 84.33 |
| Cull sales | 210.02 | 259.29 | 254.11 | 332.88 | 344.36 |
| Other income | 10.62 | 130.73 | 97.63 | 50.02 | 65.02 |
| Purchased | -44.52 | -34.86 | -46.99 | -15.09 | -24.26 |
| Transferred in | -65.08 | -71.35 | -100.24 | -137.91 | -113.35 |
| Inventory change | 56.06 | 46.87 | 65.18 | 82.01 | 50.11 |
| Dairy repl net cost | -506.80 | -538.18 | -559.82 | -579.49 | -555.49 |
| Gross margin | 4,269.87 | 4,407.09 | 4,407.90 | 5,717.17 | 4,224.13 |
| **Direct Expenses** | | | | | |
| Protein Vit Minerals | 561.62 | 709.22 | 830.03 | 937.90 | 741.81 |
| Complete Ration | 456.50 | 439.87 | 340.39 | 391.28 | 418.12 |
| Corn | 273.01 | 354.35 | 316.13 | 257.89 | 232.13 |
| Corn Silage | 294.22 | 378.99 | 377.61 | 347.35 | 322.40 |
| Hay, Alfalfa | 142.14 | 210.06 | 257.38 | 222.77 | 162.21 |
| Haylage, Alfalfa | 157.25 | 176.44 | 172.46 | 183.37 | 164.81 |
| Other feed stuffs | 101.48 | 122.54 | 139.70 | 120.90 | 163.58 |
| Breeding fees | 48.32 | 47.69 | 45.51 | 54.94 | 52.63 |
| Veterinary | 124.92 | 111.17 | 116.99 | 127.78 | 125.32 |
| BST | 37.05 | 43.67 | 42.64 | 51.73 | 54.58 |
| Supplies | 233.38 | 213.81 | 215.79 | 231.46 | 201.70 |
| Fuel & oil | 101.28 | 99.51 | 108.53 | 115.49 | 72.41 |
| Repairs | 137.72 | 147.79 | 147.50 | 193.15 | 157.29 |
| Custom hire | 53.09 | 53.41 | 54.80 | 66.25 | 56.38 |
| Hired labor | 273.72 | 270.59 | 232.76 | 293.10 | 248.99 |
| Utilities | 44.31 | 31.71 | 26.97 | 32.39 | 33.70 |
| Marketing | 49.06 | 50.76 | 49.52 | 46.90 | 47.97 |
| Bedding | 74.48 | 67.83 | 70.99 | 98.92 | 88.56 |
| Total direct expenses | 3,163.55 | 3,529.39 | 3,545.71 | 3,773.56 | 3,344.59 |
| Return over direct expense | 1,106.32 | 877.70 | 862.20 | 1,943.61 | 879.53 |
| **Overhead Expenses** | | | | | |
| Hired labor | 183.42 | 152.46 | 207.61 | 201.34 | 231.82 |
| Building leases | 56.11 | 54.46 | 35.17 | 64.85 | 51.18 |
| Farm insurance | 38.96 | 47.35 | 44.86 | 51.21 | 50.79 |
| Utilities | 44.91 | 52.39 | 63.37 | 69.80 | 62.90 |
| Interest | 99.27 | 108.49 | 109.80 | 102.00 | 94.44 |
| Mach & bldg depreciation | 129.82 | 148.24 | 152.55 | 185.76 | 167.49 |
| Miscellaneous | 61.02 | 68.32 | 65.79 | 69.57 | 54.05 |
| Total overhead expenses | 613.50 | 631.71 | 679.16 | 744.54 | 712.67 |
| Total dir & ovhd expenses | 3,777.05 | 4,161.10 | 4,224.86 | 4,518.10 | 4,057.26 |
| Net return | 492.82 | 245.99 | 183.04 | 1,199.07 | 166.87 |
| Labor & management charge | 165.07 | 163.84 | 169.59 | 189.13 | 179.14 |
| Net return over lbr & mgt | 327.75 | 82.16 | 13.45 | 1,009.94 | -12.27 |
| **Cost of Production Per Cwt. Of Milk** | | | | | |
| Total direct expense per unit | 13.71 | 15.05 | 15.40 | 15.73 | 13.81 |
| Total dir& ovhd expense per unit | 16.37 | 17.75 | 18.35 | 18.84 | 16.75 |
| With other revenue adjustments | 17.58 | 18.39 | 19.34 | 19.53 | 17.02 |
| With labor and management | 18.29 | 19.09 | 20.08 | 20.31 | 17.76 |
| Est. labor hours per unit | 42.07 | 40.15 | 35.56 | 40.02 | 40.68 |
| **Other Information** | | | | | |
| Number of cows | 299.5 | 315.1 | 308.1 | 311.9 | 311.7 |
| Milk produced per cow | 23,071 | 23,444 | 23,027 | 23,983 | 24,220 |
| Total milk sold | 6,856,363 | 7,330,860 | 7,037,071 | 7,402,904 | 7,450,758 |
| Pounds of milk sold per FTE | 1,523,379 | 1,622,654 | 1,798,159 | 1,660,790 | 1,645,437 |
| Culling percentage | 27.1 | 30.0 | 27.8 | 28.1 | 30.1 |
| Turnover rate | 35.2 | 36.9 | 36.4 | 35.9 | 37.6 |
| Cow death loss percent | 7.9 | 6.7 | 8.1 | 7.1 | 7.0 |
| Percent of barn capacity | 112.0 | 118.0 | 116.7 | 115.7 | 118.1 |
| Feed cost per day | 5.44 | 6.55 | 6.67 | 6.74 | 6.04 |
| Feed cost per cwt of milk | 8.61 | 10.20 | 10.57 | 10.26 | 9.10 |
| Feed cost per cow | 1,986.22 | 2,391.46 | 2,433.70 | 2,461.45 | 2,205.05 |
| Avg. milk price per cwt. | 19.75 | 19.46 | 20.16 | 24.60 | 17.76 |


Spot Corn Basis Bid Trend - Chart A
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
11/1/2015
12/1/2015
1/1/2016
2/1/2016
3/1/2016
4/1/2016
-0.60
-0.54
-0.40
-0.36
-0.33
-0.33


New Crop Corn Basis Bid Trend - Chart B
1/4/2016
1/11/2016
1/18/2016
1/25/2016
2/1/2016
2/8/2016
2/15/2016
2/22/2016
2/29/2016
3/7/2016
3/14/2016
3/21/2016
3/28/2016
4/4/2016
4/11/2016
4/18/2016
4/25/2016
-0.3
-0.4
-0.5
-0.6
Elevator A
Elevator B
Elevator C
Elevator D

Participant Number _____ State Abbreviation _____

Participant 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***.

# 2016 NATIONAL FFA FARM BUSINESS MANAGEMENT CAREER DEVELOPMENT EVENT

| Page Number | Part | Area | Possible Points | Score |
|---|---|---|---|---|
| 3 | I | Financial Statements | 30 | _____ |
| 8 | II | Budgeting | 24 | _____ |
| 12 | III | Cash Flow Planning | 33 | _____ |
| 16 | IV | Marketing | 23 | _____ |
| 20 | V | Income Tax | 30 | _____ |
| 23 | VI | Investment Analysis | 30 | _____ |
| 26 | VII | Risk Management | 21 | _____ |
| 30 | VIII | Farm Business Organization | 20 | _____ |
| 34 | IX | Analyzing the Farm Business | 40 | _____ |
| 39 | X | Family Living | 25 | _____ |
| 41 | XI | Economic Principles | 24 | _____ |
| **TOTAL POSSIBLE POINTS** | | | **300** | |
| **PARTICIPANT POINTS** | | | | _____ |

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Participant Number _____ State Abbreviation _____

# PART I – Financial Statements

**NOTE: For the multiple choice questions, circle the letter in front of the BEST answer. Each correct multiple choice answer is 1 point. Correct calculated answers are 2 points. For calculated numbers round to the nearest dollar or nearest percent.**

1. The balance sheet represents the financial position of ABC Organic Farm

   A. for the accounting period.
   B. for the tax year.
   C. after deferred income taxes are paid.
   D. on the date of the balance sheet.

2. One example of an account receivable for ABC Farm would be

   A. an unpaid fertilizer bill.
   B. interest that will be paid when the business makes its next loan payment.
   C. the unpaid amount for custom work that has been completed for you.
   D. the amount paid for completed custom work.

3. Noncurrent assets are sometimes referred to as

   A. intermediate and long-term assets.
   B. inventory assets.
   C. assets that will be sold during the next accounting period.
   D. assets such as cash, marketable securities, accounts and notes receivable.

4. Net worth or owner equity refers to the difference between

   A. total assets and total liabilities.
   B. total revenue and total expenses.
   C. total cash income and total cash expenses.
   D. beginning net worth or owner equity and ending net worth or owner equity.

5. On a balance sheet, using market values for intermediate and long-term assets, the sources of owner equity (net worth) will include which of the following?

   A. Contributed capital.
   B. Retained earnings.
   C. Valuation equity.
   D. A and B.
   E. A, B, and C.

6. A nine-year loan has a principal balance of $61,574, an annual principal and interest payment of $8,400 due on July 1, and an interest rate of 3% annually. What is the amount of accrued interest for this loan on the 1/1/2016 balance sheet?

   A. $1,847.22
   B. $252.12
   C. $931.20
   D. $1,049.33

7. What was the change in working capital for the 2015 accounting period?

   A. - $510,599
   B. - $40,786
   C. $1,087,559
   D. $536,174
   E. - $514,224

8. Which of the following items contributed to a positive change in the 2015 owner equity? (There may be more than one correct answer.)

   A. Net farm income
   B. Personal income
   C. Income taxes
   D. Change in the market value of capital assets

9. On the balance sheet, total assets must equal

   A. total liabilities.
   B. total assets minus total liabilities.
   C. total assets minus net worth.
   D. total liabilities plus net worth.

10. When comparing cost and market balance sheets, market valuation is best described as

    A. market value of intermediate and long-term assets minus cost value of intermediate and long-term assets.
    B. market value of intermediate and long-term assets minus intermediate and long-term liabilities on a cost basis.
    C. market value of 2015 intermediate and long-term assets minus cost value of 2016 intermediate and long-term assets.
    D. value of 2016 intermediate and long-term liabilities minus cost value of 2015 intermediate and long-term liabilities.

11. The principal due within 12 months on term liabilities represents

    A. the amount of principal the business plans to pay on its operating loan during the next accounting period.
    B. the amount of principal that must be paid on intermediate and long-term liabilities during the next accounting period.
    C. the amount of new borrowing on the operating loan.
    D. the amount of interest that will be due on intermediate and long-term liabilities during the next accounting period.

12. Gross cash income includes all of the following except

    A. sales of organic grain.
    B. milk sales.
    C. cull breeding livestock.
    D. an increase in inventory value.

13. The total inventory change found on the accrual adjusted income statement for ABC Organic Farm indicates that cash accounting

    A. understates the true net farm income.
    B. accurately reports the true net farm income.
    C. overstates the true net farm income.

14. On the ABC Organic Farm income statement (R6), depreciation is calculated using

    A. Machinery purchases and sales.
    B. The cost value of machinery assets from the balance sheet.
    C. The market value of machinery assets from the balance sheet.
    D. A and B.
    E. A and C.

15. The net farm income reported for ABC Organic Farm on the income statement represents the return to

    A. owner equity, unpaid labor and management.
    B. owner equity, unpaid labor and borrowed capital.
    C. owner equity, unpaid labor and family living.
    D. farm assets and unpaid labor.

16. Cash items on the income statement could represent which of the following?

    A. Revenues from crops produced in 2014.
    B. Expenses for items that will be used for crop production in 2016.
    C. Revenue for crops produced in 2015.
    D. All the above.

17. The return to unpaid labor, management and equity for ABC Organic Farm is

    A. $285,908
    B. $771,660
    C. $89,131

18. The change in the size of the production loan for 2015

    A. increased accrual adjusted revenue for ABC Organic Farm.
    B. decreased accrual adjusted revenue for ABC Organic Farm.
    C. did not change accrual adjusted revenues for ABC Organic Farm.

19. The 2015 Statement of Cash Flows, page R7 of the resource information, indicates operating activities provided $ _____ of cash in 2015.

20. ABC Organic Farm's Statement of Cash Flows, page R7 of the resource information, indicates the calculated cash balance (farm and personal) would be

    $ _____

21. In 2015, how much cash was used by ABC Organic Farm for business capital investments?

    $ _____

22. The primary purpose of the Statement of Cash Flows is to indicate

    A. the sources and uses of cash.
    B. the sources and uses of revenue.
    C. if there will be future cash flow problems.
    D. if there is sufficient loan repayment capacity.

23. In the 2015 Statement of Owner's Equity, Page R7, net farm income is reported to be $89,131. Family living expense and income taxes accrued are reported to be $95,106. If the change in retained earnings is limited to just these two items, retained earnings will

    A. remain unchanged.
    B. increase by $5,975.
    C. decrease by $5,975.

24. The Statement of Owner's Equity can be used for which of the following?

    A. Explaining the change in owner equity for the accounting period.
    B. Explaining the change in the amount of cash for an accounting period.
    C. Explaining the per unit cost of production for the accounting period.
    D. All of the above.

25. The projected cash flows for 2016 indicate

    A. barley will be added to the crop mix.
    B. milk sales will increase about 10%.
    C. cull breeding stock sales decrease.
    D. B and C
    E. A, B, and C

End of Part I – Financial Statements

Total Possible Points 30 POINTS EARNED PART I _____

Participant Number _____ State Abbreviation _____

# Part II – Budgeting

**For the multiple choice questions, circle the letter in front of the BEST answer. Make all calculations to the nearest cent or hundredth (0.00). Correct answers are 1 point each.**

1. An enterprise budget is

   A. a physical and financial plan for the entire farm business for a specified period of time.
   B. a record of past production performance.
   C. the tool used in analyzing only changes in the farm operation and the potential change in net income.
   D. a statement of projected costs and returns associated with one production process, usually for one production cycle.

2. If you are considering a change in the farm business that affects only a few items in the total farm budget, this change could most appropriately be evaluated using

   A. an enterprise budget.
   B. a partial budget.
   C. a cash flow budget.
   D. a total farm budget

3. 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. complimentary.
   C. competitive.
   D. supplementary.

4. If the farm business farms more acres, which of the following costs are least likely to change?

   A. Average fixed costs per acre
   B. Total variable costs
   C. Average variable costs per acre
   D. Average total costs per acre

5. Budgets are constructed to show future actions. To improve the accuracy of a budget, the operator may use

   A. historical data.
   B. forward contract pricing.
   C. more than one source for estimated data.
   D. All of the above.

6. Budgeting is not used to

   A. estimate the amount of credit needed.
   B. help plan for the useful life of assets.
   C. allow for experimentation with possible outcomes before resources are committed.
   D. All of the above.

7. In analyzing the enterprise report for the 40-acre organic alfalfa haylage (R9), which factor, when compared to the area average (R22), is most responsible for the negative return?

   A. Yield per acre
   B. Value per unit
   C. Direct expenses per acre
   D. Net return over labor and management.

Use the enterprise report for organic corn under irrigation (R8) to answer questions 8 through 15.

8. What is the yield for the corn? (Bushels per acre) _____

9. What are the total direct expenses per acre? $ _____

10. How much operating interest was paid per acre? $ _____

11. What is the expected return per acre above direct expenses? $ _____

12. What is a breakeven yield to cover direct expenses? _____ bushels per acre

13. If the sale value per unit (bushel) drops to $6.00, what would the breakeven yield be?

    _____ bushels per acre

14. What is the breakeven price per bushel for this corn enterprise to cover total direct and overhead expenses? $ _____

15. What is the net return over direct and overhead expenses? $ _____

In analyzing their replacement heifer enterprise records, ABC Organic Farm wonders if it would be better to have the replacement heifers raised in a dairy heifer feedlot. They have found one that would provide everything included in the direct operating expenses and still allow them to maintain their organic certification. The total daily feedlot charge for a year would be $821.25 for organic dairy heifers. It would take another one-time fee of $25 per head to transport the heifers. Since there will be no change in returns, they are interested in determining if these costs would be less than their direct operating costs of $796.10 per head to justify the change. Please fill out and use the partial budget to answer the questions that follow.

**Make all calculations to the nearest cent or hundredth (0.00). Correct answers are 1 point each.**

| Column One | Column Two |
|---|---|
| 16. Additional Costs | 17. Additional Returns |
| 18. Reduced Returns | 19. Reduced Costs |
| 20. Total AC + RR = | 21.Total AR + RC = |
| 22. Net Change (Line 21 minus line 20) | |

23. Should ABC Organic Farm send their heifers to the feedlot?

    A. Yes
    B. No

24. The enterprise records for the replacement heifers show that they are operating at a loss. What might be the cause of this loss?

A. Undervaluing the replacements going back into the herd
B. Undervaluing the cost of homegrown feed
C. Overvaluing the cost of homegrown feed
D. Both A and C

End of Part II – Budgeting

Total Possible Points 24 POINTS EARNED PART II _____

# Part III – Cash Flow Planning

**NOTE: For the multiple choice questions, circle the BEST answer. Each correct answer is 1 point. For calculated numbers round to the nearest dollar or nearest tenth of a percent (xx.x%).**

1. Which of the following statements is not a true statement about Cash Flow Projections?

   A. They include both known and unknown amounts of income and expense.
   B. The actual results for the year may be better or worse than the projected.
   C. Although the statement is often requested by a lender, it is of equal or more importance to the producer.
   D. Adequate "cash flow" assures a positive "projected net farm income".
   E. They show whether cash from all sources will be adequate to meet the cash needs during the year.

For questions 2 through 14, use Pages R16-17 in the resource information.

2. Which month is expected to have the most dollars from sales flowing into the farm?

   _____

3. Before any Capital Purchases are made, or Term Loan Payments are paid, which month has the largest demand for cash?

   _____

4. In which month is the JD 8230 tractor loan payment due? _____

5. Which month has the largest amount of term loan payments due? _____

6. Milk represents _____% of total cash operating inflow.

7. Labor represents what percentage of total operating outflow? _____%

8. How many dollars are projected to cover family living needs and income tax payments combined?

   $ _____

9. What is the largest single category of projected operating expenses? _____

10. What is the projected ending cash balance for ABC Organic Farm in 2016?

    $ _____

11. Is the projected cash flow positive or negative? _____

12. What is the projected Net Farm Income in 2016 for ABC Organic Farm?

$ _____

13. Which of the following is not a true statement concerning the ABC Organic Farm's proposed 2016 operating loan?

A. Cash is used before borrowing on the operating loan.
B. The operating loan borrowing in July includes the amount needed to trade bean heads.
C. Based on the projected ending operating loan balance, it does not appear to create a cash flow problem to include an equipment purchase in the operating loan borrowings.
D. The peak operating loan balance is affected by the timing of crop sales.
E. Since the projected ending cash balance is much greater than the beginning cash balance, an operating loan should not have been necessary.

14. What is the largest total annual term debt payment that ABC Organic Farm is repaying monthly?

$ _____

For questions 15 through 26, use Page R15 in the resource information.

15. The summary page of ABC Organic Farm's 2016 Cash Flow Statement calculates some key liquidity and solvency measurements and ratios for the end of the projected year, and compares them to the beginning of the year. Which of the following is a true statement?

A. The Ending Current Ratio is projected to be dangerously high.
B. Both Liquidity and Solvency are projected to improve in 2016.
C. Liquidity is projected to improve in 2016, but Solvency will weaken.
D. The Debt to Equity ratio projects a dangerous trend.
E. Solvency is projected to improve in 2016, but Liquidity will weaken.

16. What is the anticipated change in ABC Organic Farm's 2016 earned net worth? (If negative, show a negative sign.)

$ _____

17. Which of the following is a true statement concerning projected "Term Debt Coverage Ratio"?

A. All of the profit is available to service debt.
B. Depreciation is added to net farm income because it is a fictitious number anyway.
C. Interest on term debt is added to net farm income because it is not really important.
D. It is the relationship of payments due and dollars available to make them.
E. All of the above.

18. Efficiency ratios show the distribution of gross revenue and always totals _____ %.

19. What is the projected operating expense ratio? _____%

20. What is the projected net farm income ratio? _____%

21. At the beginning of the year, what was the operating loan balance?

    $ _____

22. Both the lender and the farmer need to know the maximum size of the annual operating loan. Based on the projections, the operating loan balance will peak at

    $ _____.

23. The Total Operating Inflow is $2,730,021. What percent of these dollars are used for principal and interest payments on intermediate and long-term loans?

    _____%

24. What is the projected interest expense ratio? _____%

25. Based on the projections, what is the term debt coverage ratio (farm)? (List to the nearest hundredths.) _____

26. If operating expenses all increased by 10%, what would be the anticipated term debt coverage ratio? (List to the nearest hundredths.)

    _____

One of the many values of cash flow planning is to compare the plan for the year with what actually happened financially with the business during that same year. Review the 2015 Planned vs. 2015 Actual Income Statement, found on page R13 in the Resource Information, to answer questions 27 through 29.

27. Was the planned gross cash farm income more or less than the actual gross cash farm income?

    _____

28. Which income item had the most impact on increasing the actual farm income?

    _____

29. The actual gross cash farm income exceeded the planned gross cash farm income by what percentage?

    _____%

Another value of cash flow planning is the fact that a projected balance sheet is available for the producer and lender to review. The projected balance sheet is based on the balance sheet at the beginning of the year and adjusted by the numbers in the cash flow plan. Review the 1/1/2017 Projected Balance Sheet on page R18 and the 2016 Cash Flow Plan on pages R16 and R17 in the Resource Information to answer questions 30 through 33.

30. What line item of the cash flow plan represents the “Cash and Checking” item on the 1/1/17 Projected Balance Sheet?

    _____

31. Not including the Cash and Checking, which asset is projected to increase in value on the projected balance sheet?

    _____

32. Which loan on the projected balance sheet is projected to have the largest pay down during the year?

    _____

33. Is the projected Total Debt to Asset Ratio on 1/1/17 better or worse than the actual 1/1/16 Total Debt to Asset Ratio?

    A. Better
    B. Worse

End of Part III – Cash Flow Planning

Total Possible Points 33 POINTS EARNED PART III _____

# Part IV - Marketing

**Circle the letter in front of the correct multiple choice answer and follow the directions for the other questions. Correct answers are 1 point each.**

1. What is the source of economic incentives that can stimulate production?

   A. Demand
   B. Supply
   C. Price
   D. Cost

2. The best reason for producers to use technology is to

   A. maximize profits.
   B. stay ahead of the neighbor.
   C. produce as much as possible.
   D. not be left behind.

3. In modern production agriculture it is important to remember that the producer is

   A. first in line.
   B. a price taker.
   C. always correct.
   D. market seeking.

4. If more farmers start to produce organic milk to the point of oversupply, the result is

   A. a higher price.
   B. a lower price.
   C. no change in price.
   D. decreased demand.

5. A demand curve shows the relationship between quantity purchased and

   A. quality.
   B. cost.
   C. income.
   D. price.

6. The ABC Organic Farm's milk price, compared to non-organic area milk price, is

   A. higher.
   B. lower.
   C. the same.

7. Based on ABC Organic Farm's 2015 Analysis, the price of milk could drop by how many dollars per cwt. before they would lose money if labor and management charges are included?

   A. $11.30
   B. $11.96
   C. $22.85
   D. $34.15

8. When the market price falls below the cost of production of a commodity, this lower price may force the producer to

   A. produce more of that product.
   B. produce some other product.
   C. reduce the cost of production.
   D. B and C

**For Questions 9 and 10, see Bid Trends A and B on Resource Page R34**

9. Based on the spot bid for corn on Trend Chart A, farmers could have made how much per bushel if they were able to store their corn until January at Elevator A?

   A. 5 cents
   B. 10 cents
   C. 15 cents
   D. 20 cents

10. Based on Trend Chart B and given the four sites with new crop corn bids, which offered the best basis contract?

    A. Elevator A.
    B. Elevator B.
    C. Elevator C.
    D. Elevator D.

11. In the short run what prompts most of the price variability in commodities?

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

12. When a producer forward contracts his corn but later is concerned that a possible drought may cause the price to go much higher, what could he do to be able to take part in the possible price rally?

    A. Purchase a put option
    B. Sell a put option
    C. Purchase a call option
    D. Sell a call option

13. The price that the producer in question #12 acts on is called the

    A. Selling price
    B. Buying price
    C. Breakeven price
    D. Strike price

14. The person who makes transactions for farmers hedging is

    A. an accountant.
    B. a broker.
    C. a banker.
    D. a commissioner.

15. How many bushels are in a corn futures contract?

    A. 1000
    B. 3000
    C. 5000
    D. 7000

16. An upward trend in market prices is referred to as a

    A. bear market.
    B. bull market.
    C. boar market.
    D. buck market.

17. A downward trend in market prices is referred to as a

    A. bear market.
    B. bull market.
    C. boar market.
    D. buck market.

18. The money on deposit to ensure performance of a futures contract is called

    A. basis.
    B. commission.
    C. margin.
    D. premium.

19. If ABC Organic Farm wanted to lock in the price that they would have to pay for soybean meal, they could

    A. sell a put option.
    B. buy a put option.
    C. sell a call option.
    D. buy a call option.

20. When taking a position in which one has purchased futures contracts, the producer is said to be

    A. short.
    B. long.
    C. supply side.
    D. demand side.

21. Ag exports generally have what effect on price?

    A. No change
    B. Increase
    C. Decrease

22. Ag commodities that trade on the futures market have daily limit moves.

    A. True
    B. False

23. The marketing time frame for most grains is

    A. Six months
    B. Twelve months
    C. Eighteen months
    D. Twenty-four months

End of Part IV – Marketing

Total Possible Points 23 POINTS EARNED PART IV _____

## Part V - Income Taxes

**Circle the letter in front of the correct multiple choice answer. Fill in the blank for both matching and completion questions. Correct answers are 1 point each.**

Taxes are complicated and numerous tax forms are used when filing a tax return with the IRS. Match the 2016 business item with the correct corresponding tax form. Answers can be used more than once.

_____ 1. Amount spent on fertilizer
_____ 2. Deductions detailed for depreciation and amortization
_____ 3. Interest received from the bank
_____ 4. Sale of raised cows
_____ 5. Sale of purchased market cattle

A. Schedule A
B. Schedule B
C. Schedule C
D. Schedule D
E. Schedule E
F. Schedule F
G. Form 4797
H. Form 4562

6. Which of the following expenses should not be claimed as a deduction on a cash basis farmer's 2016 tax return?

   A. Fertilizer purchased 11/25/16 for the 2017 crop
   B. An old repair bill that was paid 2/19/16, but the work was completed on 8/19/15
   C. Feeder pigs purchased 11/20/16 that will be sold in 2017
   D. Fuel bill paid 10/1/16 for the 2016 crop, if none of the crop is sold in 2016

On June 12, 2016, a farmer purchased a two-year old tractor from a local dealer that his neighbor had previously owned. He paid $86,800 plus his old tractor that was fully depreciated. He had read that the Special Depreciation Allowance (50% Bonus Depreciation) and Section 179 Deduction would be available for use in certain circumstances for this year, but did not fully understand the details of them, and would rely on the knowledge of his tax professional for guidance. Since he was using his own funds for the purchase and had not made any other major purchases, he was interested in taking as much depreciation this year as allowed. Use this information to answer questions 7 – 9.

7. What is the maximum amount of 50% Bonus Depreciation he could take on this tractor if he did not take any Section 179 Deduction?

   $ _____

8. What is the maximum amount of Section 179 Deduction he could take on this tractor if he did not take any 50% Bonus Depreciation?

   $ _____

9. If he did not take any 50% Bonus Depreciation or Section 179 Deduction this year, and used Straight Line MACRS depreciation on the tractor, what would be his depreciation deduction in the year 2018?

   $ _____

When considering types of business entities for a farm, income tax management should be a consideration. Match the Farm Business Ownership type (A thru E) with the following statements (as used here, the word "owner" could refer to "shareholder", "member", "owner", "partner", etc.). Use each answer only once.

A. Sole Proprietorship
B. Partnership
C. C Corporation
D. S Corporation
E. LLC (Limited Liability Company)

_____ 10. Undistributed earnings are taxed when earned, and then are taxed a second time when distributed to the owner(s).

_____ 11. Earnings are taxed as personal income to the owner and are subject to Federal Income Tax and Self-Employment Tax.

_____ 12. Unless the decision is made to be taxed as a corporation, it will be taxed as a partnership.

_____ 13. Earnings are distributed to the owners and are subject to Federal Income Tax and Self-Employment Tax.

_____ 14. Earnings are distributed to owner(s) and are subject to Federal Income Tax but to Self-Employment Tax.

A farm business purchased (no trade-in involved) a tractor several years ago for $140,000. Since that time they have taken $110,000 of depreciation (including this year's) on the tractor. Over time, they have used the tractor for their farm operation and have used approximately $17,000 of fuel. Smaller repairs and maintenance costs totaled $6,000. However, they did have to do a major engine overhaul of $23,800 a few years back and were told they had to depreciate that expense. Since that time they have taken $11,900 of depreciation (including this year's) on the overhaul. In 2016, they sold the tractor to a neighbor (not related) for $82,000. Using this information, calculate the correct answers to questions 15 – 20.

15. What was the original basis of the tractor? $ _____

16. What was the adjusted basis of the tractor at the time of sale? $ _____

17. How much of the tractor sale is subject to Federal Income Tax? $ _____

18. How much of the tractor sale is taxed at the Capital Gain Rate? $ _____

19. How much of the taxable gain is Recapture of Depreciation? $ _____

20. How much of the taxable gain is subject to Self-Employment Tax? $ _____

21. If you are self-employed, your gross income from self-employment is taken times 92.35% (to be fair with wage earners). This adjusted figure is then taken times _____% to calculate your Self-Employment Tax.

22. Presuming that a farm employee earns in excess of $150, the employer is required to withhold _____% from the wages for FICA tax.

23. After year-end, the employer is required to give or send a Form _____ to each employee.

24. Presuming that an independent contractor earns in excess of $600, the farmer is required to withhold _____% from the wages for FICA tax.

25. After year-end, the farmer is required to give or send a Form _____ to each independent contractor earning over $600.

Although not always perfectly clear, the determination of whether someone is hired as an employee versus an independent contractor has evolved based on the circumstances of the arrangement. With the circumstances stated below, indicate whether they tend to be characteristics of:

A. An Employee
B. An Independent Contractor

_____ 26. The worker advertises his services and expertise to the public.

_____ 27. The farmer furnishes the equipment for the worker to use.

_____ 28. The farmer instructs how the work is to be done, and supervises the process.

_____ 29. The worker furnishes his own workers compensation insurance.

_____ 30. The farmer tells the worker when to arrive in the morning.

End of Part V – Income Tax

Total Possible Points 30 POINTS EARNED PART V _____

# Part VI - Investment Analysis

**Correct answers are 2 points each.**

ABC Organic Farm wants to buy a small 2016 John Deere 1025R tractor. They want this tractor with a loader and blade to clean out the small pens in their calf nursery and calving barn. The dealer will provide them a six-year loan with an interest rate of 0%. The price of the tractor is $18,000 complete. The payments are due in annual installments. Because they are such good customers, the dealer allowed zero percent down and will carry the note in-house.

Complete the table below. Round numbers to the nearest whole dollar.

| Year | Annual Payment | Interest | Principal | Balance |
|---|---|---|---|---|
| 0 | | | | $18,000 |
| 1 | $3,000 | 0 | | $15,000 |
| 2 | $3,000 | 0 | | $12,000 |
| 3 | | 0 | | |
| 4 | $3,000 | 0 | | $6,000 |
| 5 | $3,000 | 0 | | $3,000 |
| 6 | $3,000 | 0 | | |

1. The accumulated interest will actually be equal to one payment?

   A. True
   B. False

2. The annual payment will vary year to year.

   A. True
   B. False

3. What is the beginning balance?

   A. $12,100
   B. $25,000
   C. $40,000
   D. $18,000

4. What will the balance be after the final payment is made?

   A. $17,500
   B. $6,000
   C. $0
   D. $3,000

5. What is the annual payment in year 3?

   A. $11,050
   B. $3,000
   C. $2,563
   D. $1,700

6. The balance on the loan after the third year payment will be

   A. $1,000.
   B. $4,000.
   C. $8,000.
   D. $9,000.

7. The principal amount in each of the payments on this note will always be the same.

   A. True
   B. False

8. What is principal?

   A. The actual amount of money borrowed from the lender.
   B. The total amount of money you pay to the lender.
   C. The present value of the money paid to the lender.
   D. The amount of money left over.

9. What is loan amortization?

   A. The ability to get a loan from the bank.
   B. Paying off debt with a varying repayment schedule.
   C. Paying off debt with a fixed repayment schedule.
   D. The ability to repay a loan from the bank.

10. What would the interest be on the first payment if the interest rate were 7%?

    A. $1,900
    B. $1,119
    C. $1,260
    D. $1,050

11. What is the length of time for the term on a machinery loan?

    A. 5 year property
    B. 7 year property
    C. 10 year property
    D. Can be negotiated with the lender

12. The annual payment generally consists of what two things?

    _____ _____

13. Interest is

    A. the amount of money borrowed from the lender at the time of the loan.
    B. half of principal.
    C. the cost of borrowing money.
    D. the balance.

14. If the note is carried in-house, it will be construed as a contract for ownership but will not appear on your balance sheet.

    A. True
    B. False

15. The interest amount on amortized loans will always remain the same during the life of the loan.

    A. True
    B. False

End of Part VI – Investment Analysis

Total Possible Points 30 POINTS EARNED PART VI _____

# Part VII – Risk Management

**NOTE: For the multiple choice questions, circle the letter in front of the BEST answer. Each correct answer is 1 point.**

1. Which of the following is an example of market risk that applies to ABC Organic Farm?

   A. A change in milk prices
   B. A change in interest rates
   C. A change in consumers' tastes and preferences for organic products that affects their prices
   D. Both A and C
   E. A, B and C

2. Which of the following is an example of legal risk?

   A. A change in regulations surrounding milk production
   B. A change in consumers' tastes and preferences
   C. A change in interest rates
   D. A and C
   E. A, B and C

3. Which of the following best describes risk avoidance?

   A. Paying another party to assume a portion of a risk
   B. A methodology to reduce the severity of a risk
   C. A methodology to reduce the frequency of a risk
   D. Ceasing an activity to eliminate the possibility of suffering a loss
   E. Setting aside funds to pay for any losses that may occur

4. _____ is an example of risk transfer.

   A. An insurance policy
   B. A fire suppression system
   C. Testing for food borne pathogens
   D. B and C
   E. None of the above

5. A liquidity ratio is a measure of _____ risk.

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

6. If five farms have the following debt to asset ratios, which ratio indicates the greatest risk?

   A. 2.5
   B. .7
   C. 1.6
   D. 3.0
   E. .9

7. Becoming an LLC can reduce the business owner's _____ risk?

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

8. Which of the following is an appropriate method of risk transfer for ABC Organic Farm's human risk?

   A. Crop insurance
   B. The bodily injury portion of ABC's liability insurance policy
   C. Workers' Compensation Insurance
   D. A put option
   E. A Commercial Property Insurance Policy

9. A farmer who wants to establish a floor price for corn to be received at harvest would do what?

   A. Buy a call option.
   B. Buy a futures contract.
   C. Buy a put option.
   D. Sell a put option.

10. When the futures price moves above the price that a farmer sold a futures contract for, the farmer will receive

    A. a better than expected price.
    B. a margin call.
    C. a smaller than expected price.
    D. nothing.

11. Revenue protection coverage insurance protects against

    A. a decline in price or yield.
    B. a decline in price.
    C. a decline in yield.

12. A farmer decides to use the futures market to hedge the price of soybeans to be sold at harvest. What should the farmer do to hedge the soybeans?

    A. Buy futures contracts expecting to buy more contracts when the soybeans are sold.
    B. Buy futures contracts expecting to sell those contracts when the soybeans are sold.
    C. Sell futures contracts expecting to buy them back when the soybeans are sold.
    D. Sell futures contracts expecting to sell more contracts when the soybeans are sold.

13. After the farmer is hedged in Question #11, what is the only factor that could change the price received?

    A. An increase in the futures price.
    B. A decrease in the futures price.
    C. A change in the basis.
    D. A larger than expected yield.

14. A farmer would use the futures market with the objective to

    A. transfer risk.
    B. increase risk.
    C. participate in government farm programs.
    D. obtain a loan.

15. When hedging, it is important that farmers close out both the cash and futures position

    A. prior to selling the crop.
    B. simultaneously when selling the crop.
    C. but keep the futures position open to protect against price risk.
    D. at any time.

16. To hedge using commodity futures, a farmer

    A. must use a broker.
    B. must create a margin account.
    C. A and B
    D. does not need to do A or B. A farmer can hedge over the Internet without a broker or margin account.

17. A farmer uses revenue protection insurance to protect a corn crop. This type of insurance would protect against

    A. high prices and high yields.
    B. low yields and low prices.
    C. increase in cash rental rates.
    D. failure of a grain buyer to make a payment upon delivery.

18. The yield portion of revenue protection insurance on land that the producer has continually farmed is based on

    A. the farm's actual production history of yields.
    B. the county's actual production history of yields.
    C. the state's actual production history of yields.
    D. whatever yield coverage the farmer wants to buy.

19. The price portion of revenue protection insurance is based on

    A. the futures market.
    B. the local cash market.
    C. the U.S. Marketing-Year Average price.
    D. a price determined by the USDA.

20. Which of the following is not one of the steps in the risk management process?

    A. Identify
    B. Monitor
    C. Plan
    D. Depreciate
    E. Prioritize

21. Which of the following risks should realistically be transferred?

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

End of Part VII – Risk Management

Total Possible Points 21 POINTS EARNED PART VII _____

# Part VIII – Farm Business Organization

**For multiple choice questions circle the letter in front of the correct answer. Correct answers are 1 point each.**

1. The most common form of farm business is a

   A. corporation.
   B. partnership.
   C. sole proprietorship.
   D. Limited Liability Company.

2. The simplest association of two or more people to carry on business together is a

   A. corporation.
   B. partnership.
   C. sole proprietorship.
   D. Limited Liability Company.

3. A corporation as a legal entity would normally have a _____existence.

   A. one year
   B. ten year
   C. temporary
   D. permanent

4. In a Sub S Corporation, who can be a shareholder?

   A. Partnerships
   B. Other Sub S Corporations
   C. Other C Corporations
   D. Individuals
   E. All of the above

5. All are common factors of a C Corporation except

   A. expanded opportunities for estate planning.
   B. a possible reduced tax burden.
   C. unlimited personal liability.
   D. possible access to more capital.

6. The transfer of ownership in a corporation is by the sale or gifting of

   A. stocks.
   B. bonds.
   C. loans.
   D. capital.

7. The document creating a corporation is called

   A. Articles of Incorporation.
   B. Articles of Organization.
   C. Stock Issuance.
   D. Bond Issuance.

8. The document creating a Limited Liability Company is called

   A. Articles of Incorporation.
   B. Articles of Organization.
   C. Stock Issuance.
   D. Bond Issuance.

9. In a corporation, the ownership relationship between the company and the owners is expressed in terms of

   A. bonds.
   B. membership.
   C. partnerships.
   D. shares.

10. Which of the following entities does not have pass-through taxation?

    A. C Corporations
    B. Sub S Corporations
    C. Partnerships
    D. Limited Liability Partnerships

11. The individual who creates a trust is called the

    A. trustor.
    B. trustee.
    C. grantor.
    D. manager.

12. The individual who manages a trust is called the

    A. trustor.
    B. trustee.
    C. giftee.
    D. manager.

13. When farmers are interested in a collective action to improve their economic well-being, they could form an entity that is member controlled with patronage dividends called a

    A. partnership.
    B. Limited Liability Company.
    C. cooperative.
    D. trust.

14. A form of ownership in which a person or organization manages property for the benefit of someone else

    A. partnership.
    B. Limited Liability Company.
    C. cooperative.
    D. trust.

15. Which of the following is not a disadvantage of a corporation?

    A. More costly to form
    B. Likely will continue to need legal advice
    C. Requires monthly meetings
    D. Requires a board of directors

16. Which of these entities protects personal assets from legal action against a business?

    A. Limited Liability Company
    B. Partnership
    C. Sole Proprietorship
    D. Joint Venture

17. A Sub S Corporation is like a C Corporation except it has

    A. directors.
    B. pass-through taxation.
    C. shares.
    D. bonds.

18. Factors to consider when selecting a type of business organization include

    A. Simplicity
    B. Continuity
    C. Liability of Owners
    D. All the above

19. A Limited Liability Company is created by filing with the

    A. Internal Revenue Service.
    B. Secretary of State in the state of domicile.
    C. Revenue Department in the state of domicile.
    D. Department of Agriculture in the state of domicile.

20. When two or more sole proprietors carry on some activities jointly while maintaining individual ownership of resources, they have

    A. a cooperative.
    B. a partnership.
    C. an operating agreement.
    D. a corporation.

End of Part VIII – Farm Business Organization

Total Possible Points 20 POINTS EARNED PART VIII _____

## Part IX - Analyzing the Farm Business

**Note: Calculate to whole dollars and percentages to the tenth xx.x%. Multiple choice and completion questions are 1 point each. Computation questions are 2 points each.**

Using the Resource Information for the ABC Organic Farm 1/1/2015 and the 1/1/2016 Balance Sheets, found on Pages R3 and R4, answer the following questions.

Which current asset incurred the greatest reduction in value from the beginning to the end of the year?

1. _____

2. What was the total dollar impact on the reduction in current asset value for this item? $ _____

3. What is the change in total Current Assets? $ _____

4. What percentage reduction in total Current Assets is represented by the reduction in question 2?

   _____ %

Using the Resource Information, answer the questions below from the ABC Organic 2015 Farm Executive Summary, found on Page R5, and the Area Average data, found on Page R20.

5. Working Capital is

   A. a ratio that shows the ability to pay off current debt.
   B. a dollar amount only available to pay off term debt.
   C. the dollar amount that equals current assets minus current debt.
   D. the difference between total debt payments and current debt payments.

6. What is the 1/1/2016 Ending Working Capital for ABC Organic Farm? $ _____

7. Was the 1/1/2016 ABC Organic Farm's Working Capital better or worse than the Area Average?

   A. Better
   B. Worse

8. Is the 1/1/2016 Working Capital for ABC Organic Farm better or worse than the 1/1/2015 Working Capital?

   A. Better
   B. Worse

9. What is the 2015 Gross Farm Income for ABC Organic Farm? $ _____

10. Is the 1/1/2016 Working Capital as a % of Gross Farm Income (Revenues) better or worse for ABC Organic Farm compared to the average?

    A. Better
    B. Worse

The owners of ABC Organic Farm are interested in comparing income and expense information, as well as other Financial Standards Measures, Page R5, with the High 20% farms in their area, Pages R19 and R20.

11. ABC Organic Farm has a larger gross farm income than the High 20% Farms.

    A. True
    B. False

12. The Net Farm Income for ABC Organic Farm is greater than the High 20% Farms.

    A. True
    B. False

13. The Term Debt Coverage Ratio for ABC Organic Farms is better than the High 20% Farms.

    A. True
    B. False

Answer the following questions that relate to the Crop enterprises, found on Pages R8 and R9 in the Resource information.

14. Which crop had a negative net return per acre?

    A. Irrigated Organic Corn Silage – 138 acre field
    B. Irrigated Soybeans – 50 acre field
    C. Irrigated Organic Alfalfa Haylage - 115 acre field
    D. Irrigated Organic Alfalfa Haylage – 45 acre field

15. What was the primary reason for the negative returns when compared to the other crops listed in question 14?

    _____

Compare the Corn Enterprises for ABC Organic Farm and the Area Average, Pages R23 to R27, to answer the following questions.

16. When comparing direct and overhead expenses for the ABC Organic Farm irrigated and dryland organic corn, what expense was different?

    _____

17. For the two fields in question 16, what was the difference in net return per acre for the irrigated field vs. the dryland field?

    $ _____

18. When comparing only the returns section for organic corn on ABC Organic Farm, for which line is the value significantly larger than the non-organic corn in the Area Averages?

    _____

Compare the Dairy data for ABC Organic Farm, Page R10, with the Non-organic Dairy enterprise in the Area Averages, Page R30. Calculate your answer the following questions. Round dollar answers to cents.

19. The Area Average for non-organic pounds of milk per cow is 24,034. What is the difference in the pounds of milk produced per cow for ABC Organic Farm compared to the non-organic herds in the Area Average?

    _____

20. Is the milk produced per cow by ABC Organic Farm more or less than the Area Average?

    A. More
    B. Less

21. The Area Average for non-organic milk price per cwt. Is $17.75. What is the difference in the Average Milk Price per cwt. for ABC Organic Farm compared to the non-organic herds in the Area Average?

    $ _____

22. The Area Average net return for non-organic dairy is $289 per cow. Which Dairy enterprise showed a greater Net Return per cow?

    A. ABC Organic Farm
    B. Area Average Farms

23. Was your response in question 22 influenced more by production or by price?

    A. Production
    B. Price

The Resource Information, Page R32, shows 2014 and 2015 Dairy Sort Information. The Dairy Sort shows six columns of information that compare dairy herds by various production practices. Each type is listed at the top of each column, as “Sort – Includes”. Use the data from those columns to respond to the questions below.

24. Overall, which year was better for almost all the different types of dairy operations in the Dairy Sort?

    A. 2014
    B. 2015

25. Which type of operation had the best net income per cow in 2015 and the worst net income per cow in 2014?

    _____

26. What was the greatest influence on the change in net farm income from 2014 to 2015 for the operations that were NOT organic?

    _____

Compare the ABC Organic Farm Dairy enterprise, Page R10, to the Organic Dairy enterprise in the Area Average, Page R28.

27. What was the primary reason that ABC Organic Farm Dairy had a better Net Return per cow than the Organic Dairy enterprises in the Area Average?

    _____

28. Feed costs are often presented on a per cow and a per cwt. of milk produced. For which of these is ABC Organic Farm better than the average Organic Dairy enterprise?

    _____

Using the Contributions to Overhead section of the ABC Organic Farm data, Page R12, of the Resource Information, answer the following question.

29. Which Crop Enterprise contributed the most income to cover Overhead Expenses

    _____

Based on the Comparative Trend Data, Page R14, and considering the years the farm has been involved in organic production (2007 – present), list the year that each of these factors were best.

30. Net farm income from operations _____

31. Rate of Return on Assets _____

32. Rate of Return on Equity _____

33. Current Ratio _____

34. Operating Expense Ratio _____

End of Part IX – Analyzing the Farm Business

Total possible points 40 POINTS EARNED PART IX _____

Participant Number _____ State Abbreviation _____

# Part X – Family Living

Review the story of ABC Organic Farm, Pages R1 and R2, the 2015 Family Living Expense Summary, Page R12, and the Area Average Household and Personal Living Expenses, Page R21, before answering the following questions. Round answers to whole numbers and percentages to tenths, xx.x%. Answers are worth 1 point each except for questions 1 and 2 and 14 through 18, which are worth 2 points each.

1. What is the total cash family living expense amount per ABC Organic Farm family member?

   $ _____

2. What is the total cash family living expense amount per Area Average family member?

   $ _____

Of the following, what are three annual cash family living expenses that ABC Organic Farm would find most difficult to reduce?

| | | |
|---|---|---|
| Clothing | Gifts | Household and real estate taxes |
| Health insurance | Medical care | Recreation |

3. _____
4. _____
5. _____

Of the following, what are three annual cash family living expenses that ABC Organic Farm would find least difficult to reduce?

| | | |
|---|---|---|
| Cash donations | Gifts | Life insurance premiums |
| Health insurance | Utilities | Recreation |

6. _____
7. _____
8. _____

For the following expense items, indicate whether ABC Organic Farm spends more or less than the Area Average on a per family member basis.

9. Food and meals _____

10. Clothing _____

11. Health insurance _____

12. Utilities _____

13. When reviewing the total cash family living expenses for ABC Organic Farm. In which category were the expenses the highest?

_____

As the children of ABC Organic Farm grow, we expect the food and meals expense along with the clothing expense will increase over time. What percent of total family living expense do each of these areas comprise for ABC Organic Farm? (2 points each)

14. Food and meals expense _____%

15. Clothing expense _____%

In the list below, indicate which expenses account for more or less than 5% of the Total cash family living and investment and nonfarm capital purchases / Total Personal Expenditures. (2 points each)

16. Miscellaneous for ABC Organic Farm _____

17. Household supplies for Area Average _____

18. Medical Care for ABC Organic Farm _____

End of Part X – Family Living

Total possible points 25 POINTS EARNED PART X _____

# Part XI - Economic Principles

**Circle the letter in front of the correct answer. Each correct answer is 2 points.**

ABC Organic Farm applies a fertilizer to their non-irrigated hay meadows which contains about 40 lbs. of nitrogen (N) per acre. Fertilizer cost is projected to be $1.05 per pound applied. The hay meadows currently average a yield of 1.8 tons of hay per acre but ABC Organic Farm has found that with different levels of fertilizer applied, they receive additional output. They estimate that the hay can be sold for $105 a ton.

Complete the table below. Round the Total Income from hay sold (TR) column to cents and the Marginal Cost (MC) and Marginal Revenue (MR) per acre columns to the nearest whole dollar.

| Lbs of N Applied per acre | Yield of Meadow Hay in tons per acre (TPP) | Cost of Fertilizer per acre (TC) | Total Income from hay sold (TR) | Marginal Cost of fertilizer (MC) | Marginal Revenue per acre (MR) |
|---|---|---|---|---|---|
| 0 | 1.20 | n/a | $126.00 | n/a | n/a |
| 20 | 1.51 | $21 | | | |
| 40 | 1.80 | $42 | $189.00 | | |
| 60 | 2.09 | $63 | $219.45 | | |
| 80 | 2.37 | $84 | | | |
| 100 | 2.57 | $105 | $269.85 | | |
| 120 | 2.72 | $126 | | | |
| 140 | 2.82 | $147 | $296.10 | | |
| 160 | 2.90 | $168 | $304.50 | | |

1. Given the table above, how many pounds of nitrogen fertilizer should be applied to the meadow hay to maximize profits per acre?

   A. 60 pounds
   B. 80 pounds
   C. 100 pounds
   D. 120 pounds

2. In this situation the marginal revenue is equal to the

   A. change in total revenue divided by the change in total production.
   B. increase in profits resulting from applying fertilizer to achieve the highest yield possible.
   C. revenue created through the sale of the hay minus the cost of the fertilizer.
   D. profits derived from the marginal propensity to consume the additional hay.

3. The marginal cost is equal to the

   A. cost of fertilizing a single acre.
   B. marginal value deducted from the expenses that are expected to occur.
   C. change in the total cost divided by the marginal physical product.
   D. cost of additional yield deducted from the revenue that is expected to be generated.

4. The level of fertilizer that ABC Organic Farm is currently applying is optimum for their operation.

   A. True
   B. False

5. Applying 140 lbs. of fertilizer per acre is the most efficient use of ABC Organic Farm's resources.

   A. True
   B. False

6. The decision rule for profit maximization is

   A. MR=MC
   B. MR≥MC
   C. MR≤MC
   D. MR≠MC

7. If there is not a place where the MR and the MC are equal, then you should choose the place where the marginal revenue is closest to equaling the marginal cost but more marginal revenue than marginal cost.

   A. True
   B. False

8. Why does the Marginal Revenue Per Acre column remain the same all of the way down?

   A. Because the cost of input remains the same.
   B. Because the marginal production does not change.
   C. Because average production remains the same.
   D. Because marginal revenue is equal to the price of hay.

9. What is the Total Income from hay sold at the 80 pounds of nitrogen input level?

   A. $248.85
   B. $285.60
   C. $189.00
   D. $298.50

10. If the Marginal Physical Product is not present in the table, you must calculate it in order to calculate the Marginal Cost.

    A. True
    B. False

11. If the value of a ton of hay increases to $130 per ton, the optimum amount of nitrogen applied would be

    A. 100 lbs.
    B. 120 lbs.
    C. 140 lbs.
    D. 180 lbs.

12. If the value per ton of hay drops to $100 per ton, the optimum amount of nitrogen applied would be

    A. 40 lbs.
    B. 60 lbs.
    C. 80 lbs.
    D. 100 lbs.

End of Part XI – Economic Principles

Total Possible Points 24 POINTS EARNED PART XI _____

Participant Number _____ State Abbreviation _____

Participant Name (please print clearly) _____**Key**_____

**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***.

# 2016 NATIONAL FFA FARM BUSINESS MANAGEMENT CAREER DEVELOPMENT EVENT

| Page Number | Part | Area | Possible Points | Score |
|---|---|---|---|---|
| 3 | I | Financial Statements | 30 | _____ |
| 8 | II | Budgeting | 24 | _____ |
| 12 | III | Cash Flow Planning | 33 | _____ |
| 16 | IV | Marketing | 23 | _____ |
| 20 | V | Income Tax | 30 | _____ |
| 23 | VI | Investment Analysis | 30 | _____ |
| 26 | VII | Risk Management | 21 | _____ |
| 30 | VIII | Farm Business Organization | 20 | _____ |
| 34 | IX | Analyzing the Farm Business | 40 | _____ |
| 39 | X | Family Living | 25 | _____ |
| 41 | XI | Economic Principles | 24 | _____ |
| **TOTAL POSSIBLE POINTS** | | | **300** | |
| **PARTICIPANT POINTS** | | | | _____ |

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Participant Number _____ State Abbreviation _____

# PART I – Financial Statements

**NOTE: For the multiple choice questions, circle the letter in front of the BEST answer. Each correct multiple choice answer is 1 point. Correct calculated answers are 2 points. For calculated numbers round to the nearest dollar or nearest percent.**

1. The balance sheet represents the financial position of ABC Organic Farm

   A. for the accounting period.
   B. for the tax year.
   C. after deferred income taxes are paid.
   **D. on the date of the balance sheet.**

2. One example of an account receivable for ABC Farm would be

   A. an unpaid fertilizer bill.
   B. interest that will be paid when the business makes its next loan payment.
   **C. the unpaid amount for custom work that has been completed for you.**
   D. the amount paid for completed custom work.

3. Noncurrent assets are sometimes referred to as

   **A. intermediate and long-term assets.**
   B. inventory assets.
   C. assets that will be sold during the next accounting period.
   D. assets such as cash, marketable securities, accounts and notes receivable.

4. Net worth or owner equity refers to the difference between

   **A. total assets and total liabilities.**
   B. total revenue and total expenses.
   C. total cash income and total cash expenses.
   D. beginning net worth or owner equity and ending net worth or owner equity.

5. On a balance sheet, using market values for intermediate and long-term assets, the sources of owner equity (net worth) will include which of the following?

   A. Contributed capital.
   B. Retained earnings.
   C. Valuation equity.
   D. A and B.
   **E. A, B, and C.**

6. A nine-year loan has a principal balance of $61,574, an annual principal and interest payment of $8,400 due on July 1, and an interest rate of 3% annually. What is the amount of accrued interest for this loan on the 1/1/2016 balance sheet?

   A. $1,847.22
   B. $252.12
   **C. $931.20**
   D. $1,049.33

   **$61,574*0.03 = $1,847.22 ÷ 365 days per year = $5.06 per day**
   **July 1 through Dec 31 = 184 days *$5.06 = $931.20 or**
   **$1,847.22* 0.5 years = $923.61 (an approximation)**

7. What was the change in working capital for the 2015 accounting period?

   A. - $510,599
   B. - $40,786
   C. $1,087,559
   D. $536,174
   **E. - $514,224**

   **($893,339 - $351,471) - ($1,403,998 - $347,846)**
   **$541,928 - $1,056,152 = - $514,224**

8. Which of the following items contributed to a positive change in the 2015 owner equity? (There may be more than one correct answer.)

   **A. Net farm income**
   **B. Personal income**
   C. Income taxes
   D. Change in the market value of capital assets

9. On the balance sheet, total assets must equal

   A. total liabilities.
   B. total assets minus total liabilities.
   C. total assets minus net worth.
   **D. total liabilities plus net worth.**

10. When comparing cost and market balance sheets, market valuation is best described as

    **A. market value of intermediate and long-term assets minus cost value of intermediate and long-term assets.**
    B. market value of intermediate and long-term assets minus intermediate and long-term liabilities on a cost basis.
    C. market value of 2015 intermediate and long-term assets minus cost value of 2016 intermediate and long-term assets.
    D. value of 2016 intermediate and long-term liabilities minus cost value of 2015 intermediate and long-term liabilities.

11. The principal due within 12 months on term liabilities represents

    A. the amount of principal the business plans to pay on its operating loan during the next accounting period.
    **B. the amount of principal that must be paid on intermediate and long-term liabilities during the next accounting period.**
    C. the amount of new borrowing on the operating loan.
    D. the amount of interest that will be due on intermediate and long-term liabilities during the next accounting period.

12. Gross cash income includes all of the following except

    A. sales of organic grain.
    B. milk sales.
    C. cull breeding livestock.
    **D. an increase in inventory value.**

13. The total inventory change found on the accrual adjusted income statement for ABC Organic Farm indicates that cash accounting

    A. understates the true net farm income.
    B. accurately reports the true net farm income.
    **C. overstates the true net farm income.**

14. On the ABC Organic Farm income statement (R6), depreciation is calculated using

    A. Machinery purchases and sales.
    B. The cost value of machinery assets from the balance sheet.
    C. The market value of machinery assets from the balance sheet.
    **D. A and B.**
    E. A and C.

15. The net farm income reported for ABC Organic Farm on the income statement represents the return to

    **A. owner equity, unpaid labor and management.**
    B. owner equity, unpaid labor and borrowed capital.
    C. owner equity, unpaid labor and family living.
    D. farm assets and unpaid labor.

16. Cash items on the income statement could represent which of the following?

    A. Revenues from crops produced in 2014.
    B. Expenses for items that will be used for crop production in 2016.
    C. Revenue for crops produced in 2015.
    **D. All the above.**

17. The return to unpaid labor, management and equity for ABC Organic Farm is

    A. $285,908
    B. $771,660
    **C. $89,131**

18. The change in the size of the production loan for 2015

    A. increased accrual adjusted revenue for ABC Organic Farm.
    B. decreased accrual adjusted revenue for ABC Organic Farm.
    **C. did not change accrual adjusted revenues for ABC Organic Farm.**

19. The 2015 Statement of Cash Flows, page R7 of the resource information, indicates operating activities provided $ _____ of cash in 2015.

    **$771,660**

20. ABC Organic Farm's Statement of Cash Flows, page R7 of the resource information, indicates the calculated cash balance (farm and personal) would be

    $ _____
    **$5,049**

    **Beginning Cash Balance + Net Change in Cash = Ending Cash Balance**

    **$93,523 - $88,474 = $5,049**

21. In 2015, how much cash was used by ABC Organic Farm for business capital investments?

    $ _____ **$1,050,095 + $1,500 - $3,175 = $1,048,420**

22. The primary purpose of the Statement of Cash Flows is to indicate

    **A. the sources and uses of cash.**
    B. the sources and uses of revenue.
    C. if there will be future cash flow problems.
    D. if there is sufficient loan repayment capacity.

23. In the 2015 Statement of Owner's Equity, Page R7, net farm income is reported to be $89,131. Family living expense and income taxes accrued are reported to be $95,106. If the change in retained earnings is limited to just these two items, retained earnings will

    A. remain unchanged.
    B. increase by $5,975.
    **C. decrease by $5,975.**

24. The Statement of Owner's Equity can be used for which of the following?

**A. Explaining the change in owner equity for the accounting period.**
B. Explaining the change in the amount of cash for an accounting period.
C. Explaining the per unit cost of production for the accounting period.
D. All of the above.

25. The projected cash flows for 2016 indicate

A. barley will be added to the crop mix.
B. milk sales will increase about 10%.
C. cull breeding stock sales decrease.
**D. B and C**
E. A, B, and C

End of Part I – Financial Statements

Total Possible Points 30 POINTS EARNED PART I _____

Participant Number _____ State Abbreviation _____

# Part II – Budgeting

**For the multiple choice questions, circle the letter in front of the BEST answer. Make all calculations to the nearest cent or hundredth (0.00). Correct answers are 1 point each.**

1. An enterprise budget is

   A. a physical and financial plan for the entire farm business for a specified period of time.
   B. a record of past production performance.
   C. the tool used in analyzing only changes in the farm operation and the potential change in net income.
   **D. a statement of projected costs and returns associated with one production process, usually for one production cycle.**

2. If you are considering a change in the farm business that affects only a few items in the total farm budget, this change could most appropriately be evaluated using

   A. an enterprise budget.
   **B. a partial budget.**
   C. a cash flow budget.
   D. a total farm budget

3. 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. complimentary.
   **C. competitive.**
   D. supplementary.

4. If the farm business farms more acres, which of the following costs are least likely to change?

   A. Average fixed costs per acre
   B. Total variable costs
   **C. Average variable costs per acre**
   D. Average total costs per acre

5. Budgets are constructed to show future actions. To improve the accuracy of a budget, the operator may use

   A. historical data.
   B. forward contract pricing.
   C. more than one source for estimated data.
   **D. All of the above.**

6. Budgeting is not used to

   A. estimate the amount of credit needed.
   **B. help plan for the useful life of assets.**
   C. allow for experimentation with possible outcomes before resources are committed.
   D. All of the above.

7. In analyzing the enterprise report for the 40-acre organic alfalfa haylage (R9), which factor, when compared to the area average (R22), is most responsible for the negative return?

   **A. Yield per acre**
   B. Value per unit
   C. Direct expenses per acre
   D. Net return over labor and management.

Use the enterprise report for organic corn under irrigation (R8) to answer questions 8 through 15.

8. What is the yield for the corn? (Bushels per acre) _____ **190**

9. What are the total direct expenses per acre? $ _____ **$1010.61**

10. How much operating interest was paid per acre? $ _____ **$13.28**

11. What is the expected return per acre above direct expenses? $ _____
    **$1079.39**

12. What is a breakeven yield to cover direct expenses? _____ bushels per acre
    **$1010.61 / $11 = 91.87**

13. If the sale value per unit (bushel) drops to $6.00, what would the breakeven yield be?
    _____ bushels per acre **$1010.61 / $6 = 168.44**

14. What is the breakeven price per bushel for this corn enterprise to cover total direct and overhead expenses? $ _____ **$1174.44 / 190 = $6.18**

15. What is the net return over direct and overhead expenses? $ _____
    **$915.56**

In analyzing their replacement heifer enterprise records, ABC Organic Farm wonders if it would be better to have the replacement heifers raised in a dairy heifer feedlot. They have found one that would provide everything included in the direct operating expenses and still allow them to maintain their organic certification. The total daily feedlot charge for a year would be $821.25 for organic dairy heifers. It would take another one-time fee of $25 per head to transport the heifers. Since there will be no change in returns, they are interested in determining if these costs would be less than their direct operating costs of $796.10 per head to justify the change. Please fill out and use the partial budget to answer the questions that follow.

**Make all calculations to the nearest cent or hundredth (0.00). Correct answers are 1 point each.**

| Column One | Column Two |
|---|---|
| 16. Additional Costs<br><br>**Feedlot charge = $821.25**<br>**Hauling = $25**<br>**Subtotal = $846.25** | 17. Additional Returns<br><br>**None** |
| 18. Reduced Returns<br><br>**None** | 19. Reduced Costs<br><br>**Direct or operating costs = $796.10** |
| 20. Total AC + RR = **$846.25** | 21.Total AR + RC = **$796.10** |
| 22. Net Change (Line 21 minus line 20) **$796.10 - $846.25 = -$50.15 (negative)** | |

23. Should ABC Organic Farm send their heifers to the feedlot?

A. Yes
**B. No**

24. The enterprise records for the replacement heifers show that they are operating at a loss. What might be the cause of this loss?

A. Undervaluing the replacements going back into the herd
B. Undervaluing the cost of homegrown feed
C. Overvaluing the cost of homegrown feed
**D. Both A and C**

End of Part II – Budgeting

Total Possible Points 24 POINTS EARNED PART II _____

Participant Number _____ State Abbreviation _____

# Part III – Cash Flow Planning

**NOTE: For the multiple choice questions, circle the BEST answer. Each correct answer is 1 point. For calculated numbers round to the nearest dollar or nearest tenth of a percent (xx.x%).**

1. Which of the following statements is not a true statement about Cash Flow Projections?

   A. They include both known and unknown amounts of income and expense.
   B. The actual results for the year may be better or worse than the projected.
   C. Although the statement is often requested by a lender, it is of equal or more importance to the producer.
   **D. Adequate "cash flow" assures a positive "projected net farm income".**
   E. They show whether cash from all sources will be adequate to meet the cash needs during the year.

For questions 2 through 14, use Pages R16-17 in the resource information.

2. Which month is expected to have the most dollars from sales flowing into the farm?

   _____ **November**

3. Before any Capital Purchases are made, or Term Loan Payments are paid, which month has the largest demand for cash?

   _____ **May**

4. In which month is the JD 8230 tractor loan payment due? _____ **April**

5. Which month has the largest amount of term loan payments due? _____ **April**

6. Milk represents _____% of total cash operating inflow. **72%**

7. Labor represents what percentage of total operating outflow? _____% **10%**

8. How many dollars are projected to cover family living needs and income tax payments combined?

   $ _____ **$80,000**

9. What is the largest single category of projected operating expenses? _____ **feed**

10. What is the projected ending cash balance for ABC Organic Farm in 2016?

    $ _____ **$304,277**

11. Is the projected cash flow positive or negative? _____ **positive**

12. What is the projected Net Farm Income in 2016 for ABC Organic Farm?

$ _____ **$857,159**

13. Which of the following is not a true statement concerning the ABC Organic Farm's proposed 2016 operating loan?

A. Cash is used before borrowing on the operating loan.
B. The operating loan borrowing in July includes the amount needed to trade bean heads.
C. Based on the projected ending operating loan balance, it does not appear to create a cash flow problem to include an equipment purchase in the operating loan borrowings.
D. The peak operating loan balance is affected by the timing of crop sales.
**E. Since the projected ending cash balance is much greater than the beginning cash balance, an operating loan should not have been necessary.**

14. What is the largest total annual term debt payment that ABC Organic Farm is repaying monthly?

$ _____ **$70,932**

For questions 15 through 26, use Page R15 in the resource information.

15. The summary page of ABC Organic Farm's 2016 Cash Flow Statement calculates some key liquidity and solvency measurements and ratios for the end of the projected year, and compares them to the beginning of the year. Which of the following is a true statement?

A. The Ending Current Ratio is projected to be dangerously high.
**B. Both Liquidity and Solvency are projected to improve in 2016.**
C. Liquidity is projected to improve in 2016, but Solvency will weaken.
D. The Debt to Equity ratio projects a dangerous trend.
E. Solvency is projected to improve in 2016, but Liquidity will weaken.

16. What is the anticipated change in ABC Organic Farm's 2016 earned net worth? (If negative, show a negative sign.)

$ _____ **$774,788**

17. Which of the following is a true statement concerning projected "Term Debt Coverage Ratio"?

A. All of the profit is available to service debt.
B. Depreciation is added to net farm income because it is a fictitious number anyway.
C. Interest on term debt is added to net farm income because it is not really important.
**D. It is the relationship of payments due and dollars available to make them.**
E. All of the above.

18. Efficiency ratios show the distribution of gross revenue and always totals _____ %.
**100%**

19. What is the projected operating expense ratio? _____% **60.2%**

20. What is the projected net farm income ratio? _____% **27.3%**

21. At the beginning of the year, what was the operating loan balance?

$ _____ **$140,961**

22. Both the lender and the farmer need to know the maximum size of the annual operating loan. Based on the projections, the operating loan balance will peak at

$ _____. **$276,400**

23. The Total Operating Inflow is $2,730,021. What percent of these dollars are used for principal and interest payments on intermediate and long-term loans?
_____% **10.4%**

24. What is the projected interest expense ratio?
_____% **2.8%**

25. Based on the projections, what is the term debt coverage ratio (farm)? (List to the nearest hundredths.) _____ **4.07**

26. If operating expenses all increased by 10%, what would be the anticipated term debt coverage ratio? (List to the nearest hundredths.)
_____ **3.41**

One of the many values of cash flow planning is to compare the plan for the year with what actually happened financially with the business during that same year. Review the 2015 Planned vs. 2015 Actual Income Statement, found on page R13 in the Resource Information, to answer questions 27 through 29.

27. Was the planned gross cash farm income more or less than the actual gross cash farm income?
_____ **less**

28. Which income item had the most impact on increasing the actual farm income?
_____ **Organic Corn**

29. The actual gross cash farm income exceeded the planned gross cash farm income by what percentage?
_____% **($2,962,796 - $2,532,249) / $2,532,249 = 17.0%**

Another value of cash flow planning is the fact that a projected balance sheet is available for the producer and lender to review. The projected balance sheet is based on the balance sheet at the beginning of the year and adjusted by the numbers in the cash flow plan. Review the 1/1/2017 Projected Balance Sheet on page R18 and the 2016 Cash Flow Plan on pages R16 and R17 in the Resource Information to answer questions 30 through 33.

30. What line item of the cash flow plan represents the "Cash and Checking" item on the 1/1/17 Projected Balance Sheet?

_____ **Ending Cash Balance**

31. Not including the Cash and Checking, which asset is projected to increase in value on the projected balance sheet?

_____ **Crops**

32. Which loan on the projected balance sheet is projected to have the largest pay down during the year?

_____ **Operating Loan(s)**

33. Is the projected Total Debt to Asset Ratio on 1/1/17 better or worse than the actual 1/1/16 Total Debt to Asset Ratio?

**A. Better**
B. Worse

End of Part III – Cash Flow Planning

Total Possible Points 33 POINTS EARNED PART III _____

# Part IV - Marketing

**Circle the letter in front of the correct multiple choice answer and follow the directions for the other questions. Correct answers are 1 point each.**

1. What is the source of economic incentives that can stimulate production?

   A. Demand
   B. Supply
   **C. Price**
   D. Cost

2. The best reason for producers to use technology is to

   **A. maximize profits.**
   B. stay ahead of the neighbor.
   C. produce as much as possible.
   D. not be left behind.

3. In modern production agriculture it is important to remember that the producer is

   A. first in line.
   **B. a price taker.**
   C. always correct.
   D. market seeking.

4. If more farmers start to produce organic milk to the point of oversupply, the result is

   A. a higher price.
   **B. a lower price.**
   C. no change in price.
   D. decreased demand.

5. A demand curve shows the relationship between quantity purchased and

   A. quality.
   B. cost.
   C. income.
   **D. price.**

6. The ABC Organic Farm's milk price, compared to non-organic area milk price, is

   **A. higher.**
   B. lower.
   C. the same.

7. Based on ABC Organic Farm's 2015 Analysis, the price of milk could drop by how many dollars per cwt. before they would lose money if labor and management charges are included?

   **A. $11.30**
   B. $11.96
   C. $22.85
   D. $34.15

8. When the market price falls below the cost of production of a commodity, this lower price may force the producer to

   A. produce more of that product.
   B. produce some other product.
   C. reduce the cost of production.
   **D. B and C**

**For Questions 9 and 10, see Bid Trends A and B on Resource Page R34**

9. Based on the spot bid for corn on Trend Chart A, farmers could have made how much per bushel if they were able to store their corn until January at Elevator A?

   A. 5 cents
   B. 10 cents
   C. 15 cents
   **D. 20 cents**

10. Based on Trend Chart B and given the four sites with new crop corn bids, which offered the best basis contract?

    A. Elevator A.
    **B. Elevator B.**
    C. Elevator C.
    D. Elevator D.

11. In the short run what prompts most of the price variability in commodities?

    A. Location
    B. Demand
    **C. Supply**
    D. Quality

12. When a producer forward contracts his corn but later is concerned that a possible drought may cause the price to go much higher, what could he do to be able to take part in the possible price rally?

    A. Purchase a put option
    B. Sell a put option
    **C. Purchase a call option**
    D. Sell a call option

13. The price that the producer in question #12 acts on is called the

    A. Selling price
    B. Buying price
    C. Breakeven price
    **D. Strike price**

14. The person who makes transactions for farmers hedging is

    A. an accountant.
    **B. a broker.**
    C. a banker.
    D. a commissioner.

15. How many bushels are in a corn futures contract?

    A. 1000
    B. 3000
    **C. 5000**
    D. 7000

16. An upward trend in market prices is referred to as a

    A. bear market.
    **B. bull market.**
    C. boar market.
    D. buck market.

17. A downward trend in market prices is referred to as a

    **A. bear market.**
    B. bull market.
    C. boar market.
    D. buck market.

18. The money on deposit to ensure performance of a futures contract is called

    A. basis.
    B. commission.
    **C. margin.**
    D. premium.

19. If ABC Organic Farm wanted to lock in the price that they would have to pay for soybean meal, they could

    A. sell a put option.
    B. buy a put option.
    C. sell a call option.
    **D. buy a call option.**

20. When taking a position in which one has purchased futures contracts, the producer is said to be

A. short.
**B. long.**
C. supply side.
D. demand side.

21. Ag exports generally have what effect on price?

A. No change
**B. Increase**
C. Decrease

22. Ag commodities that trade on the futures market have daily limit moves.

**A. True**
B. False

23. The marketing time frame for most grains is

A. Six months
B. Twelve months
**C. Eighteen months**
D. Twenty-four months

End of Part IV – Marketing

Total Possible Points 23 POINTS EARNED PART IV _____

## Part V - Income Taxes

**Circle the letter in front of the correct multiple choice answer. Fill in the blank for both matching and completion questions. Correct answers are 1 point each.**

Taxes are complicated and numerous tax forms are used when filing a tax return with the IRS. Match the 2016 business item with the correct corresponding tax form. Answers can be used more than once.

__**F**__ 1. Amount spent on fertilizer
__**H**__ 2. Deductions detailed for depreciation and amortization
__**B**__ 3. Interest received from the bank
__**G**__ 4. Sale of raised cows
__**F**__ 5. Sale of purchased market cattle

A. Schedule A
B. Schedule B
C. Schedule C
D. Schedule D
E. Schedule E
F. Schedule F
G. Form 4797
H. Form 4562

6. Which of the following expenses should not be claimed as a deduction on a cash basis farmer's 2016 tax return?

   A. Fertilizer purchased 11/25/16 for the 2017 crop
   B. An old repair bill that was paid 2/19/16, but the work was completed on 8/19/15
   **C. Feeder pigs purchased 11/20/16 that will be sold in 2017**
   D. Fuel bill paid 10/1/16 for the 2016 crop, if none of the crop is sold in 2016

On June 12, 2016, a farmer purchased a two-year old tractor from a local dealer that his neighbor had previously owned. He paid $86,800 plus his old tractor that was fully depreciated. He had read that the Special Depreciation Allowance (50% Bonus Depreciation) and Section 179 Deduction would be available for use in certain circumstances for this year, but did not fully understand the details of them, and would rely on the knowledge of his tax professional for guidance. Since he was using his own funds for the purchase and had not made any other major purchases, he was interested in taking as much depreciation this year as allowed. Use this information to answer questions 7 – 9.

7. What is the maximum amount of 50% Bonus Depreciation he could take on this tractor if he did not take any Section 179 Deduction?

   $ _____ **$ 0 or None**

8. What is the maximum amount of Section 179 Deduction he could take on this tractor if he did not take any 50% Bonus Depreciation?

   $ _____ **$ 86,800**

9. If he did not take any 50% Bonus Depreciation or Section 179 Deduction this year, and used Straight Line MACRS depreciation on the tractor, what would be his depreciation deduction in the year 2018?

   $ _____ **$ 12,400**

When considering types of business entities for a farm, income tax management should be a consideration. Match the Farm Business Ownership type (A thru E) with the following statements (as used here, the word "owner" could refer to "shareholder", "member", "owner", "partner", etc.). Use each answer only once.

A. Sole Proprietorship
B. Partnership
C. C Corporation
D. S Corporation
E. LLC (Limited Liability Company)

__**C**__ 10. Undistributed earnings are taxed when earned, and then are taxed a second time when distributed to the owner(s).

__**A**__ 11. Earnings are taxed as personal income to the owner and are subject to Federal Income Tax and Self-Employment Tax.

__**E**__ 12. Unless the decision is made to be taxed as a corporation, it will be taxed as a partnership.

__**B**__ 13. Earnings are distributed to the owners and are subject to Federal Income Tax and Self-Employment Tax.

__**D**__ 14. Earnings are distributed to owner(s) and are subject to Federal Income Tax but to Self-Employment Tax.

A farm business purchased (no trade-in involved) a tractor several years ago for $140,000. Since that time they have taken $110,000 of depreciation (including this year's) on the tractor. Over time, they have used the tractor for their farm operation and have used approximately $17,000 of fuel. Smaller repairs and maintenance costs totaled $6,000. However, they did have to do a major engine overhaul of $23,800 a few years back and were told they had to depreciate that expense. Since that time they have taken $11,900 of depreciation (including this year's) on the overhaul. In 2016, they sold the tractor to a neighbor (not related) for $82,000. Using this information, calculate the correct answers to questions 15 – 20.

15. What was the original basis of the tractor? $ _____ **$ 140,000**

16. What was the adjusted basis of the tractor at the time of sale? $ _____ **$ 41,900**

17. How much of the tractor sale is subject to Federal Income Tax? $ ___ **$ 40,100**

18. How much of the tractor sale is taxed at the Capital Gain Rate? $___ **$0 or None**

19. How much of the taxable gain is Recapture of Depreciation? $ _____ **$ 40,100**

20. How much of the taxable gain is subject to Self-Employment Tax? $ _____
**$0 or None**

21. If you are self-employed, your gross income from self-employment is taken times 92.35% (to be fair with wage earners). This adjusted figure is then taken times _____% to calculate your Self-Employment Tax. **15.3%**

22. Presuming that a farm employee earns in excess of $150, the employer is required to withhold _____% from the wages for FICA tax. **7.65%**

23. After year-end, the employer is required to give or send a Form _____ to each employee. **W-2**

24. Presuming that an independent contractor earns in excess of $600, the farmer is required to withhold _____% from the wages for FICA tax. **0%**

25. After year-end, the farmer is required to give or send a Form _____ to each independent contractor earning over $600. **1099-Misc. or 1099-M**

Although not always perfectly clear, the determination of whether someone is hired as an employee versus an independent contractor has evolved based on the circumstances of the arrangement. With the circumstances stated below, indicate whether they tend to be characteristics of:

A. An Employee
B. An Independent Contractor

__**B**__ 26. The worker advertises his services and expertise to the public.

__**A**__ 27. The farmer furnishes the equipment for the worker to use.

__**A**__ 28. The farmer instructs how the work is to be done, and supervises the process.

__**B**__ 29. The worker furnishes his own workers compensation insurance.

__**A**__ 30. The farmer tells the worker when to arrive in the morning.

End of Part V – Income Tax

Total Possible Points 30 POINTS EARNED PART V _____

# Part VI - Investment Analysis

**Correct answers are 2 points each.**

ABC Organic Farm wants to buy a small 2016 John Deere 1025R tractor. They want this tractor with a loader and blade to clean out the small pens in their calf nursery and calving barn. The dealer will provide them a six-year loan with an interest rate of 0%. The price of the tractor is $18,000 complete. The payments are due in annual installments. Because they are such good customers, the dealer allowed zero percent down and will carry the note in-house.

Complete the table below. Round numbers to the nearest whole dollar.

| Year | Annual Payment | Interest | Principal | Balance |
|---|---|---|---|---|
| 0 | | | | $18,000 |
| 1 | $3,000 | 0 | **$3,000** | $15,000 |
| 2 | $3,000 | 0 | **$3,000** | $12,000 |
| 3 | **$3,000** | 0 | **$3,000** | **$9,000** |
| 4 | $3,000 | 0 | **$3,000** | $6,000 |
| 5 | $3,000 | 0 | **$3,000** | $3,000 |
| 6 | $3,000 | 0 | **$3,000** | **$0** |

1. The accumulated interest will actually be equal to one payment?

   A. True
   **B. False**

2. The annual payment will vary year to year.

   A. True
   **B. False**

3. What is the beginning balance?

   A. $12,100
   B. $25,000
   C. $40,000
   **D. $18,000**

4. What will the balance be after the final payment is made?

   A. $17,500
   B. $6,000
   **C. $0**
   D. $3,000

5. What is the annual payment in year 3?

   A. $11,050
   **B. $3,000**
   C. $2,563
   D. $1,700

6. The balance on the loan after the third year payment will be

   A. $1,000.
   B. $4,000.
   C. $8,000.
   **D. $9,000.**

7. The principal amount in each of the payments on this note will always be the same.

   **A. True**
   B. False

8. What is principal?

   **A. The actual amount of money borrowed from the lender.**
   B. The total amount of money you pay to the lender.
   C. The present value of the money paid to the lender.
   D. The amount of money left over.

9. What is loan amortization?

   A. The ability to get a loan from the bank.
   B. Paying off debt with a varying repayment schedule.
   **C. Paying off debt with a fixed repayment schedule.**
   D. The ability to repay a loan from the bank.

10. What would the interest be on the first payment if the interest rate were 7%?

    A. $1,900
    B. $1,119
    **C. $1,260**
    D. $1,050

11. What is the length of time for the term on a machinery loan?

    A. 5 year property
    B. 7 year property
    C. 10 year property
    **D. Can be negotiated with the lender**

12. The annual payment generally consists of what two things?

    _____ _____
    **Principal** **Interest**

13. Interest is

    A. the amount of money borrowed from the lender at the time of the loan.
    B. half of principal.
    **C. the cost of borrowing money.**
    D. the balance.

14. If the note is carried in-house, it will be construed as a contract for ownership but will not appear on your balance sheet.

    A. True
    **B. False**

15. The interest amount on amortized loans will always remain the same during the life of the loan.

    A. True
    **B. False**

End of Part VI – Investment Analysis

Total Possible Points 30 POINTS EARNED PART VI _____

# Part VII – Risk Management

**NOTE: For the multiple choice questions, circle the letter in front of the BEST answer. Each correct answer is 1 point.**

1. Which of the following is an example of market risk that applies to ABC Organic Farm?

   A. A change in milk prices
   B. A change in interest rates
   C. A change in consumers' tastes and preferences for organic products that affects their prices
   **D. Both A and C**
   E. A, B and C

2. Which of the following is an example of legal risk?

   **A. A change in regulations surrounding milk production**
   B. A change in consumers' tastes and preferences
   C. A change in interest rates
   D. A and C
   E. A, B and C

3. Which of the following best describes risk avoidance?

   A. Paying another party to assume a portion of a risk
   B. A methodology to reduce the severity of a risk
   C. A methodology to reduce the frequency of a risk
   **D. Ceasing an activity to eliminate the possibility of suffering a loss**
   E. Setting aside funds to pay for any losses that may occur

4. _____ is an example of risk transfer.

   **A. An insurance policy**
   B. A fire suppression system
   C. Testing for food borne pathogens
   D. B and C
   E. None of the above

5. A liquidity ratio is a measure of _____ risk.

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

6. If five farms have the following debt to asset ratios, which ratio indicates the greatest risk?

   A. 2.5
   B. .7
   C. 1.6
   **D. 3.0**
   E. .9

7. Becoming an LLC can reduce the business owner's _____ risk?

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

8. Which of the following is an appropriate method of risk transfer for ABC Organic Farm's human risk?

   A. Crop insurance
   B. The bodily injury portion of ABC's liability insurance policy
   **C. Workers' Compensation Insurance**
   D. A put option
   E. A Commercial Property Insurance Policy

9. A farmer who wants to establish a floor price for corn to be received at harvest would do what?

   A. Buy a call option.
   B. Buy a futures contract.
   **C. Buy a put option.**
   D. Sell a put option.

10. When the futures price moves above the price that a farmer sold a futures contract for, the farmer will receive

    A. a better than expected price.
    **B. a margin call.**
    C. a smaller than expected price.
    D. nothing.

11. Revenue protection coverage insurance protects against

    **A. a decline in price or yield.**
    B. a decline in price.
    C. a decline in yield.

12. A farmer decides to use the futures market to hedge the price of soybeans to be sold at harvest. What should the farmer do to hedge the soybeans?

    A. Buy futures contracts expecting to buy more contracts when the soybeans are sold.
    B. Buy futures contracts expecting to sell those contracts when the soybeans are sold.
    **C. Sell futures contracts expecting to buy them back when the soybeans are sold.**
    D. Sell futures contracts expecting to sell more contracts when the soybeans are sold.

13. After the farmer is hedged in Question #11, what is the only factor that could change the price received?

    A. An increase in the futures price.
    B. A decrease in the futures price.
    **C. A change in the basis.**
    D. A larger than expected yield.

14. A farmer would use the futures market with the objective to

    **A. transfer risk.**
    B. increase risk.
    C. participate in government farm programs.
    D. obtain a loan.

15. When hedging, it is important that farmers close out both the cash and futures position

    A. prior to selling the crop.
    **B. simultaneously when selling the crop.**
    C. but keep the futures position open to protect against price risk.
    D. at any time.

16. To hedge using commodity futures, a farmer

    A. must use a broker.
    B. must create a margin account.
    **C. A and B**
    D. does not need to do A or B. A farmer can hedge over the Internet without a broker or margin account.

17. A farmer uses revenue protection insurance to protect a corn crop. This type of insurance would protect against

    A. high prices and high yields.
    **B. low yields and low prices.**
    C. increase in cash rental rates.
    D. failure of a grain buyer to make a payment upon delivery.

18. The yield portion of revenue protection insurance on land that the producer has continually farmed is based on

    **A. the farm's actual production history of yields.**
    B. the county's actual production history of yields.
    C. the state's actual production history of yields.
    D. whatever yield coverage the farmer wants to buy.

19. The price portion of revenue protection insurance is based on

    **A. the futures market.**
    B. the local cash market.
    C. the U.S. Marketing-Year Average price.
    D. a price determined by the USDA.

20. Which of the following is not one of the steps in the risk management process?

    A. Identify
    B. Monitor
    C. Plan
    **D. Depreciate**
    E. Prioritize

21. Which of the following risks should realistically be transferred?

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

End of Part VII – Risk Management

Total Possible Points 21 POINTS EARNED PART VII _____

# Part VIII – Farm Business Organization

**For multiple choice questions circle the letter in front of the correct answer. Correct answers are 1 point each.**

1. The most common form of farm business is a

   A. corporation.
   B. partnership.
   **C. sole proprietorship.**
   D. Limited Liability Company.

2. The simplest association of two or more people to carry on business together is a

   A. corporation.
   **B. partnership.**
   C. sole proprietorship.
   D. Limited Liability Company.

3. A corporation as a legal entity would normally have a _____existence.

   A. one year
   B. ten year
   C. temporary
   **D. permanent**

4. In a Sub S Corporation, who can be a shareholder?

   A. Partnerships
   B. Other Sub S Corporations
   C. Other C Corporations
   **D. Individuals**
   E. All of the above

5. All are common factors of a C Corporation except

   A. expanded opportunities for estate planning.
   B. a possible reduced tax burden.
   **C. unlimited personal liability.**
   D. possible access to more capital.

6. The transfer of ownership in a corporation is by the sale or gifting of

   **A. stocks.**
   B. bonds.
   C. loans.
   D. capital.

7. The document creating a corporation is called

   **A. Articles of Incorporation.**
   B. Articles of Organization.
   C. Stock Issuance.
   D. Bond Issuance.

8. The document creating a Limited Liability Company is called

   A. Articles of Incorporation.
   **B. Articles of Organization.**
   C. Stock Issuance.
   D. Bond Issuance.

9. In a corporation, the ownership relationship between the company and the owners is expressed in terms of

   A. bonds.
   B. membership.
   C. partnerships.
   **D. shares.**

10. Which of the following entities does not have pass-through taxation?

    **A. C Corporations**
    B. Sub S Corporations
    C. Partnerships
    D. Limited Liability Partnerships

11. The individual who creates a trust is called the

    **A. trustor.**
    B. trustee.
    C. grantor.
    D. manager.

12. The individual who manages a trust is called the

    A. trustor.
    **B. trustee.**
    C. giftee.
    D. manager.

13. When farmers are interested in a collective action to improve their economic well-being, they could form an entity that is member controlled with patronage dividends called a

    A. partnership.
    B. Limited Liability Company.
    **C. cooperative.**
    D. trust.

14. A form of ownership in which a person or organization manages property for the benefit of someone else

    A. partnership.
    B. Limited Liability Company.
    C. cooperative.
    **D. trust.**

15. Which of the following is not a disadvantage of a corporation?

    A. More costly to form
    B. Likely will continue to need legal advice
    **C. Requires monthly meetings**
    D. Requires a board of directors

16. Which of these entities protects personal assets from legal action against a business?

    **A. Limited Liability Company**
    B. Partnership
    C. Sole Proprietorship
    D. Joint Venture

17. A Sub S Corporation is like a C Corporation except it has

    A. directors.
    **B. pass-through taxation.**
    C. shares.
    D. bonds.

18. Factors to consider when selecting a type of business organization include

    A. Simplicity
    B. Continuity
    C. Liability of Owners
    **D. All the above**

19. A Limited Liability Company is created by filing with the

    A. Internal Revenue Service.
    **B. Secretary of State in the state of domicile.**
    C. Revenue Department in the state of domicile.
    D. Department of Agriculture in the state of domicile.

20. When two or more sole proprietors carry on some activities jointly while maintaining individual ownership of resources, they have

    A. a cooperative.
    B. a partnership.
    **C. an operating agreement.**
    D. a corporation.

End of Part VIII – Farm Business Organization

Total Possible Points 20 POINTS EARNED PART VIII _____

## Part IX - Analyzing the Farm Business

**Note: Calculate to whole dollars and percentages to the tenth xx.x%. Multiple choice and completion questions are 1 point each. Computation questions are 2 points each.**

Using the Resource Information for the ABC Organic Farm 1/1/2015 and the 1/1/2016 Balance Sheets, found on Pages R3 and R4, answer the following questions.

Which current asset incurred the greatest reduction in value from the beginning to the end of the year?

1. _____ **(Accounts Receivable)**

2. What was the total dollar impact on the reduction in current asset value for this item? $ _____ **($450,000 - $178,000) = $272,000**

3. What is the change in total Current Assets? $ _____

   **$1,403,998 - $893,399 = $510,599**

4. What percentage reduction in total Current Assets is represented by the reduction in question 2?

   _____ %

   **$272,000 / $ 510,599 = 53.2%**

Using the Resource Information, answer the questions below from the ABC Organic 2015 Farm Executive Summary, found on Page R5, and the Area Average data, found on Page R20.

5. Working Capital is

   A. a ratio that shows the ability to pay off current debt.
   B. a dollar amount only available to pay off term debt.
   **C. the dollar amount that equals current assets minus current debt.**
   D. the difference between total debt payments and current debt payments.

6. What is the 1/1/2016 Ending Working Capital for ABC Organic Farm?

   $ _____

   **$541,928**

7. Was the 1/1/2016 ABC Organic Farm's Working Capital better or worse than the Area Average?

   **A. Better**
   B. Worse

8. Is the 1/1/2016 Working Capital for ABC Organic Farm better or worse than the 1/1/2015 Working Capital?

   A. Better
   **B. Worse**

9. What is the 2015 Gross Farm Income for ABC Organic Farm? $ _____
   **$2,476,396**

10. Is the 1/1/2016 Working Capital as a % of Gross Farm Income (Revenues) better or worse for ABC Organic Farm compared to the average?

    A. Better
    **B. Worse**

The owners of ABC Organic Farm are interested in comparing income and expense information, as well as other Financial Standards Measures, Page R5, with the High 20% farms in their area, Pages R19 and R20.

11. ABC Organic Farm has a larger gross farm income than the High 20% Farms.

    **A. True**
    B. False

12. The Net Farm Income for ABC Organic Farm is greater than the High 20% Farms.

    A. True
    **B. False**

13. The Term Debt Coverage Ratio for ABC Organic Farms is better than the High 20% Farms.

    A. True
    **B. False**

Answer the following questions that relate to the Crop enterprises, found on Pages R8 and R9 in the Resource information.

14. Which crop had a negative net return per acre?

    A. Irrigated Organic Corn Silage – 138 acre field
    B. Irrigated Soybeans – 50 acre field
    C. Irrigated Organic Alfalfa Haylage - 115 acre field
    **D. Irrigated Organic Alfalfa Haylage – 45 acre field**

15. What was the primary reason for the negative returns when compared to the other crops listed in question 14? _____
    **(Low yield)**

Compare the Corn Enterprises for ABC Organic Farm and the Area Average, Pages R23 to R27, to answer the following questions.

16. When comparing direct and overhead expenses for the ABC Organic Farm irrigated and dryland organic corn, what expense was different? _____
**(Irrigation Energy)**

17. For the two fields in question 16, what was the difference in net return per acre for the irrigated field vs. the dryland field? $ _____ **$915.56 - (-39.02) = $954.58**

18. When comparing only the returns section for organic corn on ABC Organic Farm, for which line is the value significantly larger than the non-organic corn in the Area Averages? _____ **(Value per Unit)**

Compare the Dairy data for ABC Organic Farm, Page R10, with the Non-organic Dairy enterprise in the Area Averages, Page R30. Calculate your answer the following questions. Round dollar answers to cents.

19. The Area Average for non-organic pounds of milk per cow is 24,034. What is the difference in the pounds of milk produced per cow for ABC Organic Farm compared to the non-organic herds in the Area Average? _____
**(24,034 - 18,185 = 5,849)**

20. Is the milk produced per cow by ABC Organic Farm more or less than the Area Average?

    A. More
    **B. Less**

21. The Area Average for non-organic milk price per cwt. Is $17.75. What is the difference in the Average Milk Price per cwt. for ABC Organic Farm compared to the non-organic herds in the Area Average?

    $ _____
    **($34.15 - $17.75 = $16.40)**

22. The Area Average net return for non-organic dairy is $289 per cow. Which Dairy enterprise showed a greater Net Return per cow?

    **A. ABC Organic Farm**
    B. Area Average Farms

23. Was your response in question 22 influenced more by production or by price?

    A. Production
    **B. Price**

The Resource Information, Page R32, shows 2014 and 2015 Dairy Sort Information. The Dairy Sort shows six columns of information that compare dairy herds by various production practices. Each type is listed at the top of each column, as "Sort – Includes". Use the data from those columns to respond to the questions below.

24. Overall, which year was better for almost all the different types of dairy operations in the Dairy Sort?

    **A. 2014**
    B. 2015

25. Which type of operation had the best net income per cow in 2015 and the worst net income per cow in 2014? _____ **(organic herds)**

26. What was the greatest influence on the change in net farm income from 2014 to 2015 for the operations that were NOT organic? _____

    **(Ave. milk price per cwt.)**

Compare the ABC Organic Farm Dairy enterprise, Page R10, to the Organic Dairy enterprise in the Area Average, Page R28.

27. What was the primary reason that ABC Organic Farm Dairy had a better Net Return per cow than the Organic Dairy enterprises in the Area Average?

    _____

    **(Pounds of milk produced per cow or Milk Sold per cow)**

28. Feed costs are often presented on a per cow and a per cwt. of milk produced. For which of these is ABC Organic Farm better than the average Organic Dairy enterprise?

    _____

    **(Feed Cost per cwt.)**

Using the Contributions to Overhead section of the ABC Organic Farm data, Page R12, of the Resource Information, answer the following question.

29. Which Crop Enterprise contributed the most income to cover Overhead Expenses

    _____

    **(Irrigated Organic Corn)**

Based on the Comparative Trend Data, Page R14, and considering the years the farm has been involved in organic production (2007 – present), list the year that each of these factors were best.

30. Net farm income from operations _____ **(2014)**

31. Rate of Return on Assets _____ **(2014)**

32. Rate of Return on Equity _____ **(2007)**

33. Current Ratio _____ **(2010)**

34. Operating Expense Ratio _____ **(2014)**

End of Part IX – Analyzing the Farm Business

Total possible points 40 POINTS EARNED PART IX _____

Participant Number _____ State Abbreviation _____

# Part X – Family Living

Review the story of ABC Organic Farm, Pages R1 and R2, the 2015 Family Living Expense Summary, Page R12, and the Area Average Household and Personal Living Expenses, Page R21, before answering the following questions. Round answers to whole numbers and percentages to tenths, xx.x%. Answers are worth 1 point each except for questions 1 and 2 and 14 through 18, which are worth 2 points each.

1. What is the total cash family living expense amount per ABC Organic Farm family member?

   $ _____ **$7,772 ($69,950 / 9 family members)**

2. What is the total cash family living expense amount per Area Average family member?

   $ _____ **$13,840 ($48,439 / 3.5 family members)**

Of the following, what are three annual cash family living expenses that ABC Organic Farm would find most difficult to reduce?

| | | |
|---|---|---|
| Clothing | Gifts | Household and real estate taxes |
| Health insurance | Medical care | Recreation |

3. _____ **Household and real estate taxes**
4. _____ **Health insurance**
5. _____ **Medical care**

Of the following, what are three annual cash family living expenses that ABC Organic Farm would find least difficult to reduce?

| | | |
|---|---|---|
| Cash donations | Gifts | Life insurance premiums |
| Health insurance | Utilities | Recreation |

6. _____ **Cash donations**
7. _____ **Gifts**
8. _____ **Recreation**

For the following expense items, indicate whether ABC Organic Farm spends more or less than the Area Average on a per family member basis.

9. Food and meals _____ **Less**

10. Clothing _____ **Less**

11. Health insurance _____ **More**

12. Utilities _____ **Less**

13. When reviewing the total cash family living expenses for ABC Organic Farm. In which category were the expenses the highest? _____
**Food and meals expense**

As the children of ABC Organic Farm grow, we expect the food and meals expense along with the clothing expense will increase over time. What percent of total family living expense do each of these areas comprise for ABC Organic Farm? (2 points each)

14. Food and meals expense _____% **($11,547/$69,950) x 100 = 16.5%**

15. Clothing expense _____% **($2,247/$69,950) x 100 = 3.2%**

In the list below, indicate which expenses account for more or less than 5% of the Total cash family living and investment and nonfarm capital purchases / Total Personal Expenditures. (2 points each)

16. Miscellaneous for ABC Organic Farm _____ **More 5.3%**

17. Household supplies for Area Average _____ **Less 4.2%**

18. Medical Care for ABC Organic Farm _____ **Less 4..9%**

End of Part X – Family Living

Total possible points 25 POINTS EARNED PART X _____

# Part XI - Economic Principles

**Circle the letter in front of the correct answer. Each correct answer is 2 points.**

ABC Organic Farm applies a fertilizer to their non-irrigated hay meadows which contains about 40 lbs. of nitrogen (N) per acre. Fertilizer cost is projected to be $1.05 per pound applied. The hay meadows currently average a yield of 1.8 tons of hay per acre but ABC Organic Farm has found that with different levels of fertilizer applied, they receive additional output. They estimate that the hay can be sold for $105 a ton.

Complete the table below. Round the Total Income from hay sold (TR) column to cents and the Marginal Cost (MC) and Marginal Revenue (MR) per acre columns to the nearest whole dollar.

| Lbs of N Applied per acre | Yield of Meadow Hay in tons per acre (TPP) | Cost of Fertilizer per acre (TC) | Total Income from hay sold (TR) | Marginal Cost of fertilizer (MC) | Marginal Revenue per acre (MR) |
|---|---|---|---|---|---|
| 0 | 1.20 | n/a | $126.00 | n/a | n/a |
| 20 | 1.51 | $21 | **$158.55** | **$68** | **$105** |
| 40 | 1.80 | $42 | $189.00 | **$72** | **$105** |
| 60 | 2.09 | $63 | $219.45 | **$72** | **$105** |
| 80 | 2.37 | $84 | **$248.85** | **$75** | **$105** |
| 100 | 2.57 | $105 | $269.85 | **$105** | **$105** |
| 120 | 2.72 | $126 | **$285.60** | **$140** | **$105** |
| 140 | 2.82 | $147 | $296.10 | **$210** | **$105** |
| 160 | 2.90 | $168 | $304.50 | **$263** | **$105** |

1. Given the table above, how many pounds of nitrogen fertilizer should be applied to the meadow hay to maximize profits per acre?

   A. 60 pounds
   B. 80 pounds
   **C. 100 pounds**
   D. 120 pounds

2. In this situation the marginal revenue is equal to the

   **A. change in total revenue divided by the change in total production.**
   B. increase in profits resulting from applying fertilizer to achieve the highest yield possible.
   C. revenue created through the sale of the hay minus the cost of the fertilizer.
   D. profits derived from the marginal propensity to consume the additional hay.

3. The marginal cost is equal to the

   A. cost of fertilizing a single acre.
   B. marginal value deducted from the expenses that are expected to occur.
   **C. change in the total cost divided by the marginal physical product.**
   D. cost of additional yield deducted from the revenue that is expected to be generated.

4. The level of fertilizer that ABC Organic Farm is currently applying is optimum for their operation.

   A. True
   **B. False**

5. Applying 140 lbs. of fertilizer per acre is the most efficient use of ABC Organic Farm's resources.

   A. True
   **B. False**

6. The decision rule for profit maximization is

   **A. MR=MC**
   B. MR≥MC
   C. MR≤MC
   D. MR≠MC

7. If there is not a place where the MR and the MC are equal, then you should choose the place where the marginal revenue is closest to equaling the marginal cost but more marginal revenue than marginal cost.

   **A. True**
   B. False

8. Why does the Marginal Revenue Per Acre column remain the same all of the way down?

   A. Because the cost of input remains the same.
   B. Because the marginal production does not change.
   C. Because average production remains the same.
   **D. Because marginal revenue is equal to the price of hay.**

9. What is the Total Income from hay sold at the 80 pounds of nitrogen input level?

   **A. $248.85**
   B. $285.60
   C. $189.00
   D. $298.50

10. If the Marginal Physical Product is not present in the table, you must calculate it in order to calculate the Marginal Cost.

    **A. True**
    B. False

11. If the value of a ton of hay increases to $130 per ton, the optimum amount of nitrogen applied would be

    **A. 100 lbs**.
    B. 120 lbs.
    C. 140 lbs.
    D. 180 lbs.

12. If the value per ton of hay drops to $100 per ton, the optimum amount of nitrogen applied would be

    A. 40 lbs.
    B. 60 lbs.
    **C. 80 lbs.**
    D. 100 lbs.

End of Part XI – Economic Principles

Total Possible Points 24 POINTS EARNED PART XI _____

State _____ Team Number _____

Please put your state and team number in the blanks in the upper right corner of each page

**Each team will complete and turn in only one copy of these pages. Other copies can be used to make notes and calculations**

# 2016 National FFA Farm Business Management Career Development Event Team Activity

**Expectations:** The team activity evaluates the ability of team members to work together to use decision making and problem analysis skills while applying economic principles and concepts taught in farm business management.

**Evaluation:** The team activity portion is evaluated as follows:

- involve all members of the team
- organize the team effort
- communicate with each other in resolving issues relating to the current situation
- reach consensus and agreement
- complete the analysis of possible alternatives and solutions
- communicate and submit in writing the team's consensus of solutions

**Team Activity Focus:** Explore the ABC Organic Farm business in the areas listed below. Review the current and past situations considering what you have learned from the Resource Information and from working on the individual problem.

| | | |
|---|---|---|
| **Points:** | **Part 1 – Advantages of organic dairying** | **16 points** |
| | **Part 2 – Challenges in organic dairying** | **16 points** |
| | **Part 3 – Net return comparison** | **28 points** |
| | **Part 4 – Total net return difference** | **6 points** |
| | **Part 5 – Life insurance rationale** | **6 points** |
| | **Part 6 – Item in an estate plan – Part 1** | **8 points** |
| | **Part 7 – Item in an estate plan – Part 2** | **8 points** |
| | **Part 8 – Bio-security** | **16 points** |
| | **Part 9 – Community relationships** | **16 points** |
| | **Part 10 – Retaining employees** | **16 points** |
| | **Part 11 – Advantages of organic crop production** | **16 points** |
| | **Part 12 – Challenges in organic crop production** | **16 points** |
| | **Part 13 – Corn enterprise comparison** | **16 points** |
| | **Part 14 – Risk management factors** | **16 points** |
| | **Total** | **200 points** |

| 1. List four possible advantages of organic dairying. (4 pts. Ea. = 16 points) |
| --- |
| |

| 2. List four possible disadvantages/challenges of organic dairying. (4 pts. Ea. = 16 points) |
| --- |
| |

**3. ABC Organic Farm wants to compare their total returns over the past five years to see how much difference there is compared to other similar size cow herds from the area average. See pages R14 and R33. (28 points total)**

i. Identify the Net Return over labor and management per Cow. List to nearest cent. (1 pt. each)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| 1. Conventional | _____ | _____ | _____ | _____ | _____ |
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2. ABC Organic | _____ | _____ | _____ | _____ | _____ |

ii. Assume that both the average and ABC Organic farms have 200 cows. Calculate the total net return over labor and management for each year. List to nearest whole dollar. (1 pt. -each)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| 1. Conventional | _____ | _____ | _____ | _____ | _____ |
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2. ABC Organic | _____ | _____ | _____ | _____ | _____ |

iii. Calculate the 5-year total for each operation. (4 pts. each)

1. Conventional $ _____
2. ABC Organic $ _____

**4. Explain the difference between the five-year totals in Question #3, Answer iii. (6 points)**

**5. List three reasons for having life insurance in this operation. (List = 6 points)**

**6. List one item that should be addressed in an estate plan and explain its importance in detail. (8 points)**

**7. List a second item that should be addressed in an estate plan and explain its importance in detail. (8 points)**

**8. List four of ABC Organic Farm's biggest challenges in bio-security. (4 pts. Ea. = 16 points)**

**9. List four ways the owners of ABC Organic Farm can promote strong community relationships. (4 pts. Ea. = 16 points)**

**10. List four key factors necessary to retain high quality employees. (4 pts. Ea. = 16 points)**

**11. List four possible advantages of producing organic crops. (4 pts. Ea. = 16 points)**

**12. What are four possible disadvantages/challenges of producing organic crops? (4 pts. Ea. = 16 points)**

**13. Compare ABC Organic Farm's dryland organic corn to the Corn on Cash Rent area average. Respond to each expense item by indicating whether the amount for ABC Organic Farm is more or less (circle) than the area average and give the main reason there is a difference. See pages R8 and R24. (4 pts. Ea. = 16 points)**

**Seed:** **More or Less**

∞ **WHY:**

**Chemicals:** **More or Less**

∞ **WHY:**

**Fuel and Repairs:** **More or Less**

∞ **WHY:**

**Total Direct Expenses:** **More or Less**

∞ **WHY:**

**14. List four Risk Management strategies you recommend for this business. (4 pts. Ea. = 16 points)**

**Each team will complete and turn in only one copy of these pages. Other copies can be used to make notes and calculations**

# 2016 National FFA Farm Business Management Career Development Event Team Activity

**Expectations:** The team activity evaluates the ability of team members to work together to use decision making and problem analysis skills while applying economic principles and concepts taught in farm business management.

**Evaluation:** The team activity portion is evaluated as follows:

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- organize the team effort
- communicate with each other in resolving issues relating to the current situation
- reach consensus and agreement
- complete the analysis of possible alternatives and solutions
- communicate and submit in writing the team's consensus of solutions

**Team Activity Focus:** Explore the ABC Organic Farm business in the areas listed below. Review the current and past situations considering what you have learned from the Resource Information and from working on the individual problem.

| | | |
|---|---|---|
| **Points:** | **Part 1 – Advantages of organic dairying** | **16 points** |
| | **Part 2 – Challenges in organic dairying** | **16 points** |
| | **Part 3 – Net return comparison** | **28 points** |
| | **Part 4 – Total net return difference** | **6 points** |
| | **Part 5 – Life insurance rationale** | **6 points** |
| | **Part 6 – Item in an estate plan – Part 1** | **8 points** |
| | **Part 7 – Item in an estate plan – Part 2** | **8 points** |
| | **Part 8 – Bio-security** | **16 points** |
| | **Part 9 – Community relationships** | **16 points** |
| | **Part 10 – Retaining employees** | **16 points** |
| | **Part 11 – Advantages of organic crop production** | **16 points** |
| | **Part 12 – Challenges in organic crop production** | **16 points** |
| | **Part 13 – Corn enterprise comparison** | **16 points** |
| | **Part 14 – Risk management factors** | **16 points** |
| | **Total** | **200 points** |

**1. List four possible advantages of organic dairying. (4 pts. Ea. = 16 points)**

- ∞ **Price of the milk**
- ∞ **Longevity of the cows**
- ∞ **Perception of quality**
- ∞ **Limited supply of organic milk**
- ∞ **Limited supply dairy replacements**
- ∞ **Less use of medication**

**2. List four possible disadvantages/challenges of organic dairying. (4 pts. Ea. = 16 points)**

- ∞ **Obtaining an organic feed supply**
- ∞ **Adequate amount of organic pasture**
- ∞ **Additional recordkeeping required**
- ∞ **Inspections**
- ∞ **Annual Organic Certification fee**
- ∞ **Limited options for agronomic decisions**

**3. ABC Organic Farm wants to compare their total returns over the past five years to see how much difference there is compared to other similar size cow herds from the area average. See pages R14 and R33. (28 points total)**

i. Identify the Net Return over labor and management per Cow. List to nearest cent. (1 pt. each)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| 1. Conventional | **327.75** | **82.16** | **13.45** | **1009.94** | **-12.27** |
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2. ABC Organic | **289.78** | **393.17** | **1236.45** | **1133.83** | **2054.38** |

ii. Assume that both the average and ABC Organic farms have 200 cows. Calculate the total net return over labor and management for each year. List to nearest whole dollar. (1 pt. each)

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| 1. Conventional | **65,550** | **16,432** | **2,690** | **201,988** | **-2,454** |
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| 2. ABC Organic | **57,956** | **78,634** | **247,290** | **226,766** | **410,876** |

iii. Calculate the 5-year total for each operation. (4 pts. each)

1. Conventional **$ 284,206**
2. ABC Organic **$ 1,021,522**

**4. Explain the difference between the five-year totals in Question #3, Answer iii. (6 points)**

∞ **Decisions to be based on relation to Margin**

**5. List three reasons for having life insurance in this operation. (List = 6 points)**

- ∞ **Covering farm debt**
- ∞ **Replacing lost labor**
- ∞ **Replacing lost childcare**
- ∞ **Replacing lost income**
- ∞ **Replacing lost management ability and knowledge**
- ∞ **Protect children's future**

**6. List one item that should be addressed in an estate plan and explain its importance in detail. (8 points)**

- ∞ **Guardianship of minor children**
- ∞ **Distribution of assets**
- ∞ **Proper business entity**
- ∞ **Need for wills**
- ∞ **Avoiding probate (trusts) and estate taxes**
- ∞ **Identifying expertise in advising**

**7. List a second item that should be addressed in an estate plan and explain its importance in detail. (8 points)**

- ∞ **See list above.**

**8. List four of ABC Organic Farm's biggest challenges in bio-security. (4 pts. Ea. = 16 points)**

- ∞ **Animal diseases**
- ∞ **Chemical drift**
- ∞ **Contamination from non-organic crops**
- ∞ **Site security**

**9. List four ways the owners of ABC Organic Farm can promote strong community relationships. (4 pts. Ea. = 16 points)**

- ∞ **Contributions to community events**
- ∞ **Participation in community activities (i.e. 4-H)**
- ∞ **Participation in church activities**
- ∞ **Buying local**
- ∞ **Promotion of organic products - tell the organic story**
- ∞ **Serve on community boards**
- ∞ **Offer farm tours**

**10. List four key factors necessary to retain high quality employees. (4 pts. Ea. = 16 points)**

- ∞ **Wages**
- ∞ **Benefits (vacation, health insurance, retirement plan, education/training)**
- ∞ **Working conditions**
- ∞ **Incentives**
- ∞ **Equity between employees**

**11. List four possible advantages of producing organic crops. (4 pts. Ea. = 16 points)**

- ∞ Price per unit
- ∞ Produce feed for organic dairy
- ∞ Perception of quality
- ∞ Use his own organic manure on organic crops
- ∞ Less exposure to chemicals
- ∞ Opportunity to sell to organic markets

**12. What are four possible disadvantages/challenges of producing organic crops? (4 pts. Ea. = 16 points)**

- ∞ Unable to use chemical weed control
- ∞ Different practices needed to control weeds
- ∞ Adequate amount of organic pasture
- ∞ Additional recordkeeping required
- ∞ Inspections
- ∞ Annual Organic Certification fee
- ∞ More management required
- ∞ More trips over the field / more machinery cost
- ∞ More labor required

**13. Compare ABC Organic Farm's dryland organic corn to the Corn on Cash Rent area average. Respond to each expense item by indicating whether the amount for ABC Organic Farm is more or less (circle) than the area average and give the main reason there is a difference. See pages R8 and R24. (4 pts. Ea. = 16 points)**

**Seed:** **More** or less

∞ **WHY: costs more per unit; less seed available could result in higher costs**

**Chemicals:** More or **less**

∞ **WHY: none used**

**Fuel and Repairs** **More** or less

∞ **WHY: more trips over the field; more equipment wear**

**Total Direct Expenses** **More** or less

∞ **WHY: more machinery costs; fertilizer costs**

**14. List four Risk Management strategies you recommend for this business. (4 pts. Ea. = 16 points)**

- ∞ **Crop insurance**
- ∞ **Health insurance**
- ∞ **Disability insurance**
- ∞ **Liability insurance**
- ∞ **Balance business and personal time**

JOHN DEERE