

Appendix C: Measuring Farm Operator Household Income

The Current Population Survey (CPS) of the Bureau of the Census is the source of official U.S. household income statistics. ERS calculates an estimate of farm household income from the ARMS that is consistent with CPS methodology in order to make meaningful income comparisons between farm operator households and all U.S. households. Farm operator household income from the ARMS is composed of three major components: (1) the operator's farm self-employment income, (2) other farm-related earnings of the household, and (3) household earnings from off-farm sources (table C).

The operator of a farm, for ARMS purposes, is the person who makes most of the day-to-day decisions about the farm, whether or not others share management responsibility. Thus, for the ARMS, as for the census of agriculture, the number of farm operators is the same as the number of farms. Information on operator characteristics and occupation is collected only for the operator.

ARMS household information, such as off-farm income, is collected for the operator household only if the farm is organized as a sole proprietorship, partnership, or family corporation. Information is collected for one household per farm, the operator's household, even if the farm business income is shared among multiple households.

The CPS definition of farm self-employment income is net money income from the operation of a farm by a person on his or her own account, as an owner, renter, or sharecropper. CPS self-employment income includes income received as cash, but excludes in-kind or nonmoney receipts. The CPS definition departs from a strictly cash concept by deducting depreciation, a noncash business expense, from the income of self-employed people.

Farm self-employment income from ARMS is the sum of the operator household's share of adjusted farm business income, wages paid by the farm business to the operator, and farmland rental income net of expenses. Adding other farm-related earnings of the operator household, we get earnings of the operator household from farming activities. However, earnings of the operator household from farming activities may leave out some resources the farm business makes available to the household.

For example, an additional source of cash may be depreciation expense that is not actually spent during the current year, or an increase in inventory that could be sold to raise cash. Nonmoney income, such as the imputed rental value of a farm-owned dwelling, represents a business contribution to household income because it frees up household cash that would otherwise be spent on housing.

In 1995, earnings of the household from farming activities averaged \$4,720 per operator household. Clearly, this was well below net cash farm income per farm (\$11,218), a measure of cash generated by the farm business. Most of this apparent disparity is due to subtracting depreciation from net cash farm income in order to be consistent with the CPS methodology. The remainder of the difference is attributable to the sharing of adjusted farm business income with other households.

For households of commercial farm operators, earnings of the operator household from farming activities averaged \$28,191, almost half of total household income. In contrast, households associated with noncommercial farms lost an average of \$3,373 from farming. Although household earnings from off-farm sources for operators of the larger farms (sales \$50,000 or more) were lower than for operators of smaller farms, total household income for operators of the large farms was higher, and their average total income was 28 percent more than the average for all U.S. households.

Table C--Deriving ARMS farm operator household income estimates consistent with Current Population Survey (CPS) methodology for self-employment income, by farm size, 1995 ¹

	Farms with gross value of sales		All farms
	Less than \$50,000	\$50,000 or more	
	<i>Dollars per farm</i>		
Net cash farm business income ²	* -1,687	48,434	11,218
Less depreciation ³	2,216	20,072	6,795
Less wages paid to operator ⁴	* 75	1,819	522
Less farmland rental income ⁵	* 743	844	769
Less adjusted farm business income due to other household(s) ⁶	* -111	2,853	649
	<i>Dollars per farm operator household</i>		
Equals adjusted farm business income	-4,609	23,055	2,484
Plus wages paid to operator	* 75	1,819	522
Plus net income from farmland rental ⁷	942	1,373	1,053
Equals farm self-employment income	-3,592	26,247	4,059
Plus other farm-related earnings ⁸	219	1,944	661
Equals earnings of the operator household from farming activities	-3,373	28,191	4,720
Plus earnings of the operator household from off-farm sources ⁹	43,187	29,476	39,671
Equals average farm operator household income comparable to U.S. average household income, as measured by the CPS	39,814	57,667	44,392
	<i>Percent</i>		
Average farm operator household income as percent of U.S. average household income ¹⁰	88.6	128.3	99.8
Average operator household earnings from farming activities as percent of average operator household income	a	48.9	10.6

* = The relative standard error (RSE) is more than 25 percent but less than 50 percent. The RSE provides a means of evaluating the survey results. A smaller RSE indicates greater reliability of the estimate.

¹ This table derives farm operator household income estimates from the Agricultural Resource Management Study (ARMS) that are consistent with Current Population Survey (CPS) methodology. The CPS, conducted by the Census Bureau, is the source of official U.S. household income statistics. The CPS defines income to include any income received as cash. The CPS definition departs from a strictly cash concept by including depreciation as an expense that farm operators and other self-employed people subtract from gross receipts when reporting net money income.

² A component of farm sector income. Excludes income of contractors and landlords as well as the income of farms organized as nonfamily corporations or cooperatives, and farms run by a hired manager. Thus, represents the income of farms organized as proprietorships, partnerships, and family corporations.

³ Consistent with the CPS definition of self-employment income, reported depreciation expenses are subtracted from net cash income. The ARMS collects farm business depreciation used for tax purposes.

⁴ Wages paid to the operator are subtracted here because they are not shared among other households that have claims on farm business income. These wages are later added back in to the operator household's adjusted farm business income to obtain farm self-employment income.

⁵ Gross rental income is subtracted here because net rental income from the farm operation is added below to income received by the household.

⁶ More than one household may have a claim on the income of a farm business. On average, 1.1 households share the income of a farm business.

⁷ Includes net farmland rental income from the farm business and from farmland held by household members that is not part of the farm business.

⁸ Wages paid to other operator household members by the farm business and net income from a farm business other than the one being surveyed.

⁹ Wages, salaries, net income from nonfarm businesses, interest, dividends, transfer payments, etc.

¹⁰ U.S. average household income, as reported in the CPS, was \$44,938 in 1995.

a = The negative average earnings from farming activities decreased average operator household income 8 percent.

Sources: U.S. Dept. of Agriculture, Economic Research Service, 1995 Agricultural Resource Management Study (ARMS), for farm operator household data. U.S. Dept. of Commerce, Bureau of the Census, Current Population Survey (CPS), for U.S. average household income.