

Off-Farm Work and Income in U.S. Farm Households

Off-farm income received by farm operators and their spouses has risen steadily over recent decades (fig. 1a) as job opportunities have grown and technological progress, such as mechanization, has lessened onfarm labor needs. The off-farm income share of total household income of U.S. farmers rose from about 50 percent in 1960 to more than 80 percent over the past 10 years (fig. 1b). Most of the off-farm income was earned. On average, a farm household earned about \$48,800 from off-farm sources in 2004, received about \$18,500 in unearned income (Social Security, interest, etc), and netted nearly \$14,200 from farming activities (Covey et al., 2005).⁵ Fifty-two percent of farm operators worked off farm in 2004 (up from 44 percent in 1979). The share of spouses working off farm grew from 28 percent of spouses in 1979 to 45 percent in 2004 (Mishra et al., 2002; 2004 ARMS data).

The trend is similar in terms of hours worked (table 1). Average hours worked off farm by farm operators has increased (from 830 hours per year in 1996 to 1,022 in 2004), while the hours devoted to farm work did not change markedly (1,525 hours in 1996 and 1,574 in 2004). Similarly, the number of hours worked off the farm by spouses increased from 690 in 1996 to 809 in 2004.

Farmers' Motivations To Work Off Farm

Once seen as a “temporary response to the Great Depression,” off-farm employment is now regarded as a “regular feature of almost all farming societies” (Fuller, 1991; Bartlett, 1986; Bessant, 2000). More than half of U.S. farm operators now work off the farm.⁶ Moreover, off-farm income appears to smooth out household income flows (Mishra and Goodwin, 1997; Mishra and Sandretto, 2002), and most farmers view off-farm employment as a permanent rather than a temporary or transitional (into or out of farming) pursuit (Ahearn and El-Osta, 1993).⁷ Farm operators in a 1982 survey felt that full-time farming provided inadequate income (91 percent of the respondents), and that farm income was risky (70 percent) and offered no fringe benefits such as pensions and health insurance (55 percent). Capital and land constraints were considered less important disadvantages to full-time farming (42 and 30 percent) (Barlett, 1991). More

Table 1

Operator and spouse hours worked on and off farm, 1996-2004

Item	1996	2000	2004
Operator hours worked:			
On farm	1,525	1,433	1,547
Off farm	830	1,011	1,022
Total	2,355	2,443	2,596
Spouse hours worked:			
On farm	366	337	877
Off farm	690	751	809
Total	1,056	1,089	1,686

Sources: 1996: Hoppe (2001, p. 29); 2000: Mishra et al. (2002, p. 50); 2004: ARMS data.

⁵Across all farms, operators earned 64 percent of all household off-farm earned income in 2001, spouses earned close to 33 percent, and other members earned 3 percent (O'Donoghue and Hoppe, 2005).

⁶There are, however, some issues regarding the definition of a farm. Since the USDA definition of a farm is not adjusted for inflation, the number of small operations that get defined as farms may increase over time, which may also increase the share of operators working off the farm.

⁷A minority of farmers (18.4 percent of the total in 1987) may be considered as a transitional group, i.e., full-time farmers who worked off farm because they faced heavy losses and high debts. Some of these farmers expected to return to full-time farming when their financial situation was resolved (Bartlett, 1991). Moreover, using agricultural census data spanning 1982 to 1997, ERS researchers identified 644 (out of over 5,000) small part-time farms that managed to grow into large commercial operations. These farms are called emergent adaptive farms (EAF). Off-farm work provided financial support during the early years of the typical EAF, but EAF operators spent more time on farm activities as their businesses expanded: 35 percent of EAF operators worked at least 200 days off the farm in 1987, but that share declined to 16 percent by 1997 (Newton, 2005).

recently, the 2004 ARMS asked operators and spouses to list the two main reasons for seeking off-farm work. The primary reason given by 35-50 percent of the operators and 44-63 percent of the spouses (depending on farm size and occupation of the farm operator) was “to increase income” of the farm household. Other reasons cited were to obtain fringe benefits (such as health insurance) and personal satisfaction (Covey et al., 2005).

So most operators and spouses report working off farm primarily to increase income for the farm household, but how was the additional income used? Contrary to conventional wisdom, most farm operators and spouses did not work off the farm to directly support their farm business. USDA surveys indicate reasons unrelated to the farm business, from buying groceries to funding a retirement account (Hoppe, 2001).

Farmers and spouses hold a variety of off-farm jobs, but especially in private businesses (54.1 percent of operators with off-farm jobs), self-employment (22.3 percent), and government (16.0 percent). Only 3.3 percent worked on another farm (Mishra et al., 2002). Spouses with off-farm work are most likely to be employed in the private sector (55.1 percent) and government (28.4 percent), with less than 1 percent working on another farm.

Opportunity Cost of Labor for Farm Operators

Opportunity cost is an important economic concept that measures the economic cost of an action or decision in terms of what is given up (opportunity forgone) to carry out that action. In the case of farm labor, for example, the opportunity cost of labor for the operator (or spouse) labor is often measured in terms of the wage that the operator (or spouse) can obtain working off farm. As the United Nations’ Economic Commission for Europe notes: “In conventional accounting systems, ‘unpaid’ family labour does not usually appear as an explicit cost of production. Consequently, there is no explicit ‘wage’ paid to the labour that the farmer and his family [contribute to] production.”

Farm household labor is a critical input in agricultural production. In the corn/soybean-producing States, farm household members provide more than 80 percent of all labor hours.⁸ A significant proportion of those labor hours is not valued directly in the marketplace (e.g., through wages). Studies have estimated the opportunity costs of farm labor by using predicted off-farm wages (El-Osta and Ahearn, 1996).

Alternatively, a simplified approximation of the opportunity cost of labor for farm operators and their spouses can be obtained directly from ARMS data. The (nominal) opportunity costs for corn/soybean operators and spouses appear not to have increased over 1996-2000. The cost for the operator (\$21.07 per hour for 2000) appears to run about 20 percent higher than that of the spouse, and both are higher than the actual wage rate for hired farm labor.⁹

It is also interesting to compare the opportunity cost of labor for corn/soybean farmers with those of dairy farmers. The cost for U.S. dairy farmers in 2000 was econometrically estimated at \$27.58 per hour for oper-

⁸Corn/soybean-producing States are defined as those that account for most of the U.S corn and soybean production. States included are Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, and Wisconsin.

⁹The opportunity cost of labor varies with the farm’s region, size, and specialization, the operator’s human capital (education and experience); and household characteristics (El-Osta and Ahearn). In addition, opportunity cost estimates may vary with the characteristics of the labor markets, the methodology used, and data sources.

ators (30 percent higher than for corn/soybean farmers) and \$19.36 for spouses (18 percent higher) (Lovell and Mosheim, 2005). Given that labor requirements in dairy production are high and inflexible (El-Osta and Ahearn), dairy farmers likely require a higher “wage” to work off the farm than farmers working in other enterprises.

Table 2

Opportunity cost of labor for corn/soybean farm operators and spouses, and actual hired farm wage rate, 1996-2000

Year	Operator	Spouse	Hired
<i>Dollars per hour</i>			
1996	22.88	17.87	7.42
1997	26.72	19.06	8.01
1998	22.14	18.77	8.30
1999	22.19	17.96	8.67
2000	21.07	17.47	8.99

Source: ERS estimates based on ARMS data for corn/soybean States analyzed (Nehring, Fernandez-Cornejo, and Banker, 2005).