

Kentucky Farm Business Management Program

Preliminary Grain Analysis Summary

2014



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A Special Note to Our Readers

The data for this study are drawn from the detailed financial and production records of producers cooperating with the Kentucky Farm Business Management Program. The data are not drawn from a random sample of farms in the state. However, these data are the most accurate and detailed farm financial data available to researchers and educators. Every attempt has been made to select a set of farms for these research studies which are “typical”

operations and have complete financial information available for analysis. These data are carefully cross-checked by our farm management specialists before inclusion in this analysis. It should be noted that farms included in this study are representative of commercial farms producing major commodities and livestock, but not of all farms in Kentucky.

Source of Data

This report presents the *preliminary summary* of 2014 performance data, both financial and physical, from 361 farmers on 146 Kentucky farm businesses. Some data are presented for previous years so that trends and changes can be studied. The data come from records obtained from farmers participating in the Kentucky Farm Business Management (KFBM) program. The program is a cooperative effort between the Department of Agricultural Economics of the University of Kentucky and four incorporated Farm Analysis Groups. This program was initiated to improve Kentucky farm management in general and specifically to:

- Provide farmers with an individual farm analysis and comparative analysis of farm business records emphasizing information necessary for sound decision making and wise financial planning;
- Provide farmers with objective counseling in developing priorities and alternative plans;
- Provide the public with basic information about business conditions as well as costs and returns on Kentucky farms under current conditions;
- Provide Kentucky farmers, teachers, researchers and lending agencies actual on-farm information about Kentucky farm businesses.

In 2014, 649 farmers on 383 farms were members of the Kentucky Farm Business Management program keeping records under the direction of 9 Farm Business Management Specialists. The program serves farmers in 55 counties.

Uses for This Report

This annual summary is meant to be used as a reference for obtaining advance information about Kentucky grain and dairy farms. To see the complete publication of annual summary data, and for other, similar publications, go to <http://www.uky.edu/Ag/KFBM>.

Managing a farm business is almost impossible without a complete set of farm records. Records such as those underlying the KFBM program provide the essential information required by lenders and tax preparers, and also provide the means for farmers to fully analyze their businesses. Analyzing this complete record gives an accurate evaluation of how profitable and efficient the business is, indicates the business' weak points and strong points, and provides reliable data (particularly physical production data) for use in planning.

The farm business summaries in this report are used by individual farmers to analyze their business operations and to develop future plans for their farming operations. This report summarizes information so that specialists in agricultural extension, teaching, and research can use the data to enhance their programs. The definition of terms and income and expense measures below will be of assistance in using the data.

Farmers must be able to evaluate changes in their financial position. They must look at the interrelationships of the cash flow, income statement, and balance sheet to evaluate financial progress. For "real" progress to be made, the business must generate an increase in net worth as measured by a reconciled set of financial statements.

To thoroughly evaluate performance – to learn how the business is progressing – farmers need a record summary that includes considerable detail (i.e., production per person, yields per acre or head, feed conversion rates, etc.), and they must make trend and comparative analysis.

Trend analysis compares the farm's current year record summary with summaries from previous years. It allows farmers to identify trends and changes in their business over time and thereby detect improvements and deteriorations in various parts of the business.

Comparative analysis allows farmers to examine the similarities and differences in business performance between their farm and that of other similar farms. Comparative analysis is an important part of the work that Farm Business Management Specialists do with farmers in the program. The data presented here, however, can be useful to any farmer in Kentucky as a benchmark for performance.

Definition of Terms and Accounting Methods

Sampling Technique

Data from all farm business records certified to be usable for comparative analysis by field staff were aggregated by area, type of farm, size (i.e., tillable acres, number of animal production units, etc.), and management. Illinois Farm Business Farm Management Association's Farm Business Farm Management software was used to compile and summarize the data. It is important to note the farms represented in the KFBM dataset can change from year to year, and that fluctuations within the data could be due to this change of sample.

Type of Farm

Farm type is based on the percent feed fed. To determine percent feed fed, the total value of feed fed to all livestock enterprises is divided by the value of crop returns. However, tobacco revenue is excluded from crop returns for this calculation. Values for percent feed fed can range from zero to infinity. Large values are possible if a farm has limited grain production and thus purchases much of its feed.

Grain farms are defined as farms on which the value of feed fed was less than 40 percent of the crop returns and the value of feed fed to dairy was less than one-sixth of the crop returns.

Dairy farms are defined as farms on which the value of feed fed was more than 40 percent of the crop returns and the dairy enterprise utilized more than one-third of the value of feed fed.

Accrual Accounting

Accrual accounting matches the year's cost and returns to the farm's physical production. It differs from cash accounting, which records payments as made and income as received. For KFBM purposes, cash records are adjusted to approximate accrual accounting. Changes in inventories of commodities and livestock, accounts receivable, prepaid expenses, and accounts payable are added to or subtracted from cash income and expense records for the calendar or fiscal year. Accrual accounting provides a more realistic reflection of net farm income for the period as well as more accurate income statements and balance sheets in accordance with Farm Financial Standards Council recommendations.

Expense/Cost Items

Total operating expenses include cash operating expenses plus depreciation plus the net effect on expenses when accounting for the accrual change in accounts payable and prepaid expenses. Cash operating expenses include cash outlays for the following non-depreciable items:

- Fertilizer
- Pesticides
- Seed (including homegrown seed)
- Machinery repairs
- Machinery hire and leases
- Fuel and oil (lubricants)
- Farm share of utilities and light vehicle expenses
- Building repairs
- Drying and storage
- Hired labor
- Livestock expense
- Taxes
- Insurance
- Miscellaneous expenses

Purchased feed, grain and livestock are not included because they are deducted from Gross Revenue to calculate the Value of Farm Production.

Depreciation used here is Economic Depreciation. It is calculated on each item using the Alternative Depreciation System (ADS) under the Modified Accelerated Cost Recovery System of the Internal Revenue Code of 1986. ADS imposes straight line depreciation over a longer cost recovery period than the General Depreciation System and other expense deductions allowed for income tax purposes.

Total interest expense includes cash interest paid on operating and term debt plus the net change in accrued interest on farm business debt.

Interest on equity capital is a charge of 2.95 percent on the current value of land and 4.95 percent on non-land items less total interest expense. It is the opportunity cost of investing in the farm business. The non-land charge is calculated by multiplying 4.95 percent times: 1) the average of the beginning and ending of year value of livestock, economic book value of machinery, and building investment; 2) one-half of the average of the beginning and ending of year balance of inventory items; and 3) one-half of the total year's cash operating expense.

Land Charge Total is the sum of land equity charge, real estate taxes, cash rent, and lease cost. Lease cost is the cost calculated to be paid by the landlord for the operator(s) share of acres paid less costs paid by the operator(s) for the landlord on share crop acres.

Unpaid family and operator labor is the opportunity cost of using the operator's own and unpaid family labor in the farm business. A charge of \$2,725 per month for unpaid operator and family labor is made for each farm. This labor charge is per labor month and is based on unpaid labor of 2,500 hours per year. Part-time family labor is therefore prorated. Like any other resource, unpaid labor must be accounted for when studying profitability of a farm business.

Revenue Items

Crop returns is the sum of the feed and grain sold, value of all feed fed (except milk), government crop subsidy program payments, and the change in value of feed and grain inventories less the value of crops and feed purchased. Tobacco revenue is excluded from crop returns for this calculation.

Livestock returns above feed is the sum of the sale of livestock and livestock products, value of livestock products consumed, and value of the livestock on hand at the end of the year minus livestock purchases and the value of the livestock on hand at the beginning of the year minus the cost of all feed fed, whether purchased or raised.

Gross farm returns is the sum of cash and accrued value of sales of farm products and services, government payments, and other farm-related revenue less the cost of purchased feed and livestock, plus the change in inventory value for grain and livestock, plus the value of farm products used. Farm products used are products consumed on farm and not sold. Also called *Value of farm production*.

Net Farm Income is the value of farm production less total operating expenses, less total interest expense plus net gain or loss on machinery and buildings sold. Net Farm Income includes returns to the farm for unpaid family and operator labor, the interest on invested capital, and management. It is the net total earnings to the farm operator(s).

Operator(s) labor and management income is Net Farm Income less the interest charge on equity capital, less the opportunity cost of unpaid family labor. It represents the operators' return to their labor and management.

Management return is the residual after a charge for unpaid operator labor is deducted from operator(s) labor and management income.

Operator-only refers to the revenue, costs, production, and returns that accrue to the farmer(s) involved in the farm's management and NOT that of landlords.

Financial Efficiency Ratios

Expense Ratios are measures of how economically farm businesses operate. Each ratio compares some aspect of expense or Net Farm Income to gross farm returns.

Other Terms Used in this Report

Inventory value of crops and livestock is based on average year-end prices reported for the four KFBM areas in the Kentucky Department of Agriculture Market Reports and the USDA Agriculture Marketing Service reports.

Old Crop is any crop that was produced in a prior year, but inventoried and held for sell in the current year.

New Crop is any crop that was produced in the current year.

Operator Acres is owned and cash rented acres plus the operator's share of tillable acres under crop share leases.

Pasture Days is the number of days the operator(s) reported that livestock derived a significant portion of nutrition from pasture. The charge to livestock for pasture days is the number of days multiplied times the number of animal units involved at a calculated cost of \$0.31/day for producing grass in pasture.

Total Acres Planted – Selected Crops is the total number of acres planted to a particular crop divided by the number of farms that planted that crop for all farms in a particular comparative sort.

Grain Summary Analysis

Profitability from Kentucky grain farms fell to 28% of the previous year's Net Farm Income. This is based on the experience of 146 farms that participated in the Kentucky Farm Business Management program (KFBM) in 2013 and 2014. Profitability, as measured by Net Farm Income (NFI), averaged \$135,787 in 2014 compared to \$489,345 for the same farms in 2013 (Tables 1 and 2). NFI is the value of farm production less total operating expenses and interest, plus net gain or loss on machinery and buildings sold. It includes returns to the farm for operator labor, interest on invested capital, and management. The 146 farms were included in the 2014 Preliminary Analysis and in the 2013 Annual Summary Data.

Costs of production associated with each year are nearly the same (Figure 1). Total average non-feed cost for 2014 averaged \$856.51 per acre. Average cost for 2013 was \$854.23 per acre. Chemical, seed, and fertilizer cost was down 5%, about \$15 per acre. Power and equipment costs, drying and storage, and building repairs (not including depreciation) increased \$5.41 per acre over 2013. Labor cost was up about \$5 per acre. Land cost, including taxes, rent, and leasing, was essentially the same for both years. All costs are adjusted to an accrual basis so that cost of production is matched to production for each year and are reported on a per acre basis.

Figure 1: Selected Costs	Per Operator Acre			
	2014	2013	Difference	% of 2013
Soil Fertility	128.94	142.03	-13.10	91%
Pesticides	60.14	62.30	-2.17	97%
Seed	83.72	83.80	-0.07	100%
Crop Total	272.80	288.14	-15.34	95%
Power & Equipment Total	118.92	114.82	3.99	103%
Drying, Storage, Building Repair	19.54	18.12	1.42	108%
Labor Paid	61.98	56.82	5.16	109%
Taxes	3.23	3.00	0.23	108%
Cash Rent	82.30	84.29	-1.99	98%
Leasing Cost	36.44	37.11	-0.67	98%
Land Cost	160.15	161.64	-1.49	99%
TOTAL NON-FEED COSTS	856.51	854.23	2.29	100%

These farmers paid about \$7 more per acre on building and equipment depreciation. The average balance sheet for this group shows an increase in value of buildings and equipment in 2014 (compare Tables 3 & 4). The average increase was \$75,132 in machinery and equipment; \$53,999 in buildings. This indicates continued investment in capital assets. Increase in buildings and equipment is net of ordinary decrease in value of existing used equipment.

Figure 2: Land in Farm	2014	2013	Difference	% of Opr Acres	
Total Acres	2,480	2,431	49		
Tillable Acres	2,308	2,274	34		
Opr Acres	2,103	2,051	52	2014	2013
Owned Acres	631	616	15	30%	30%
Share Rent Acres	575	625	-50	27%	30%
Rented Acres	1,102	1,033	69	52%	50%

The average farm added 34 tillable acres in 2014 (Figure 2). There was also a shift in rental arrangements in 2014. The average grain farm dropped 50 acres of crop share and added 69 acres of cash rent. Net result after adjustment for crop share arrangements is an additional 52

acres on which the farm operator received crop revenues. The average farm also purchased 15 acres of tillable land. The average balance sheet shows \$166,483 increase in land value at the end of 2014. This reflects the land purchase and continued strong prices for farm land.

Gross Farm Returns (GFR) fell to 83% of 2013 GFR for the average grain farm in this comparison (Figure 3). Crop revenue declined \$201 per acre. Tobacco, livestock returns above feed, and other farm income added to the total \$820.62 GFR per acre, a net decline of \$168 per acre.

	Per Operator Acre			
	2014	2013	Difference	% of 2013
Crop Returns	680.46	881.62	-201.16	77%
Livestock Returns Above Feed	23.29	15.56	7.72	150%
Custom Work	5.88	7.85	-1.97	75%
Other Farm Receipts	30.42	17.13	13.29	178%
Tobacco Receipts	80.57	66.93	13.64	120%
GROSS FARM RETURNS	820.62	989.10	-168.48	83%

The preliminary data shows two reasons for the decline in crop revenue (Table 5). The most obvious is the fall in commodity prices. Average price received by these farmers for corn produced and sold in 2013 was \$4.77 per bushel (Figure 4). Average price for corn produced and sold in 2014 was \$3.91 per bushel. Comparing the two years, the \$0.86 per bushel difference created a \$137 per acre loss for corn produced in 2014. For full season soybeans the price drop was \$2.01 per bushel, resulting in a \$94 per acre decline in crop revenue. Double crop soybeans produced less per acre in 2013, so the negative impact from price was only \$73 per acre. Wheat prices received declined \$1.30 per bushel, resulting in a \$92 drop in 2014 revenue per acre.

Crop	2014		2013		Change		\$ Crop Loss/AC		% Crop Loss	
	Yield	New Crop Price	Yield	New Crop Price	Yield per Acre	Price per Bushel	Due to Yield	Due to Price	Due to Yield	Due to Price
Corn	159	3.91	187	4.77	-28	-0.86	-132	-137	49%	51%
Full Beans	47	10.87	53	12.88	-6	-2.01	-76	-94	45%	55%
Wheat	71	5.57	80	6.86	-9	-1.30	-64	-92	41%	59%
DC Beans	35	10.79	49	12.86	-13	-2.07	-171	-73	70%	30%

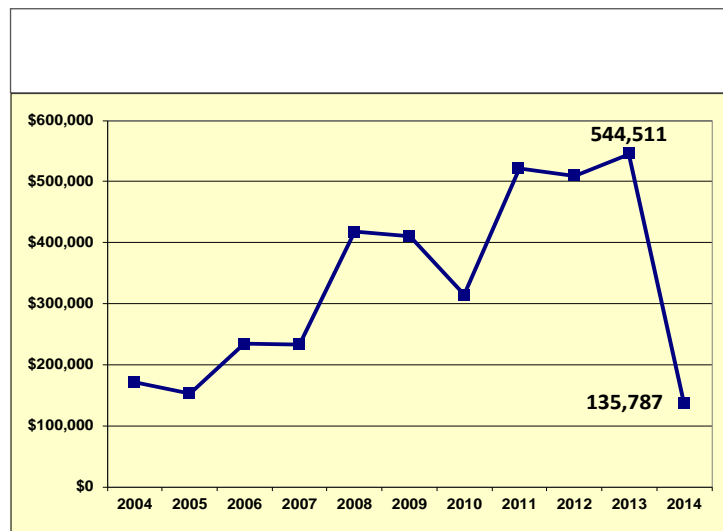
The other reason for decline in crop revenue per acre, and thus GFR, is a drop in yields. USDA reported moderate drought conditions for most of Kentucky in July and August, 2014. The reports said that later crops fared worse than early-planted crops. Corn and soybean yields were diminished, and double crop beans showed “severe stand problems.” The Purchase and Pennyroyal areas were hit hardest.

The 146 farms included in the 2014 Preliminary Analysis experienced an average 28 bushel per acre drop in corn yields compared to 2013. At the average 2014 price received for new crop corn there was a \$132 per acre reduction in crop revenues. For double crop soybeans, the yield difference was 13 bushels per acre, a loss of \$171 in crop revenue per acre. Full season soybeans and wheat were not affected as sharply by the drought. Soybean yield was 6 bushel less than 2013. Wheat yield was 9 bushel less. Drought reduced crop revenue for full season soybeans by \$76 per acre and wheat by \$64 per acre.

Corn was equally affected by drop in yield and in price. Soybeans and wheat were somewhat more affected by price. Double crop soybeans were dramatically affected by decline in yields. These farms did not change the percent of acres planted to corn (Table 5). There was a slight shift from full season soybeans to wheat/double crop beans. In hindsight, a shift of acres from corn to full season beans would have been more profitable.

A financial analysis of the average grain farm is generally good (Table 6). The farm has a healthy balance sheet with net worth over \$6.8 million. Liquidity is slightly lower than 2013. The current ratio measures the farm’s ability to meet its principal obligations for the year from current assets on hand at first of the year. A farm with \$2 in current assets for every \$1 in current debt has liquidity to take advantage of opportunities or react to challenges. The 2014 average current ratio was 1.80 to 1. The debt-to-asset ratio measures solvency – long term financial stability. Grain farms are considered to be at low risk when the ratio of debt to assets is below 30% and at high risk when the ratio approaches 60%. The average debt-to-asset ratio was 29%. Profitability was low for 2014, so financial efficiency ratios are subsequently low. However, depreciation and interest ratios are very good. Financial efficiency ratios suggest the average farm did not operate economically, but they were not financially inefficient because of depreciable assets and interest payments in 2014.

The loss of crop revenue resulted in significantly lower NFI for 2014 compared to prior years. Figure 5 shows NFI for all KFBM grain farms from 2004 through 2013. NFI peaked at \$544,511 in 2013. NFI for farms included in the 2014 preliminary analysis was \$135,787, slightly lower than that of all KFBM grain farms in 2005. Kentucky grain farms experienced extraordinary high commodity prices and Net Farm Incomes for 2006-2013. Poor weather created downturns in 2010 and 2012.



How do Kentucky grain farms improve profitability? They cannot affect the weather. They can have some effect on improving prices through intentional marketing strategies. There are several publications available on marketing. Farm managers can also improve profitability the old fashioned way: by managing costs. Note that cost per acre did not change between 2013 and 2014. High commodity prices during the past eight years may have shifted the focus of managers away from cost management. The focus needs to shift back to reducing cost of production. This includes direct costs of production, fixed costs, and the cost of assets like land and equipment. In addition to managing to improve profitability, farmers should manage to protect working capital. Tools like budgets, cash flow projections, and enterprise analysis could be helpful in making better management decisions.



TABLE 1: ECONOMIC MANAGEMENT ANALYSIS
AVERAGE KENTUCKY GRAIN FARM
For Year Ending December 31, 2014

Preliminary Analysis

Kentucky Farm Business Management Program

FARM RETURNS AND COSTS			Operator Totals		Operator Acre
FARM RETURNS					
Crop Returns			1,431,035		680.46
Livestock Returns Above Feed			48,974		23.29
Custom Work			12,366		5.88
Other Farm Receipts			63,965		30.42
Tobacco Receipts			169,442		80.57
GROSS FARM RETURNS			1,725,782		820.62
FARM COSTS					
Soil Fertility			271,158		128.94
Pesticides			126,472		60.14
Seed			176,075		83.72
Crop Total			573,705		272.80
Utilities			25,558		12.15
Machinery Repairs			89,661		42.63
Machine Hire and Lease			58,276		27.71
Fuel & Oil			75,890		36.09
Light Vehicle			699		0.33
Machinery Depreciation			148,731		70.72
Power & Equipment Total			398,815		189.64
Drying			13,001		6.18
Storage			1,988		0.95
Building Repair & Rent			26,098		12.41
Building Depreciation			34,417		16.37
Building Total			75,505		35.90
	Avg			Paid Hours/Acre	4.69
	Months			Avg. Wage \$/Hr	\$13.23
Labor Unpaid	16.9		66,492		31.62
Labor Paid	47.3		130,349		61.98
Labor Total	64.2		196,841		93.60
Vet, Medicine, & Livestock Supply			4,020		1.91
Insurance			69,935		33.25
Miscellaneous			21,545		10.24
Interest Charge Nonland @ 5.40%			124,112		59.02
Other Costs Total			219,613		104.43
Interest Charge @3.75%	Per Acre		80,291		38.18
Taxes	10.77 Owned		6,793		3.23
Cash Rent	157.05 Rented		173,086		82.30
Leasing Cost	133.28 Shared		76,625		36.44
Land Cost			336,796		160.15
TOTAL NON-FEED COSTS			1,801,274		856.51
Gain (Loss) on Mach & Build Sales Less Amortization			9,646		4.59
MANAGEMENT RETURNS			-65,845		-31.31
ECONOMIC RETURN ANALYSIS					
Net Farm Income			135,787	Total Acres	2,480
Interest on Equity Capital			135,140	Tillable Acres	2,308
Unpaid Family Labor			1,189	Opr Acres	2,103
Operator(s) Labor & Mgmt Income			-542	Owned Acres	631
Unpaid Operator Labor			65,303	Share Rent Acres	575
Management Returns			-65,845	Rented Acres	1,102
Net Farm Income Per Operator			96,417	No. Farms in Avg.	146
Labor & Management Income Per Operator			-385	Crop Ins. Inc.	72,700
Production Per \$1 Non-Feed Cost			0.96	Crop Ins. Exp.	40,770
Farm Production Per Man Year			322,576	Govt Paymnets	7,712




TABLE 2: ECONOMIC MANAGEMENT ANALYSIS
AVERAGE KENTUCKY GRAIN FARM
For Year Ending December 31, 2013

Preliminary Analysis

Kentucky Farm Business Management Program

FARM RETURNS AND COSTS		Operator Totals		Operator Acre	
FARM RETURNS					
Crop Returns		1,808,536			881.62
Livestock Returns Above Feed		31,926			15.56
Custom Work		16,109			7.85
Other Farm Receipts		35,133			17.13
Tobacco Receipts		137,296			66.93
GROSS FARM RETURNS		2,029,000			989.10
FARM COSTS					
Soil Fertility		291,363			142.03
Pesticides		127,810			62.30
Seed		171,901			83.80
Crop Total		591,075			288.14
Utilities		21,589			10.52
Machinery Repairs		86,951			42.39
Machine Hire and Lease		50,865			24.80
Fuel & Oil		75,870			36.98
Light Vehicle		488			0.24
Machinery Depreciation		137,219			66.89
Power & Equipment Total		372,981			181.82
Drying		14,513			7.07
Storage		1,283			0.63
Building Repair & Rent		21,380			10.42
Building Depreciation		26,836			13.08
Building Total		64,011			31.20
	Avg Months		Paid Hours/Acre		4.45
			Avg. Wage \$/Hr		\$12.77
Labor Unpaid	16.6	64,470			31.43
Labor Paid	43.8	116,569			56.82
Labor Total	60.5	181,039			88.25
Vet, Medicine, & Livestock Supply		3,291			1.60
Insurance		69,415			33.84
Miscellaneous		21,760			10.61
Interest Charge Nonland @ 5.40%		117,192			57.13
Other Costs Total		211,658			103.18
Interest Charge @3.75%	Per Acre	76,391			37.24
Taxes	9.97 Owned	6,148			3.00
Cash Rent	167.41 Rented	172,909			84.29
Leasing Cost	121.83 Shared	76,127			37.11
Land Cost		331,575			161.64
TOTAL NON-FEED COSTS		1,752,332			854.23
Gain (Loss) on Mach & Build Sales Less Amortization		11,912			5.81
MANAGEMENT RETURNS		288,580			140.68
ECONOMIC RETURN ANALYSIS					
Net Farm Income		489,345	Total Acres		2,431
Interest on Equity Capital		136,296	Tillable Acres		2,274
Unpaid Family Labor		1,076	Opr Acres		2,051
Operator(s) Labor & Mgmt Income		351,974	Owned Acres		616
Unpaid Operator Labor		63,394	Share Rent Acres		625
Management Returns		288,580	Rented Acres		1,033
Net Farm Income Per Operator		380,688	No. Farms in Avg.		146
Labor & Management Income Per Operator		253,821	Crop Ins. Inc.		
Production Per \$1 Non-Feed Cost		1.16	Crop Ins. Exp.		
Farm Production Per Man Year		402,724	Govt Paymnets		

 <p><i>Kentucky Farm Business Management Program</i> UK COOPERATIVE EXTENSION SERVICE University of Kentucky - College of Agriculture</p>	TABLE 3: AVERAGE GRAIN FARMER		3/30/2015
	BALANCE SHEET		
	For Year Ending December 31, 2014		
<u>Current Assets</u>		<u>Current Liabilities</u>	
Bank Balance	89,101	Accounts Payable with Merchants & Dealers	35,855
Savings & CD's	59,687	Lease Payment	2,126
Hedging Account Balance	8,667	Feed Accounts Payable/FSA	0
Marketable Stocks & Bonds	64,502	Commodity Credit Corp Loans	37,390
Accounts Receivable/FSA LDP & CCP's	24,038	Operating/Short Term Loans	592,343
Crops & Feed	974,540	Estimated Tax Liability	
Market Livestock	28,080	Real Estate	8
Prepaid Expenses	275,004	Income and Social Security	2,818
Non-Farm Business/Other	20,575	Accrued Interest	24,346
		Principal Due Within Twelve Months	
		Intermediate Term Notes	94,113
		Long Term Notes	52,285
		Current, IT, & LT Other	0
Total Current Assets	1,544,194	Total Current Liabilities	841,284
<u>Intermediate Assets</u>		<u>Intermediate Liabilities</u>	
Assets Under Capital Lease	11,719	Capital Lease/Deferred Portion	5,731
Machinery & Equipment	1,317,858	Intermediate Notes	297,963
Breeding Livestock	35,841		
Non-Farm Business/Other	23,311	Life Insurance Policy Loans	0
Notes Receivable	14,502	Other	0
Retirement Accounts	119,053		
Securities Not Readily Marketable	83,206		
Cash Value of Life Insurance	17,173		
Home Furnishings & Personal Items	19,352		
Total Intermediate Assets	1,642,015	Total Intermediate Liabilities	303,695
<u>Fixed Assets</u>		<u>Fixed Liabilities</u>	
Farm Real Estate - Bare Land	2,905,199	Real Estate Mortgages	833,498
Buildings & Improvements	435,660	Other	0
Personal Residence	148,054		
Other Non-Farm Real Estate	62,613		
Contracts & Notes Receivable	2,442		
Non-Farm Business/Other/Amortization	62,395		
Total Fixed Assets	3,616,363	Total Fixed Liabilities	833,498
Total Assets	6,802,571	Total Liabilities	1,978,477
		Net Worth	4,824,094
		Total Liabilities & Net Worth	6,802,571


 <p><i>Kentucky Farm Business Management Program</i> UK COOPERATIVE EXTENSION SERVICE University of Kentucky - College of Agriculture</p>	TABLE 4: AVERAGE GRAIN FARMER		3/30/2015
	BALANCE SHEET		
	For Year Ending December 31, 2013		
<u>Current Assets</u>		<u>Current Liabilities</u>	
Bank Balance	98,176	Accounts Payable with Merchants & Dealers	22,371
Savings & CD's	56,941	Lease Payment	171
Hedging Account Balance	11,042	Feed Accounts Payable/FSA	0
Marketable Stocks & Bonds	49,076	Commodity Credit Corp Loans	10,741
Accounts Receivable/FSA LDP & CCP's	10,592	Operating/Short Term Loans	509,263
Crops & Feed	1,115,522	Estimated Tax Liability	
Market Livestock	18,706	Real Estate	4
Prepaid Expenses	278,318	Income and Social Security	5,537
Non-Farm Business/Other	18,592	Accrued Interest	21,056
		Principal Due Within Twelve Months	
		Intermediate Term Notes	85,124
		Long Term Notes	45,332
		Current, IT, & LT Other	0
Total Current Assets	1,656,966	Total Current Liabilities	699,599
<u>Intermediate Assets</u>		<u>Intermediate Liabilities</u>	
Assets Under Capital Lease	1,498	Capital Lease/Deferred Portion	359
Machinery & Equipment	1,242,727	Intermediate Notes	283,143
Breeding Livestock	31,378		
Non-Farm Business/Other	25,095	Life Insurance Policy Loans	0
Notes Receivable	17,519	Other	0
Retirement Accounts	105,650		
Securities Not Readily Marketable	66,576		
Cash Value of Life Insurance	16,533		
Home Furnishings & Personal Items	19,056		
Total Intermediate Assets	1,526,032	Total Intermediate Liabilities	283,502
<u>Fixed Assets</u>		<u>Fixed Liabilities</u>	
Farm Real Estate - Bare Land	2,738,716	Real Estate Mortgages	766,383
Buildings & Improvements	381,661	Other	0
Personal Residence	141,649		
Other Non-Farm Real Estate	38,192		
Contracts & Notes Receivable	2,800		
Non-Farm Business/Other/Amortization	61,275		
Total Fixed Assets	3,364,292	Total Fixed Liabilities	766,383
Total Assets	6,547,290	Total Liabilities	1,749,484
		Net Worth	4,797,806
		Total Liabilities & Net Worth	6,547,290

TABLE 5: CROP PRODUCTION AND PRICES 2013-2014

2013										
Crop		Number of Farms	Total Acres	Operator Acres	Yield	Crop Value/AC	LAND USE %	Old Crop Price	New Crop Price	
Corn	Total		139,330	125,107	26,157	118,095	6,044	5.01	3.61	Lo
	Farm	140	995	894	187	844	43%	8.03	8.46	Hi
								7.00	4.77	Avg
Full Season Beans	Total		74,142	65,034	6,795	89,110	3,476	11.44	10.44	Lo
	Farm	126	575	504	53	691	27%	17.23	14.95	Hi
								14.59	12.88	Avg
Wheat	Total		77,596	70,888	9,127	60,585	3,271	5.73	5.12	Lo
	Farm	114	681	622	80	531	29%	12.50	9.60	Hi
								7.84	6.86	Avg
DC Beans	Total		81,317	74,313	5,500	71,634	3,408	12.35	10.44	Lo
	Farm	113	720	658	49	634	30%	16.13	16.07	Hi
								14.60	12.86	Avg
2014										
Crop		Number of Farms	Total Acres	Operator Acres	Yield	Crop Value/AC	LAND USE %	Old Crop Price	New Crop Price	
Corn	Total		141,485	128,196	22,774	100,693	6,197	3.59	2.60	Lo
	Farm	143	989	896	159	704	43%	7.32	9.71	Hi
								4.67	3.91	Avg
Full Season Beans	Total		86,462	76,575	6,640	67,646	3,997	11.41	9.01	Lo
	Farm	142	609	539	47	476	28%	15.57	15.24	Hi
								13.22	10.87	Avg
Wheat	Total		72,066	66,401	7,293	33,806	2,845	5.12	2.28	Lo
	Farm	103	700	645	71	328	28%	10.85	11.25	Hi
								6.87	5.57	Avg
DC Beans	Total		75,598	69,862	3,891	45,994	2,953	11.01	9.45	Lo
	Farm	110	687	635	35	418	27%	15.58	14.00	Hi
								13.30	10.79	Avg

**Table 6
Farm Financial Analysis**

UK Farm Management Forms: FA

Name KFBM Average Grain Farm

Date 31-Dec-14



Liquidity

Current Ratio	=	Total Current Assets	/	Total Current Liabilities
1.8	=	\$1,544,193.82	/	\$841,283.90

Working Capital	=	Total Current Assets	-	Total Current Liabilities
\$702,909.91	=	\$1,544,193.82	-	\$841,283.90



Solvency

Debt/Asset Ratio	=	Total Liabilities	/	Total Assets
29%	=	\$1,978,476.98	/	\$6,802,571.24



Equity/Asset Ratio	=	Total Equity	/	Total Assets
71%	=	\$4,824,094.26	/	\$6,802,571.24



Debt/Equity Ratio	=	Total Liabilities	/	Total Equity
41%	=	\$1,978,476.98	/	\$4,824,094.26

Profitability

Return on Assets = Net Farm Income From Operations
 + Farm Interest Expense
 - Value of Operator & Family Labor & Mgt
 / Average Farm Assets [(Beg + End)/2]



0.9%	=	\$111,714.01
	+	\$62,766.83
	-	\$120,281.94
	/	\$6,100,563.58

Return on Equity = Net Farm Income From Operations
 - Value of Operator & Family Labor & Mgt
 / Average Farm Equity [(Beg + End)/2]



-0.2%	=	\$111,714.01
	-	\$120,281.94
	/	\$4,236,582.97

Financial Efficiency



Asset Turnover Ratio	=	Value of Farm Prod.	/	Average Farm Assets
28%	=	\$1,722,186.84	/	\$6,100,563.58



Operating Expense Ratio	=	Total Op Exp - Depr	/	Value of Farm Prod.
79%	=	\$1,355,908.61	/	\$1,722,186.84



Depreciation Expense Ratio	=	Depreciation Expense	/	Value of Farm Prod.
11%	=	\$191,797.40	/	\$1,722,186.84



Interest Expense Ratio	=	Interest Expense	/	Value of Farm Prod.
4%	=	\$62,766.83	/	\$1,722,186.84



Net Farm Income from Operation Ratio	=	NFIFO	/	Value of Farm Prod.
6%	=	\$111,714.01	/	\$1,722,186.84

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