

Kentucky Farm Business Management Program

Family Living

2013 Sources and Uses Summary



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By:

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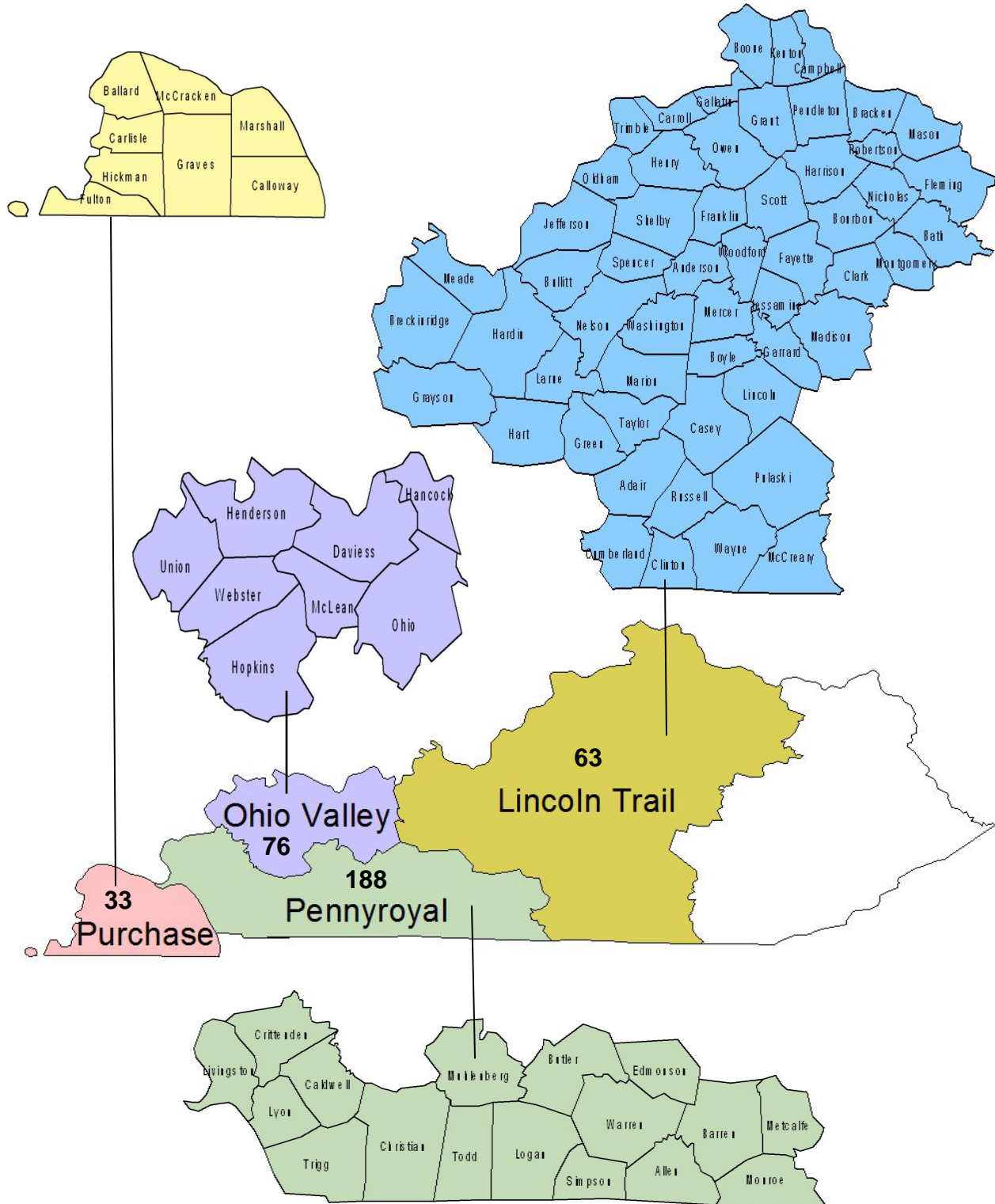
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Map of Area, Counties, and Number of Area Cooperators, 2013



Contents

Map of Cooperator’s Locations by Area and County, 2013	ii
Acknowledgments	iv
Kentucky Farm Business Management Program	1
Source of Data	
Definition of Terms and Accounting Methods	1
Sampling Technique	
Accrual Accounting	
Other Terms Used in This Report	
Tables	
Table 1 - Farm and Family Sources and Uses of Dollars-Average per Farm in Kentucky	8
Table 2 - Farm and Family Sources and Uses of Dollars by Number of Family	9
Table 3- Farm Family Sources and Uses of Dollars by Tillable Acres	10

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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.

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Source of Data

This report presents the summarized 2013 performance data, both financial and physical, on 340 Kentucky farm businesses. Some data are presented for previous years so that trends and changes can be studied. This is the 47th annual summary of 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 2013, 548 farmers on 360 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 54 counties.

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.

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.

Other terms used in this report

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 3.5 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 \$2,700 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).

Gross farm returns (also called *Value of farm production*) 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.

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.

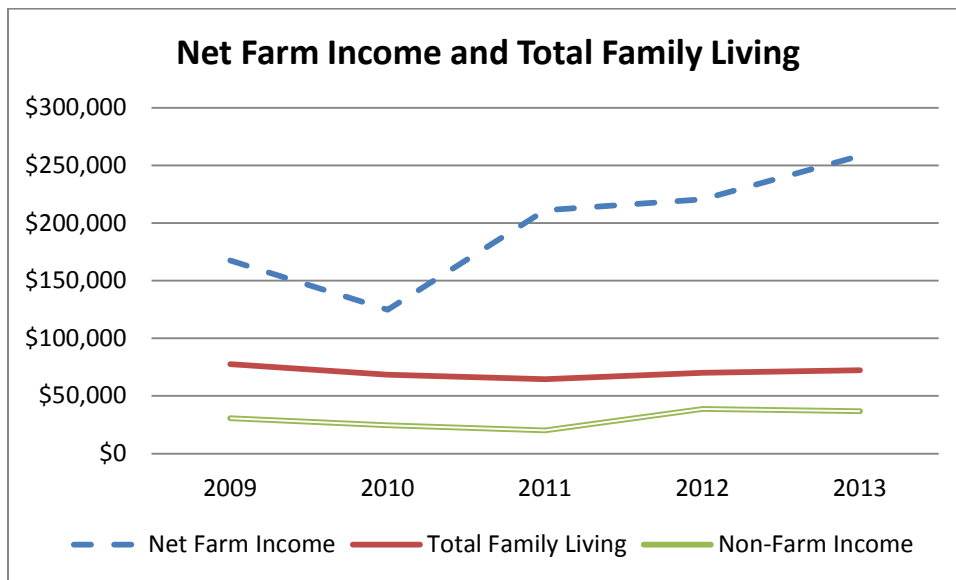
Management return is the residual after a charge for unpaid operator labor is deducted from operator(s) labor and management income.

Hi 1/3 and Lo 1/3 refer to groupings by management returns. Thirds are the net of Gross Farm Returns less Total Non-Feed Cost.

Family Living Expenses can have a direct impact on the sustainability of the family farm. Just like labor expenses can impact the bottom-line of any business, the amount of money that farm families spend for non-farm purposes can determine the farm’s ability to remain viable. The Kentucky Farm Business Management (KFBM) program collected family living data from 145 farms during 2013. This data is summarized based on the average farm, family size, and the size of the farm.

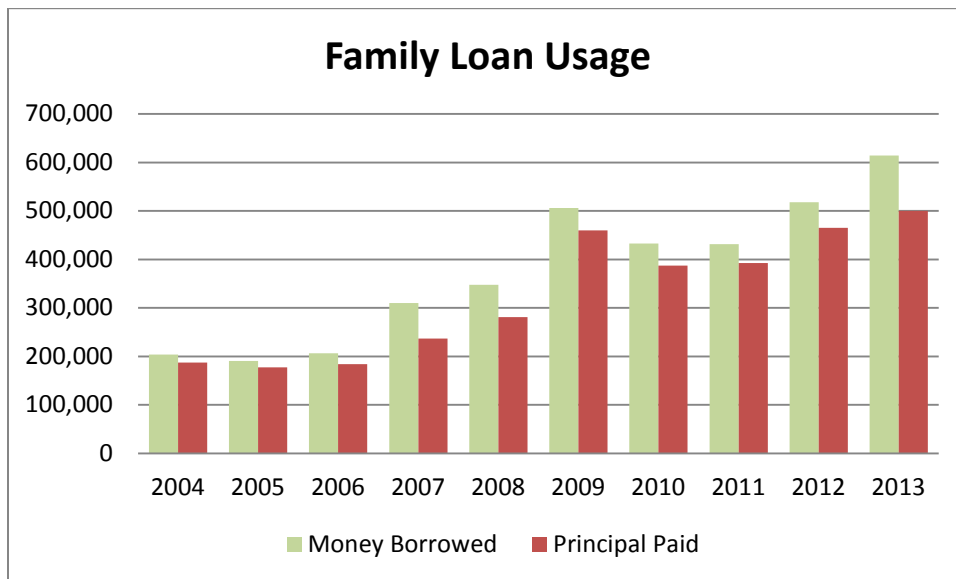
Average Sources & Uses - Trend

After declines from 2009 through 2011, family living expenses have now increased over the last two years, reaching \$72,221 in 2013. KFBM farms reported the highest average net farm income in the last five years in 2013 at \$258,471, while net non-farm income decreased from the 5 year high of \$38,743 in 2012 to \$36,718 in 2013. Although family living expenses increased from 2012 to 2013, family living expenses as a percent of net farm income decreased from 32.2% in 2012 to 27.9% in 2013. Net farm income increased 17.2% from 2012 to 2013, while family living expenses increased only 1.7% in the same time period. Contributions increased 33.3% from 2012 to 2013 while medical expenses decreased 5.1% and family capital expenditures (such as home repair, personal vehicles) increased 27.0% over the same time period. The following graph displays the relationship between Net Farm Income, Non-Farm Income and Family Living Expenses. (Table 1)



Although farms paid less interest expense in 2013 (compared to 2012), all other farm expenditures increased to their highest levels in the past five years. Total non-capital living expenses changed very little and savings and investments continue to rebound from their low in 2011.

For several years now, farm families have continued to borrow more funds than they have paid back in principal. As the following graph shows, the difference between loan proceeds and principal payments was relatively small from 2004 through 2006. The gap widened in 2007 and by 2011 it shrunk back to \$38,989. However, by 2012 that difference was \$52,692 and then it more than doubled in 2013 to \$114,439. This trend could have negative impacts on the operations as the farming economy tightens up.



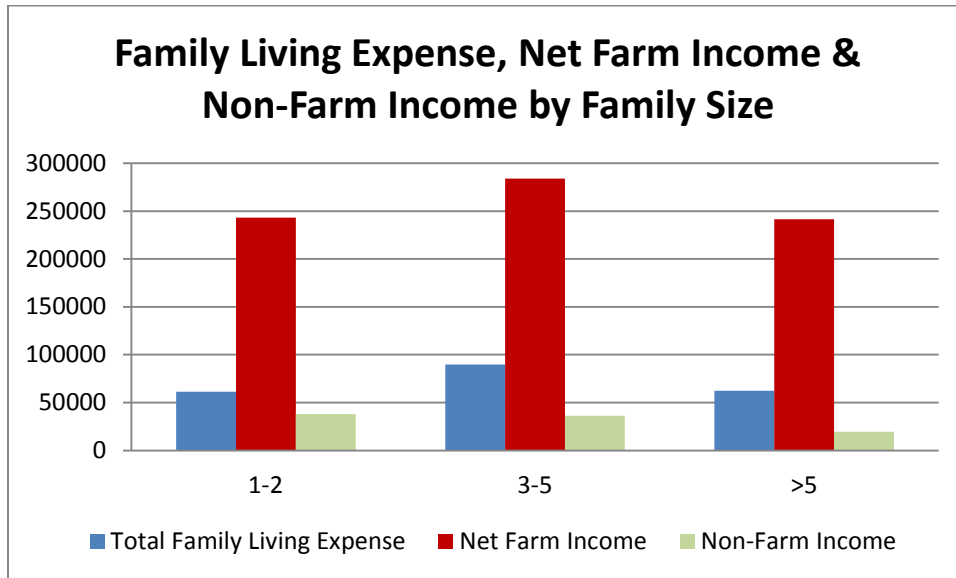
Size of Family

The average size of the farm family reported in this summary is 2.7 people. However, differences do exist based on the number of children represented in farm families. Table 2 provides data based on farm families that have one to two family members, families with three to five members and families with more than five members.

Families with three to five members reported the highest living expenses at \$89,851 in 2013. These families had an average of 3.8 persons, representing family living expenses of \$23,645 per person. Families with one or two members had the lowest family living expenses in 2013 at \$61,401. This category represented the older families with an average age of operator of 53 and had the highest average operator acres at 998. Families with greater than five members averaged \$62,235 in family living expenses. With an average family size of 6.6, this represents family living expenses of \$9,430 per person. Families with more than five members were also the smallest farms, with an average of 870 operator acres. Note that there were only five farms in this category.

Net non-farm income decreased as the size of the family increased. Although there was little difference (\$1800) between non-farm income in the small and medium sized families, non-farm

income decreased more than \$16,000 from the three to five member families and the families with more than five members.



The one to two member families represented a majority of KFBM farm families, had the most operator acres, contributed the most and had the smallest amount of medical expenses. The families with three to five members spent the most in total living expenses and had the highest net farm income. The families with more than five members reported the lowest net farm income, the lowest net non-farm income, borrowed more money (paid most back in principal) yet reported the largest amount of savings and investments.

Size of Farm

The size of the farm can, but not always, be directly related to the amount of net farm income. Table 3 compares family living expenses based on the size of the farm, comparing farms less than 300 acres, between 300 and 600 acres, and those greater than 600 acres. Table 3 also provides data on the high and low third performing groups, based on management returns, for the farms in the family living study that had 300 to 600 acres.

For 2013, the family living expenses and net farm income was in-line with farm size. The largest farms had the highest family living expense (\$81,425) and the highest net farm income (\$395,383). Likewise the smallest farms had the lowest family living expense (\$50,226) and the lowest net farm income (\$59,788). Unlike in previous years, net farm incomes were greater than family living expenses for all farm sizes.

Those farms in the middle, between 300 and 600 acres, had family living expenses of \$63,387 and net farm income of \$97,751. However, to illustrate the differences between farm families, the high third group had family living expenses of \$109,450 while the low third group of family

living expenses only spent \$20,528. There is also a significant difference in the net farm income and non-farm income between the high and low third groups. The high third group had a net farm income of \$126,986 and non-farm income of \$44,499. The low third group had lower net farm income (\$65,073) and lower non-farm income (\$9,964).

Conclusion

While family living expenses increased in 2013, there is a wide range of spending among all families. It is important to measure and know the limits on how much a particular farm family can afford to spend for personal purposes. Overspending can cause viability problems for the farming operation, when funds needed for the family exceed the funds available. Proper recordkeeping and an annual inspection of family living expenses can help the farm family keep spending under control.

Table 1. Farm and Family Sources and Uses of Dollars - Average per Farm in Kentucky, 2009-2013

Item	2013	2012	2011	2010	2009
Number of families	145	139	169	163	103
Age of operator	51	50	49	56	54
Number in family	2.7	2.7	2.6	2.6	3.0
Age of oldest dependent child	18	17	17	17	18
Total tillable operator acres ¹	993	959	871	841	1058
Value of feed fed	\$60,101	\$53,609	\$51,750	\$60,612	\$80,509
Net farm income	\$258,471	\$220,575	\$211,037	\$124,834	\$167,577
FAMILY LIVING EXPENSE:					
Contributions	\$6,110	\$4,582	\$3,764	\$4,258	\$5,074
Medical	7,893	8,313	7,071	9,379	9,431
Life Insurance	2,800	2,781	2,834	2,881	3,319
Expendables	<u>51,128</u>	<u>51,973</u>	<u>47,908</u>	<u>45,130</u>	<u>55,571</u>
Total Non-Capital.	(67,930)	(67,649)	(61,576)	(61,648)	(73,395)
Capital.	<u>4,291</u>	<u>3,378</u>	<u>2,981</u>	<u>6,851</u>	<u>4,313</u>
Total Living Expenses	(\$72,221)	(\$71,027)	(\$64,558)	(\$68,499)	(\$77,708)
SOURCES OF FUNDS:					
Non-taxable receipts ²	68,793	64,391	69,439	86,738	280,977
Net non-farm income	36,718	38,743	20,138	24,520	30,648
Money borrowed	614,585	517,751	431,426	432,553	505,761
Total farm receipts	<u>1,046,919</u>	<u>1,025,119</u>	<u>764,563</u>	<u>728,293</u>	<u>901,829</u>
TOTAL SOURCE ALL FUNDS	\$1,767,016	\$1,646,005	\$1,285,566	\$1,272,104	\$1,719,216
USES OF FUNDS:					
Farm					
Interest paid	\$30,375	\$32,921	\$24,142	\$25,861	\$31,842
Other farm expenses	758,834	726,127	548,465	519,879	670,437
Machinery-bldg. purchases	<u>172,713</u>	<u>134,994</u>	<u>131,087</u>	<u>120,066</u>	<u>153,723</u>
Total Farm Expenditures	(\$961,922)	(\$894,042)	(\$703,693)	(\$665,805)	(\$856,002)
Principal payments	\$500,146	\$465,059	\$392,437	\$387,474	\$459,605
Income & S.S. tax	33,639	21,721	14,722	15,980	18,127
Savings and Investment ³	199,085	194,147	110,177	134,658	307,704
Living expenses:					
Total Non-Capital	\$67,930	\$67,649	\$61,576	\$61,648	\$73,395
Capital	<u>4,291</u>	<u>3,378</u>	<u>2,981</u>	<u>6,851</u>	<u>4,313</u>
Total Living Expense	(\$72,221)	(\$71,027)	(\$64,558)	(\$68,499)	(\$77,708)
TOTAL USE OF FUNDS	\$1,767,012	\$1,645,996	\$1,285,588	\$1,272,415	\$1,719,146
Balancing error	-3	-9	22	311	-71

¹ Total tillable acres prior to 2002.

² Included fund transfers and withdrawals from savings, tax refunds, gifts, inheritances, transfer from other business ent. & misc.

³ Includes transfers to savings, loans to others, real estate purchases, other non-farm capital and net change in bank balance.

Table 2. Farm and Family Sources and Uses of Dollars, 2013, by Number of Family and All Families.

Item	Number in Family			All Families
	1 - 2	3 - 5	>5	2013
Number of families	85	55	5	145
Age of operator	53	47	42	51
Number in family	1.6	3.9	6.6	2.7
Age of oldest dependent child	0	17	16	18
Total tillable operator acres	998	996	870	993
Value of feed fed	\$70,816	\$41,523	\$82,298	\$60,101
Net farm income	\$243,018	\$283,881	\$241,674	\$258,471
FAMILY LIVING EXPENSE:				
Contributions	\$6,488	\$5,707	\$4,110	\$6,110
Medical	6,544	9,536	12,746	7,893
Life Insurance	3,119	2,432	1,409	2,800
Expendables	<u>42,793</u>	<u>64,812</u>	<u>42,293</u>	<u>51,128</u>
Total Non-Capital.	(58,944)	(82,487)	(60,558)	(67,930)
Capital.	<u>2,456</u>	<u>7,364</u>	<u>1,677</u>	<u>4,291</u>
Total Living Expenses	(\$61,401)	(\$89,851)	(\$62,235)	(\$72,221)
SOURCES OF FUNDS:				
Non-taxable receipts ¹	\$69,544	\$71,999	\$20,772	\$68,793
Net non-farm income	38,040	36,239	19,516	36,718
Money borrowed	543,586	699,262	890,113	614,585
Total farm receipts	<u>1,009,574</u>	<u>1,099,880</u>	<u>1,099,224</u>	<u>1,046,919</u>
TOTAL SOURCE ALL FUNDS	\$1,660,744	\$1,907,380	\$2,029,625	\$1,767,016
USES OF FUNDS:				
Farm				
Interest paid	\$30,202	\$30,969	\$26,769	\$30,375
Other farm expenses	758,528	766,599	678,633	758,834
Machinery-bldg. purchases	<u>147,164</u>	<u>197,661</u>	<u>332,632</u>	<u>172,713</u>
Total Farm Expenditures	(\$935,894)	(\$995,228)	(\$1,038,035)	(\$961,922)
Principal payments	\$442,310	\$572,813	\$684,021	\$500,146
Income & S.S. tax	29,875	42,233	3,090	33,639
Savings and Investment ²	191,259	207,255	242,244	199,085
Living expenses:				
Total Non-Capital	\$58,944	\$82,487	\$60,558	\$67,930
Capital	<u>2,456</u>	<u>7,364</u>	<u>1,677</u>	<u>4,291</u>
Total Living Expense	(\$61,401)	(\$89,851)	(\$62,235)	(\$72,221)
TOTAL USE OF FUNDS	\$1,660,738	\$1,907,380	\$2,029,625	\$1,767,012
Balancing error	-6	0	0	-3

¹ Included fund transfers and withdrawals from savings, tax refunds, gifts, inheritances, transfer from other business ent. & misc.

² Includes transfers to savings, loans to others, real estate purchases, other non-farm capital and net change in bank balance.

**Table 3. Farm and Family Sources and Uses of Dollars, 2013, by Operator Tillable Acres
In Farm and by High-Low 1/3 Non-Capital Living Expenses for 600-900 Acre Size.**

Item	Operator Tillable Acres in Farm			Non-Capital Living Expenses	
				300-600 Operator Tillable Acres	
	Under 300	300-600	600+	High 1/3	Low 1/3
Number of families	24	25	85	8	8
Age of operator	52	56	48	55	53
Number in family	3.3	2.0	2.8	2.1	1.6
Age of oldest dependent child	16	10	19	10	9
Total tillable operator acres	153	438	1,521	440	443
Value of feed fed	\$66,871	\$128,458	\$45,274	\$98,961	\$168,518
Net farm income	\$59,788	\$97,751	\$395,383	\$126,986	\$65,073
FAMILY LIVING EXPENSE:					
Contributions	\$2,158	\$12,814	\$5,605	\$32,754	\$2,401
Medical	7,448	6,982	8,524	11,959	3,333
Life Insurance	1,024	1,722	3,926	2,351	1,213
Expendables	38,673	36,925	58,628	62,136	13,581
Total Non-Capital.	(49,302)	(58,442)	(76,682)	(109,200)	(20,528)
Capital.	924	4,945	4,742	250	0
Total Living Expenses	(\$50,226)	(\$63,387)	(\$81,425)	(\$109,450)	(\$20,528)
SOURCES OF FUNDS:					
Non-taxable receipts ¹	\$19,996	\$30,892	\$88,623	\$29,727	\$30,603
Net non-farm income	45,182	22,665	37,336	44,499	9,964
Money borrowed	153,010	230,485	906,094	146,949	321,403
Total farm receipts	<u>279,835</u>	<u>491,888</u>	<u>1,542,869</u>	<u>476,981</u>	<u>608,401</u>
TOTAL SOURCE ALL FUNDS	\$498,024	\$775,930	\$2,574,922	\$698,156	\$970,372
USES OF FUNDS:					
Farm					
Interest paid	\$10,444	\$11,190	\$44,356	\$12,712	\$12,433
Other farm expenses	194,354	362,898	1,117,755	350,362	478,896
Machinery-bldg. purchase:	<u>33,351</u>	<u>63,649</u>	<u>266,480</u>	<u>49,715</u>	<u>73,292</u>
Total Farm Expenditures	(\$238,148)	(\$437,736)	(\$1,428,591)	(\$412,789)	(\$564,622)
Principal payments	\$145,223	\$188,558	\$749,024	\$144,290	\$222,758
Income & S.S. tax	5,011	11,699	52,456	14,448	9,549
Savings and Investment ²	59,417	74,527	263,427	17,177	152,847
Living expenses:					
Total Non-Capital	\$49,302	\$58,442	\$76,682	\$109,200	\$20,528
Capital	<u>924</u>	<u>4,945</u>	<u>4,742</u>	<u>250</u>	<u>0</u>
Total Living Expense	(\$50,226)	(\$63,387)	(\$81,425)	(\$109,450)	(\$20,528)
TOTAL USE OF FUNDS	\$498,026	\$775,908	\$2,574,922	\$698,155	\$970,303
Balancing error	2	-22	0	-1	-69

¹ Included fund transfers and withdrawals from savings, tax refunds, gifts, inheritances, transfer from other business ent. & misc.

² Includes transfers to savings, loans to others, real estate purchases, other non-farm capital and net change in bank balance.