

Kentucky Farm Business Management Program

Family Living

2014 Sources and Uses Summary



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By:

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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 2014 performance data, both financial and physical, on 381 Kentucky farm businesses. Some data are presented for previous years so that trends and changes can be studied. This is the 48th 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 2014, 649 farmers on 381 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.

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.

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.

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).

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.

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.

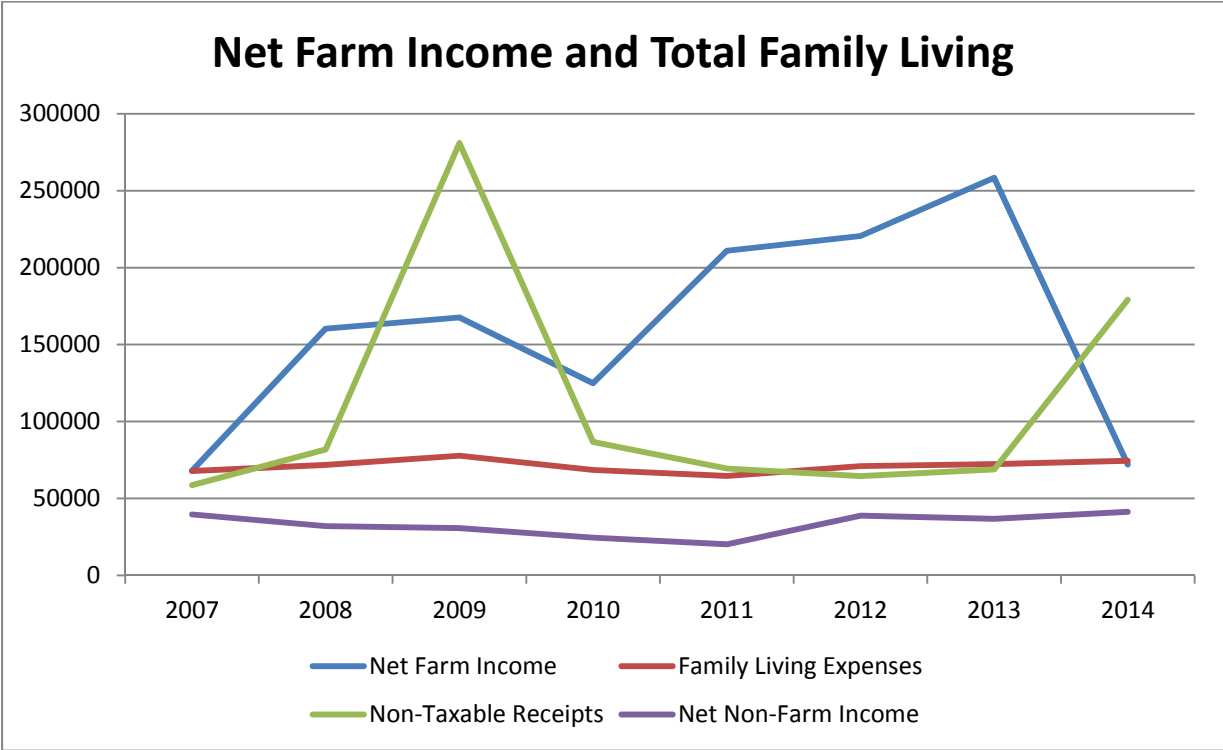
Net Non-Farm Income is non-farm income minus non-farm business expenses.

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.

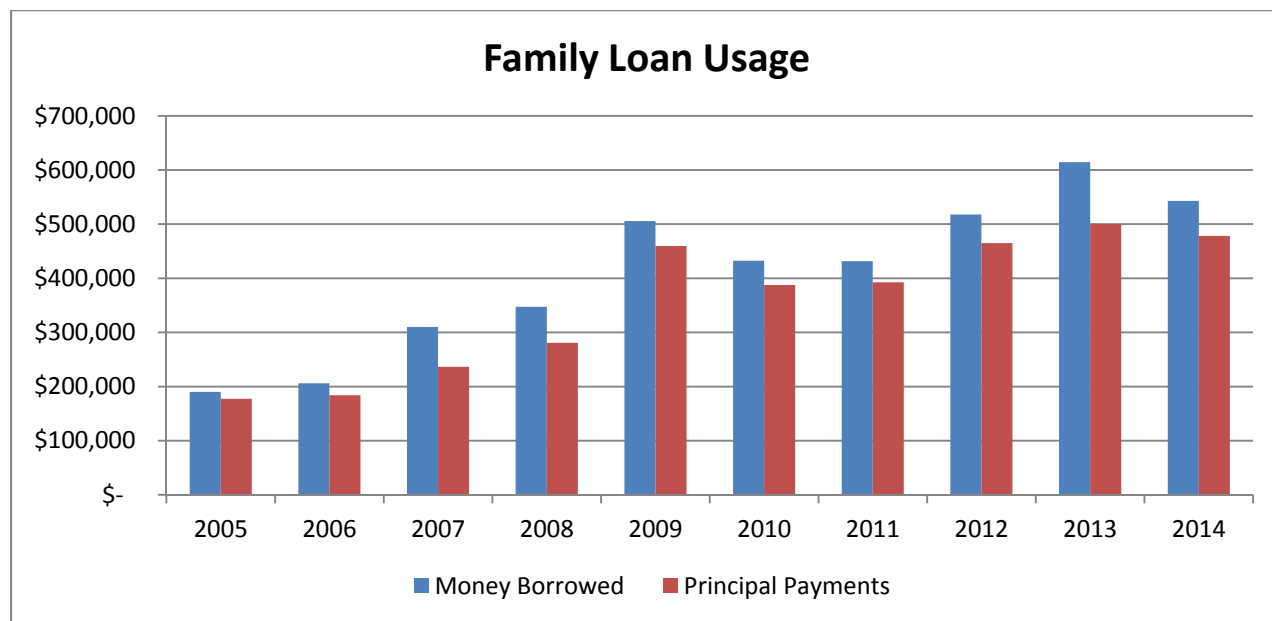
Family Living Expenses can have a direct impact on the sustainability of the family farm. Just like labor expenses can impact the bottom-line of any business, the amount of total farm receipts that farm families spend for non-farm purposes can determine the operation’s ability to remain viable. The Kentucky Farm Business Management (KFBM) program collected family living data from 167 farms during 2014. This data is summarized based on the average farm, family size, and the size of the farm.

Average Sources & Uses – Trend

A drastic change in relation between net farm income and family living expenses was realized in 2014. After a generally increasing trend in net farm income and relative stability in family living expenses since 2008, net farm income declined in 2014, and was actually less than the average family living expenses. After the record high net farm income for KFBM cooperators in 2013 of \$258,471, the net farm income for 2014 fell to its lowest level in seven years at \$72,044. At the same time, total family living expenses in 2014 were at their highest level in five years at \$74,475. This is a 3% increase over 2013. It should be noted that the Cost of Living Adjustment for Social Security benefits was 1.5% for 2014. Non-taxable receipts in 2014, which includes fund transfers and withdrawals from savings, tax refunds, gifts, inheritances, and transfer from other business entities, perhaps helped farm family cash flows as they were also at their highest levels since 2009 at \$179,191, a 160% increase over 2013. (Table 2)



For the last several years, farm families have been borrowing more money than they have paid back in principal payments. That trend continued in 2014; however, the total funds borrowed did decrease 11.6% from 2013 levels. The amount of principal paid also decreased at a rate of 4.4% from 2013. The amount of funds borrowed was \$64,819 higher than the amount of principal payments in 2014. This difference was less than that in 2013, but was still above the 10 year average of \$53,718.



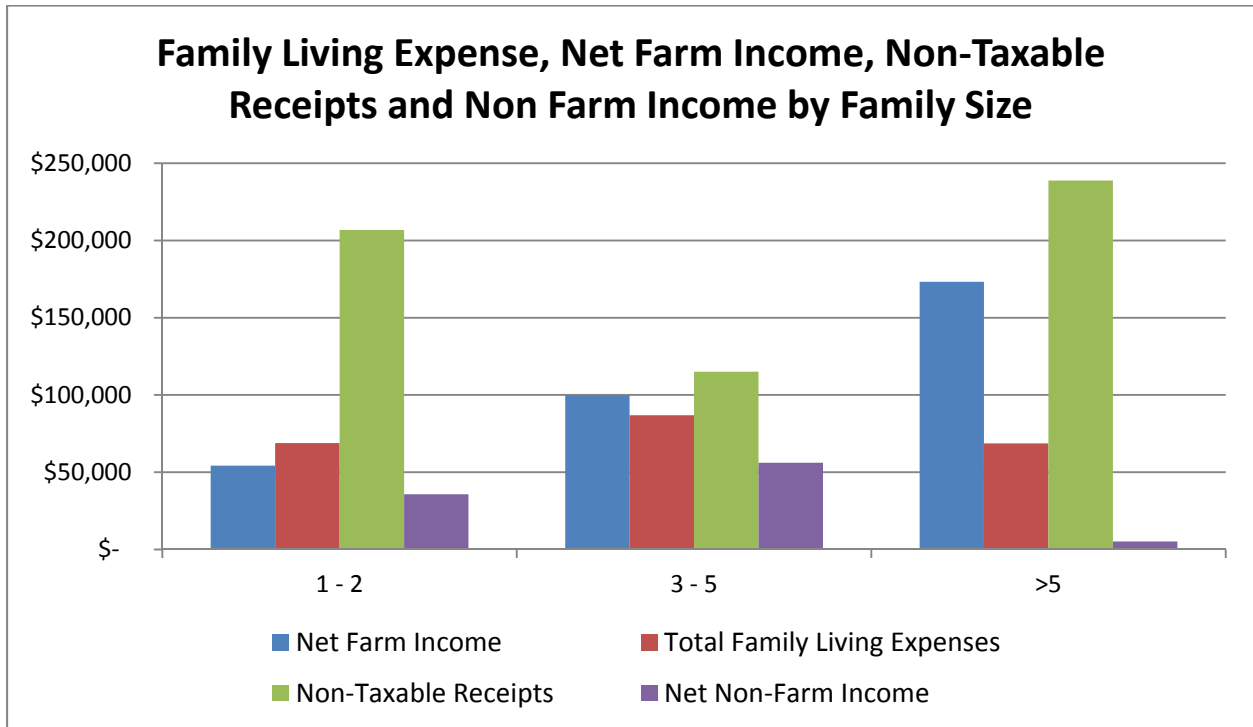
Size of Family

The average size of the farm family reported in this summary is 2.5 people. However, differences do exist based on the number of children represented in farm families. Table 3 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 more than five members reported the highest net farm income (\$173,318), the lowest family living expenses (\$68,623), the highest expenditures on machinery and buildings (\$438,666), and the lowest income and social security taxes (\$9,553)¹ in 2014. In 2013, this family size category reported the lowest net farm income (\$241,674). In 2014, families with more than five members also reported the lowest net non-farm income than did families with fewer members. Families with one to two members reported the lowest net farm income (\$54,226), were, on average, the oldest operator (age 51), and averaged the highest number of tillable acres in production (1,014). The family size with the highest level of family expenses was the three to five member families. With an average of 3.9 in the family, they spent an

¹ It is likely that most of the families in the dataset with more than 5 members are families of recognized religious sects that are exempt from self-employment taxes.

average of \$22,279 per family member. The mid-sized family member group also reported the highest net non-farm income and the lowest farm expenses.



Size of Farm

The size of the farm can, but not always, be directly related to the amount of net farm income. Table 4 compares family living expenses based on the total tillable acres of the farm (not just owned acres), comparing farms less than 300 acres, between 300 and 600 acres, and those greater than 600 acres. Table 4 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.

In 2014, the 600+ acre farms reported the highest net farm income (\$94,655) and the highest total living expenses (\$83,370). The farms with less than 300 acres reported the second highest average net farm income (\$48,854) and the lowest average total living expenses (\$51,988).

Table 1 below displays farms included in the family living study with 300 to 600 operator acres, whose management returns were either among the high third or low third categories. In 2013, the farm families in both categories spent less than their net farm income on family living. However, in 2014, the farm families in both categories spent more than their net farm income on family living expenses. Capital expenses for the family were excluded in the living expenses calculations. Net non-farm income increased from 2013 to 2014 for both the high third (by 6.0%) and low third (by 111%) groups. Farm families will need to carefully monitor family living

expenses as farm incomes continue to be projected lower than they had been in the recent years prior to 2014.

Table 1. Select Data for Farm Families with 300 to 600 Operator Acres in 2013 and 2014.				
	Non-Capital Living Expenses, 300-600 Operator Tillable Acres			
	High 1/3 Mgt Returns		Low 1/3 Mgt Returns	
	2013	2014	2013	2014
Net Farm Income	\$126,986	\$42,205	\$65,073	\$16,754
Net Non-Farm Income	\$44,499	\$47,187	\$9,964	\$21,072
Family Living Expenses	\$109,450	\$111,621	\$20,528	\$32,324

Conclusion

Although family living expenses increased again in 2014, 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 operation can afford to spend for family living 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 keep personal spending under control.

Table 2. Farm and Family Sources and Uses of Dollars - Average per Farm in Kentucky, 2010-2014

Item	2010	2011	2012	2013	2014
Number of families	163	169	139	145	167
Age of operator	56	49	50	51	49
Number in family	2.6	2.6	2.7	2.7	2.5
Age of oldest dependent child	17	17	17	18	19
Total tillable operator acres ¹	841	871	959	993	979
Value of feed fed	\$60,612	\$51,750	\$53,609	\$60,101	\$58,648
Net farm income	\$124,834	\$211,037	\$220,575	\$258,471	\$72,044
FAMILY LIVING EXPENSE:					
Contributions	\$4,258	\$3,764	\$4,582	\$6,110	\$5,187
Medical	9,379	7,071	8,313	7,893	7,656
Life Insurance	2,881	2,834	2,781	2,800	3,349
Expendables	<u>45,130</u>	<u>47,908</u>	<u>51,973</u>	<u>51,128</u>	<u>51,331</u>
Total Non-Capital	(61,648)	(61,576)	(67,649)	(67,930)	(67,523)
Capital	<u>6,851</u>	<u>2,981</u>	<u>3,378</u>	<u>4,291</u>	<u>6,952</u>
Total Living Expenses	(<u>\$68,499</u>)	(<u>\$64,558</u>)	(<u>\$71,027</u>)	(<u>\$72,221</u>)	(<u>\$74,475</u>)
SOURCES OF FUNDS:					
Non-taxable receipts ²	86,738	69,439	64,391	68,793	179,191
Net non-farm income	24,520	20,138	38,743	36,718	41,218
Money borrowed	432,553	431,426	517,751	614,585	543,081
Total farm receipts	<u>728,293</u>	<u>764,563</u>	<u>1,025,119</u>	<u>1,046,919</u>	<u>956,329</u>
TOTAL SOURCE ALL FUNDS	\$1,272,104	\$1,285,566	\$1,646,005	\$1,767,016	\$1,719,819
USES OF FUNDS:					
Farm					
Interest paid	\$25,861	\$24,142	\$32,921	\$30,375	\$28,548
Other farm expenses	519,879	548,465	726,127	758,834	693,550
Machinery-bldg. purchases	<u>120,066</u>	<u>131,087</u>	<u>134,994</u>	<u>172,713</u>	<u>144,416</u>
Total Farm Expenditures	(\$665,805)	(\$703,693)	(\$894,042)	(\$961,922)	(\$866,514)
Principal payments	\$387,474	\$392,437	\$465,059	\$500,146	\$478,262
Income & S.S. tax	15,980	14,722	21,721	33,639	34,076
Savings and Investment ³	134,658	110,177	194,147	199,085	266,493
Living expenses:					
Total Non-Capital	\$61,648	\$61,576	\$67,649	\$67,930	\$67,523
Capital	<u>6,851</u>	<u>2,981</u>	<u>3,378</u>	<u>4,291</u>	<u>6,952</u>
Total Living Expense	(\$68,499)	(\$64,558)	(\$71,027)	(\$72,221)	(\$74,475)
TOTAL USE OF FUNDS	\$1,272,415	\$1,285,588	\$1,645,996	\$1,767,012	\$1,719,819
Balancing error	311	22	-9	-3	0

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 3. Kentucky Farm and Family Sources and Uses of Dollars, 2014, by Number of Family and All Families

Item	Number in Family			All Families
	1 - 2	3 - 5	>5	2014
Number of families	110	52	5	167
Age of operator	51	47	41	49
Number in family	1.6	3.9	6.4	2.5
Age of oldest dependent child	0	17	15	19
Total tillable operator acres	1014	913	910	979
Value of feed fed	\$69,903	\$32,756	\$80,333	\$58,648
Net farm income	\$54,226	\$99,997	\$173,318	\$72,044
FAMILY LIVING EXPENSE:				
Contributions	\$4,538	\$6,666	\$4,095	\$5,187
Medical	6,976	8,917	9,497	7,656
Life Insurance	3,235	2,770	11,877	3,349
Expendables	46,188	62,997	43,153	51,331
Total Non-Capital.	(60,937)	(81,349)	(68,623)	(67,523)
Capital.	7,935	5,539	0	6,952
Total Living Expenses	(\$68,872)	(\$86,888)	(\$68,623)	(\$74,475)
SOURCES OF FUNDS:				
Non-taxable receipts ¹	\$206,797	\$115,059	\$238,849	\$179,191
Net non-farm income	35,780	56,183	5,220	41,218
Money borrowed	519,390	569,883	785,547	543,081
Total farm receipts	<u>972,679</u>	<u>906,194</u>	<u>1,118,035</u>	<u>956,329</u>
TOTAL SOURCE ALL FUNDS	\$1,734,645	\$1,647,318	\$2,147,650	\$1,719,819
USES OF FUNDS:				
Farm				
Interest paid	\$26,558	\$32,682	\$29,331	\$28,548
Other farm expenses	714,335	646,071	730,039	693,550
Machinery-bldg. purchases	<u>133,167</u>	<u>139,919</u>	<u>438,666</u>	<u>144,416</u>
Total Farm Expenditures	(\$874,061)	(\$818,672)	(\$1,198,036)	(\$866,514)
Principal payments	\$483,635	\$459,234	\$557,947	\$478,262
Income & S.S. tax	27,918	49,460	9,553	34,076
Savings and Investment ²	280,160	233,064	313,490	266,493
Living expenses:				
Total Non-Capital	\$60,937	\$81,349	\$68,623	\$67,523
Capital	<u>7,935</u>	<u>5,539</u>	<u>0</u>	<u>6,952</u>
Total Living Expense	(\$68,872)	(\$86,888)	(\$68,623)	(\$74,475)
TOTAL USE OF FUNDS	\$1,734,645	\$1,647,318	\$2,147,648	\$1,719,819
Balancing error	0	0	-2	0

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 4. Kentucky Farm and Family Sources and Uses of Dollars, 2014, 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	34	24	97	8	8
Age of operator	45	58	49	61	52
Number in family	2.9	2.0	2.4	1.8	2.3
Age of oldest dependent child . . .	17	16	19	24	18
Total tillable operator acres	146	429	1,529	447	390
Value of feed fed	\$59,579	\$79,815	\$60,341	\$118,909	\$24,694
Net farm income	\$63,648	\$48,854	\$94,655	\$42,205	\$16,754
FAMILY LIVING EXPENSE:					
Contributions	\$3,520	\$5,861	\$5,692	\$12,658	\$3,422
Medical	4,303	7,480	8,801	11,183	2,734
Life Insurance	785	1,250	4,382	2,013	842
Expendables	<u>37,063</u>	<u>48,073</u>	<u>57,730</u>	<u>77,375</u>	<u>20,097</u>
Total Non-Capital.	(45,670)	(62,664)	(76,606)	(103,229)	(27,095)
Capital.	<u>6,318</u>	<u>4,540</u>	<u>6,765</u>	<u>8,392</u>	<u>5,229</u>
Total Living Expenses	(51,988)	(67,204)	(83,370)	(111,621)	(32,324)
SOURCES OF FUNDS:					
Non-taxable receipts ¹	\$43,874	\$130,223	\$237,333	\$251,146	\$103,125
Net non-farm income	32,081	28,614	28,762	47,187	21,072
Money borrowed	136,885	160,507	833,345	101,185	180,486
Total farm receipts	<u>305,812</u>	<u>429,010</u>	<u>1,425,767</u>	<u>470,305</u>	<u>345,894</u>
TOTAL SOURCE ALL FUNDS	\$518,653	\$748,355	\$2,525,207	\$869,822	\$650,578
USES OF FUNDS:					
Farm					
Interest paid	\$13,062	\$9,287	\$41,031	\$6,974	\$8,534
Other farm expenses	203,143	302,922	1,044,691	345,302	219,966
Machinery-bldg. purchases	<u>55,670</u>	<u>60,326</u>	<u>209,240</u>	<u>48,107</u>	<u>65,114</u>
Total Farm Expenditures	(271,875)	(372,534)	(1,294,962)	(400,383)	(293,613)
Principal payments	\$131,182	\$190,098	\$700,408	\$159,101	\$198,574
Income & S.S. tax	9,796	10,309	47,987	12,887	7,713
Savings and Investment ²	53,812	108,209	398,480	185,831	118,354
Living expenses:					
Total Non-Capital	\$45,670	\$62,664	\$76,606	\$103,229	\$27,095
Capital	<u>6,318</u>	<u>4,540</u>	<u>6,765</u>	<u>8,392</u>	<u>5,229</u>
Total Living Expense	(51,988)	(67,204)	(83,370)	(111,621)	(32,324)
TOTAL USE OF FUNDS	\$518,653	\$748,355	\$2,525,207	\$869,822	\$650,578
Balancing error	0	1	0	0	1

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.