

# **Time Use in Farm Operator Households: How Do they Manage?**

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## **Introduction**

The majority of farm operator households have a member who works off the farm at a wage and salary job or operating another business, in addition to operating their farm business. In fact, principal farm operators are more than 10 times as likely to be multiple jobholders than the general U.S. employed population (56 compared to 5 percent in 2006).<sup>2</sup> Multiple jobholding is also common for spouses of principal farm operators, too (38 percent in 2006). Multiple jobholding has contributed to the current situation which finds farm operator households in a favorable financial position relative to the general U.S. population or other self-employed households. In 2006, the average income of farm operator households was 20 percent greater than all U.S. households and their median wealth was about 5 times as large. While most of their wealth is in their farm assets, off-farm sources of income account for 90 percent of the average farm operator's household income (USDA).

But, how do farm operators and their spouses find the time to be able to engage in multiple jobholding more often than other employed persons? Part of the answer to this question lies in the way in which farms are defined and the increase in the growth of rural residences. To operators of farms that produce little or no agricultural products, a major service of their farm is to provide a desirable residence. Operators of so-called "residence farms" who work off the farm are classified as multiple jobholders, but they may allocate a relatively small amount of their time to farm work. Nevertheless, limiting consideration to the farms with positive agricultural production, a significant share of principal farm operators (54 percent in 2006) and their spouses (31 percent in 2006) manage their time so as to engage in multiple jobholding.

The purpose of this paper is to examine how farm operator households allocate an important household resource—their time. We examine labor allocations of operators and spouses to farm and off-farm work using the 2006 Agricultural Resource Management Survey (ARMS). Besides providing a large and reliable sample of farmers and ranchers, these data allow us to consider time allocation choices in the context of how they organize their farming operation. The ARMS is used to provide critical information on the financial position of farm businesses and households and has collected

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<sup>2</sup> Women in the general U.S. population are more likely than men to be multiple jobholders (5.6 compared to 4.9 percent in 2006) (U.S. Department of Labor, Bureau of Labor Statistics).

information on hours of time allocated to work as part of that mission, albeit in a rather imprecise manner relative to a diary-based approach. In general, the goal is to impute a return to the unpaid hours of farm work. Time use is also utilized in various research models explaining behavior of farm operator households.

We hypothesize that farmers engage in multiple job holding more frequently than other households by (1) working more hours and (2) working more hours on weekends and holidays. BLS data show that the general self-employed population work more hours on weekends and evenings than wage and salary workers, likely because their greater control over the business gives them that flexibility. We examine these hypotheses using the Bureau of Labor Statistics (BLS) American Time Use Survey (ATUS) for 2003-2006.

An additional goal of this analysis is to use the ATUS diary-based time use data as a validation check on the work hours data collected on the ARMS. On the ARMS, respondents are asked to provide work hours by quarter for the previous year several months after the year has ended. Recognizing the potential for bias in this type of recall, we are interested in gaining an understanding of how ARMS work hours estimates compare to a diary-based method of time use data collection. Before we pursue these analyses, we begin with a brief description of the characteristics of farm operator households that are most closely related to how they use their time.

### **Relevant Characteristics of Farms and Their Households**

Those classified as farmers and ranchers and their households are a diverse group. The major factor contributing to this diversity stems from the current USDA definition of a farm. The definition of a farm is a very liberal one, requiring only that a place have annual sales, or the potential for sales, of \$1,000. About 20 percent of U.S. farms in a typical year report that they do not have any production. Some of those places may not have production because of a production failure, but given their small size most are likely low-production farms on a usual basis. The low-production levels of many farms means low farm labor requirements, facilitating the off-farm employment choice of the household members who operate these farms. In short, the liberal farm definition means that many U.S. farms are very small, requiring little labor from the farm household, and may mean that the time allocation of this large group of farm households may not be that different from other U.S. households with similar life-cycle characteristics. At the other end of the size continuum are very large farms, accounting for the majority of agricultural production. For example, 10 percent of the largest farms in 2004 accounted for 75 percent of the production (Hoppe, et al.).

Approximately, 40 percent of farms are in metropolitan counties, potentially providing easier access to off-farm opportunities than farms in nonmetropolitan counties.<sup>3</sup> And,

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<sup>3</sup> Metropolitan areas are defined to include central counties with urbanized areas (cities of at least 50,000 residents or with an urbanized area of 50,000 or more) and outlying counties which are tied to the central counties by having a daily commuting population of at least 25 percent. Farm operator households in

although many small farms have negative farm incomes in any one year, they experience other types of returns. For example, financial benefits of farming include unrealized capital gains in their farm land, lower property taxes on their dwelling and other farm land and buildings as a result of being zoned as farm property, and, at the same time, their farm losses reducing their taxes on off-farm income. This is in addition to the environmental and cultural amenities of farm life that some farm households may value. To some farm households, these benefits merit allocating time to farm work—some likely view the farm work itself as a benefit of farm life.

Despite the dominance of small farms, the farm operator household population has characteristics that distinguish it from the general U.S. population in ways that are known to be relevant to time allocation choices. In particular, gender and age distribution are relevant factors in time allocation choices and differ significantly between the general U.S. employed population and the farm household population.

Research has shown that employment status of the general population is a more important factor than age in explaining a persons' use of time (Robinson and Godbey). Krantz-Kent and Stewart reinforced this result in their finding that most of the differences in time use by age disappear after controlling for employment status. Nevertheless, the age distribution of farm operators is notable, relative to the general population of employed persons. Their average age is 57 years old. More than 25 percent are 65 years or older, and 57 percent are 55 years old or more. In the general U.S. employed population, 18 percent of employed persons were 55 years or older (as of August 2007; BLS).

There are many forces that likely contribute to this difference in the age distributions of the farm and the general employed population. However, a major difference relates to the dual nature of the farm as a place of business and a place of residence—for many a place of intergenerational roots. Older operators may choose to continue to reside on the family farm and decrease their farm work and production levels, rather than fully retire and move off the farm. In fact, approximately 20 percent of farm operators report they are retired from farming, although they are still considered as employed for data collection purposes. Some may even be retired from other occupations and farming is their second career, as well as their residence. The higher proportion of women operators among older operators without production is a tell-tale sign of the household choice to remain on the farm while exiting from agricultural production activities, since women have a longer life expectancy than men and many of these older female operators are widows.

In the general U.S. population, women are a slightly smaller share of those employed than men (aged 20 and older). As of August 2007, women were 46 percent of the employed U.S. population (BLS). Women are much less likely to be farm operators and ranchers than are men, however. The ARMS data collection process identifies all

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metropolitan areas are only slightly more likely to have someone in the household with an off-farm job, although off-farm income is about 20 percent higher for those residing in metropolitan counties.

operators on a farm and also identifies the one operator viewed as the principal operator.<sup>4</sup> About 90 percent of principal operators are male, although many report that their spouses are also operators of the family farm. About 45 percent of family farms have more than one operator, including the more than one-third of all family farms operated by a husband and wife team.<sup>5</sup> Of course, spouses who are not operators of farms also contribute work hours to the farm. For example, for family farms with a single operator but where a spouse was present, about one-third of the spouses reported working some hours on the farm in 2006. For other farms with multiple operators--but where the spouse is not among the operators--43 percent of the principal operators who had a spouse reported that their spouse worked on the farm in 2006.

In table 1, we report demographic and income characteristics of farm operator households based on their operator management structure. There are about 2 million U.S. farms and nearly 3 million farm operators. Farm size is often the single most distinguishing factor explaining average farm characteristics. Farms operated by a single operator or by a husband-wife team have similar sizes, on average. In contrast, other farms that have multiple operators tend to be larger in both production and acreage. The household income of the principal farm operators in this multiple operator group is higher as a result of their greater farm production—although their off-farm incomes are slightly higher, too.

### **Farm and Off-farm Work Choices of Farm Operators and Their Spouses**

Principal farm operators provide more than 40 percent of all of the hours worked on U.S. farms. This high share of the total work hours is a reflection of the highly mechanized nature of farming today. Over the past 6 decades, while output is more than 2.5 times as large, the labor input is the only major input category to experience significant and continuous declines. Decline in labor use is the major reason behind agriculture's relatively high total factor productivity levels among U.S. industries. Principal farm operators provided 1,385 hours of work time on their farms, on average, in 2006. Hours provided are positively related to the size of the farm they operate. The significantly greater allocation of work hours to their farms for large farms is evident for both the principal operator and spouse in table 2. For example, principal operators of farms with sales of \$250,000 or more average about 3,000 hours of work on their farm per year, compared to one-third of that for the farms with sales of less than \$50,000 per year. (However, three-quarters of farms have sales of less than \$50,000, bringing the average farm hours down for all principal operators.) More than half of operators also work off their farm, and for those reporting off-farm work hours, they averaged 2,056 hours in 2006. Off-farm work participation of principal operators decreases significantly as the size of the farm increases.

Spouses in principal farm operator households provided about 10 percent of all hours worked on U.S. farms in 2006. On more than 700,000 of the 2 million farms, the spouse is also an operator of the farm. On another 300,000 farms, a nonoperator spouse reported

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<sup>4</sup> A farm operator is someone who makes day-to-day management decisions for the farm.

<sup>5</sup> In less than 5 percent of the husband-and-wife operated farms there were additional operators, too.

working some hours on the farm in 2006. While they are less likely to work on the farm than operators, farm spouses are just as likely as farm operators to work off the farm in a wage and salary job or a nonfarm business. In fact, in contrast to principal operators, their participation in off-farm work activities does not decline as farm sizes increase. When they do work off the farm, spouses average slightly fewer hours of work—37 hours per week, compared to 40 hours per week for operators.

Off-farm work has been a common activity of farm operator households for several decades (Ahearn and Lee), but it continues to increase. Currently, nearly three-quarters of farm operator households report at least one household member working off the farm. As mentioned, multiple jobholding is much more common in farm operator households than it is for the general U.S. population. Moreover, when we consider just those households that had a spouse in 2006, in 23 percent of households both spouses are multiple jobholders.

### **Time Allocation of Farmers and Ranchers in the ATUS**

Information on annual farm and off-farm hours worked collected on annual farmer surveys, such as ARMS, raises questions about accuracy in reporting. Moreover, ARMS data cannot further illuminate how farm operators and spouses manage their time, given the extremely high levels of multiple jobholding observed. Krantz-Kent reports for the U.S. employed population, multiple jobholders were twice as likely as single jobholders to work on a weekend day or holiday and slightly more likely to work on a nonholiday weekday. On days that they worked, multiple jobholders averaged more work time than single jobholders. ARMS data do not provide information that will allow us to determine if farmers and ranchers manage their time in a similar fashion.

It is also known that time allocation differs for those who have wage and salary jobs, compared to persons who are self-employed. For example, wage and salary workers and persons who are self-employed are just as likely to work on nonholiday weekdays, but wage and salary workers work (54 minutes) more than self-employed (BLS). Self-employed persons are more likely to work on weekends or holidays and more likely to work from home. Self-employed persons may have greater flexibility in allocating their time and they may have increased responsibility in their work positions, both of which we would expect to affect time use. Hyytinen and Ruuskanen report that self-employed in Finland work longer hours and a non-negligible part of these extra hours are in the evenings and weekends.

Detailed information on how individual operators and their spouses manage their work time cannot feasibly be collected from the ARMS. Consequently, we draw on BLS' new American Time Use Survey (ATUS) to further address these issues (Frazis and Stewart). The ATUS allows us to compare time use between farm persons and the general employed population. Since farmers are self-employed, we also compare their time use to the general self-employed population.

The ATUS sample is drawn from households that have completed their participation in the Current Population Survey (CPS). ATUS is a stratified random sample surveyed throughout the year which began in 2003 and is representative of the U.S. civilian noninstitutionalized population 15 years and older. Because of our interest in farmers and ranchers we limited respondents to 18 years and older and combined data for 2003-2006 to increase the sample of farmers and ranchers. We identified this group as employed persons who reported their primary or secondary occupation as farm, ranch, and other agricultural managers or who reported being a farmer or rancher. It includes those who are unpaid managers of a family farm.<sup>6</sup>

The core of the ATUS is a 24-hour time diary, 4:00am to 4:00am of the interview day. All months of the year and days of the week are represented in the ATUS, including weekdays and weekends. In 2003, there were about 21,000 completed ATUS interviews, and about 13,000 each year for 2004-06. Half of the ATUS sample is asked about their activities on a Saturday or Sunday, and the other half on weekdays. This is done because the BLS found that Americans engage in a greater variety of activities on the weekends. The sample weights adjust for day of week in addition to demographic factors to allow for nationally representative estimates.

For the diary days represented in the 2003-06 ATUS, farmers and ranchers were more likely to report working, and when they worked, reported working more hours than the general employed or the self-employed population (table 3). Their average hours spent working was 6.43 hours per day, compared to 5.29 for all employed, and 6.30 for all self-employed. So, the time farmers allocated to work was much more similar to that of other self-employed persons than it was to all employed persons. Farmers spent less time commuting than the other groups, but it did not compensate for their greater work time. Farmers spent less time on personal care, purchasing goods and services, caring for household members, in education endeavors, in leisure or communication, such as telephone calls than either all employed or all self-employed. In contrast, they allocated more time to civic and religious activities, eating, and household activities than did the other two groups.

Based on their reported work hours and the extent of their multiple jobholding, we expected to find that farmers worked more total hours than other employed persons. We also expected that they would work more on weekends and holidays, than other employed persons. In fact, the ATUS data confirms that result, as well. In table 4, we report the average daily time use of the same three populations by weekdays and weekend and holidays. Farmers work 6 percent more hours than all employed persons during the weekdays, but they work more than twice as much as all employed persons on weekends and holidays. Farmers' relative allocations of working and commuting time indicates that the weekend work time is more likely to be spent in farm work rather than commuting to an off-farm job. Farmers work time during the weekdays is very similar to all self-employed. But, farmers allocate more time to work than all self-employed on

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<sup>6</sup> In Appendix table 1, we compare demographic characteristics of the following populations for the U.S.: farmer/rancher, self-employed, and all employed persons from the ATUS and principal operators and spouses of principal operators who also report being an operator from the ARMS.

weekends and holidays. Interestingly, farmers spend less time on weekdays purchasing goods and services, whereas other employed persons spend more. In addition, all employed persons and self-employed persons spend significantly more time on weekends in household activities, in contrast to farmers who spend about the same time during the week, as on weekends, working on household activities.

### **Validation of ARMS Estimates**

The use of time diaries is generally viewed as a superior approach to collecting data on time use—“This chronological reporting procedure avoids many pitfalls that other survey estimation procedures encounter and is less subject to distortion due to ‘social desirability bias.’”<sup>7</sup> The common alternative is to ask a respondent to report hours worked for some period in the past—an approach subject to recall errors. In addition, in the case of the self-employed population there is a fuzziness regarding the distinction between work and leisure. Methodological research has addressed these issues, although the results are not definitive. For example, Robinson and Bostrom compared time-diary estimates to CPS-like questions regarding hours worked in a previous week. They found that respondents overreported hours in the recall questions. Other research (e.g., Jacobs) indicates that work time is very close to self-reported retrospective questions.

Part of the mission of the Economic Research Service, USDA is to provide economic statistics about the financial performance of U.S. farms. Since the majority of labor on farms is not paid a wage or salary, a cost must be imputed to these hours in constructing economic statistics. In particular, a cost is imputed for unpaid labor in the development of commodity cost of production estimates, productivity estimates, and estimates of the returns to owner’s equity in farm capital (e.g., see USDA, 1988). Beginning with the Farm Costs and Returns Survey (FCRS) and continuing with the Agricultural and Resource Management Survey (ARMS), USDA has collected statistical indications of time use spent in farm and off-farm work for farm operators and their spouses. Traditionally, the FCRS-ARMS have collected information on hours worked by asking the respondent to recall this information for 4 quarters in the prior calendar year. Although crude compared to a diary approach to time use data collection, the results from this data collection method are generally credible and certainly superior to previous methods (e.g., based on assumed engineering machinery requirements, see El-Osta and Ahearn for more background). However, hours reported spent in farming seem to be relatively high for a large share of the sample, especially in light of the hours allocated to off-farm work by many operators and spouses. The survey results have been generally consistent over the years, although there has been an increase in the share of operators and spouses working in an off-farm job.

In addition to financial performance measures of farming, there is an interest in understanding how farm policies affect time allocations of farm operator households (e.g., Ahearn, El-Osta, and Dewbre and El-Osta, Mishra, and Ahearn). An ideal goal of

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<sup>7</sup> Linda L. Stinson, “Measuring how people spend their time: a time-use survey design,” *Monthly Labor Review*, U.S. Department of Labor, Bureau of Labor Statistics, August 1999, p. 12, [www.bls.gov/opub/mlr/1999/08/art3abs.htm](http://www.bls.gov/opub/mlr/1999/08/art3abs.htm).

farm policies is to design policies that do not distort trade, or distort trade only minimally. Studying the impacts of alternative policy designs through a labor allocation model has the advantages provided by the control of time, i.e., there are only 24 hours in any day, compared to the direct target of the policy analysis, production levels, which are affected by a myriad of factors, including the weather. Economic theory offers predictions about how a farm household might respond to different types of farm policies, but how they actually respond is an empirical question. Ideally, more complete time use data would be available for farmers, including collection of hours spent in leisure activities, in order to provide an empirical analysis of the effects of different types of policies.

As a step towards validating the quality of the data on work hours reported in the ARMS, a change was made to a version of the 2004 ARMS survey instrument, the so-called Costs and Returns Report (CRR). In particular, the CRR version was modified to collect additional time use categories that required the respondent to account for a 24-hour day. Given the statistical design, a comparison was made between the new and old time allocation design between the CRR and another version of the survey, called the Core version, for a 15-state area. To our surprise, we found that the CRR average hours worked on the farm were greater than those reported on the Core, 1,634 and 1,430 hours per year, respectively, a statistically significant difference. One hypothesis is that the closed format yields a more thoughtful response, resulting in a more accurate but higher estimate. Another hypothesis is that the closed format causes the respondent to inflate the hours worked because of a stigma associated with reporting too high an allocation to leisure. The personally enumerated data collection of the CRR, compared to the mail enumeration of the Core, may encourage this bias.

A more rigorous validation of the ARMS self-reported hours work data involves a comparison of the ARMS data to the ATUS diary-based estimates of time use. Careful attention was paid to matching the population concepts and the measures of hours worked across the two surveys. The comparison to be made is between the ARMS estimate of total hours worked, farm and off-farm, of principal operators and the spouses of principal operators who are also identified as operators of the farm, compared to the ATUS estimate of work hours for the farmer and rancher self-employed population defined above. While the ATUS day are reported for an average day, the ARMS average work time in a day is constructed from the retrospectively reported hours worked in a week in each of the 4 quarters of a calendar year.

Remarkably, the estimates of average hours worked per day from the 2006 ARMS of 6.42 compares to the 2003-06 ATUS estimate of 6.43! Such a close average value between the two data sources with very different sampling approaches and approaches to time use collection is suspect. The total ATUS population of farmers was 1.9 million, compared to the ARMS population of 2.7 million. Moreover, we know from the basic demographic data reported in Appendix table 1, that some differences in the average population characteristics exist. Hence, we have examined some distributional information (figure 1). The ATUS population of farmers are more likely to work less



than 4 hours per day and more likely to work 8 hours or more per day. In contrast, a larger share of ARMS farmers work 4 to under 8 hours per day.

## **Conclusions**

It has long been recognized that farm operator households commonly engage in off-farm work and multiple jobholding at a very high rate. It is also generally understood that operating a farm requires a significant time commitment. The implicit conclusion is that farmers and ranchers are allocating a large amount of time to work. This raises two general questions: First, are the usual data collection methods biased? USDA farmer surveys have collected work hours of farm operators and farm spouses for decades. Oftentimes the estimates of time allocated to work by some respondents are very high—almost incredibly high. This has enhanced the concerns of researchers about the crude recall approaches they commonly employ in collecting time use data on annual farmer surveys. Secondly, the high level of multiple jobholding raises questions about how farmers and ranchers manage their time so as to allocate so much to work activities.

By jointly evaluating the ARMS and the ATUS, we found support for the high level of reported work hours on the ARMS among farm operators. We found that farmers and ranchers do, in fact, work significantly more than all employed persons, despite their advanced age structure. They work more than all self-employeds, as well. They allocate more time to work both during the weekday and during the weekend and holidays. This is a welcomed result for users of ARMS because of the richness of the ARMS data, which complement the time use data, for research and the construction of economic statistics.

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### **Websites**

ERS website on Food, Nutrition, and Time Use: [ww.ers.usda.gov/emphases/healthy/atus/](http://www.ers.usda.gov/emphases/healthy/atus/)

BLS website on ATUS: [www.bls.gov/tus/](http://www.bls.gov/tus/)

BLS ATUS questionnaire: [stats.bls.gov/tus/tuquestionnaire.pdf](http://stats.bls.gov/tus/tuquestionnaire.pdf)

**Table 1.—Farm operator household demographics and financial well-being by operator management structure, 2006**

Item	Operator Management Structure			48-State total
	Sole operator	Husband-wife team	Multiple operators, none spouse	
Number of family farms	1,091,506	733,130	163,202	1,987,838
Percent of family farms	55	37	8	100
Total number of operators	1,091,506	1,506,565	362,024	2,960,095
Percent of all operators	37	51	12	100
Percent of value of production	43	30	27	100
Average value of production	67,806	69,681	278,351	85,783
Percent with no production	27	22	12	24
Average acres operated	356	392	842	409
Personal & Life-Cycle Characteristics				
Age of principal operator				
Average	57	56	56	57
% less than 65	71	74	72	72
% 65 or older	29	26	28	28
Race/ethnicity of operator				
% Nonwhite or Hisp	12	6	10	10
% White, nonHisp	88	94	90	90
Gender of operator				
% Male	88	93	89	90
% Female	12	7	11	10
Educational attainment of operator				
% < 4-year college degree	76	72	75	75
% 4-year college or more	24	28	25	25
Principal operator retired				
Yes	23	18	21	21
No	77	82	79	79
Marital status				
% Married	71	100	69	82
% Not married	29	na	31	18
Metro status				
Metro	42	41	35	41
Nonmetro	58	59	65	59
Sources of income, average \$				
Total household income	77,617	76,190	104,755	79,319
From farming activities	6,556	1,492	28,381	6,480
Off-farm income	71,061	74,699	76,373	72,838
Earned off-farm income	51,946	56,656	52,071	53,693
Off-farm wages and salaries	35,554	44,950	31,762	38,708
Operator	20,607	26,936	15,936	22,558
Spouse	12,456	16,573	11,719	13,914
Others in household	2,492	1,442	4,106	2,237
Off-farm business income	16,392	11,705	20,309	14,985
Operator	13,829	9,231	16,683	12,368
Spouse	2,534	2,437	2,864	2,525
Others in household	29	na	na	92
Unearned income	19,114	18,043	24,302	19,145
Share with farm loss/profit				
Farm loss	54	65	39	57
Farm profit	46	35	61	43
Household balance sheet				
Average farm net worth	644,574	663,614	898,448	672,439
Average nonfarm net worth	261,717	273,943	327,359	271,615
Average household net worth	906,291	937,557	1,225,807	944,055

Source: 2006 USDA Agricultural Resource Management Survey. Na= indicates value is not available due to reliability concerns.

Based on 6,278 observations.(6,278 Households). Expansion factor was VER1WT0. Version=1 only.

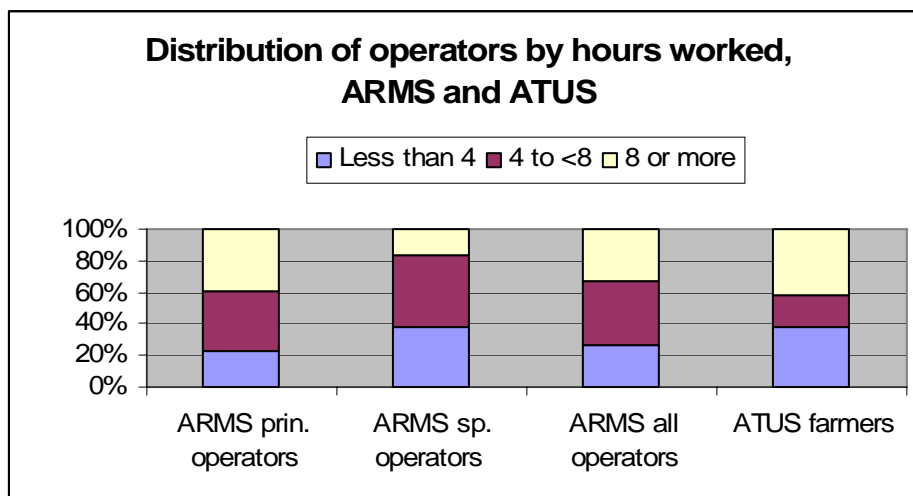
**Table 2.—Labor allocations, by farm size, 2006**

Item	Farm size				48-State total
	\$49,999 or less	\$50,000- \$249,999	\$250,000- \$499,999	\$500,000 or more	
Number of family farms	1,525,510	308,406	82,953	70,969	1,987,838
Percent of family farms	77	16	4	4	100
Total number of operators	2,224,102	477,582	130,711	127,700	2,960,095
Farms by number of operators					
1	57	49	53	40	55
2	41	47	37	44	42
3 or more	2	3	9	15	4
Percent of all operators	75	16	4	4	100
Percent of value of production	7	21	17	55	100
Average value of production	7,758	114,906	351,019	1,326,377	85,783
Average acres operated	164	869	1,492	2,425	409
Percent of principal operators retired	25	10	na	4	21
Labor force participation					
Major occupation of principal operator					
% Farm and ranch	33	75	91	97	44
% Other	67	25	9	3	56
Major occupation of spouse					
% Farm and ranch	13	25	27	35	16
% Other	68	56	59	56	65
% without spouse	19	19	14	9	18
Farm hours worked per year					
Principal operator					
Average hours	1,008	2,424	2,929	3,169	1,385
Principal operator's spouse					
Number reporting any hours	651,040	161,169	50,603	38,736	901,549
Average per reporting farm	699	1,175	1,133	1,359	837
Other operators					
Number reporting any	75,205	42,494	17,202	21,653	156,554
Average per reporting farm	913	1,685	3,176	3,447	1,722
Unpaid workers, besides operators and spouses					
Number reporting any	209,669	58,003	11,716	7,587	286,974
Average per reporting farm	696	1,414	1,140	1,424	878
Paid workers, besides operators and spouses					
Number reporting any	194,186	122,561	51,071	54,451	422,270
Average per reporting farm	na	2,309	3,916	12,005	6,067
Off-farm hours worked per year					
Principal operator					
Average per reporting farm	2,125	1,739	1,393	1,215	2,056
Principal operator spouse					
Average per reporting farm	1,944	1,898	1,773	1,802	1,925
Percent of those who hire onfarm & supply work hours off farm	9	24	35	36	13
Multiple job holding status					
% of principal operators	63	42	28	16	56
Spouse jobs					
% Farm only	18	27	28	35	20
% Off-farm only	22	19	17	22	21
% Farm and off-farm	25	26	33	20	25
% No farm or off-farm	17	9	7	14	15
% No spouse	19	19	14	9	18

Source: 2006 USDA Agricultural Resource Management Survey. Na indicates value is not available due to reliability concerns.

Based on 6,278 observations.(6,278 Households). Expansion factor was VER1WT0. Version=1 only.

Figure 1.



Appendix Table 1. Demographic Characteristics of Populations, ARMS and ATUS

	ARMS		ATUS		
	Principal Operator	Operator/Spouse of Principal Operator	Farmers	All Employed	Self-Employed
Total (1,000) annualized	1,987	733	1,861	143,526	16,183
Gender					
% Male	90	8	74	53	66
% Female	10	92	26	47	35
Average age (years)	57	54	52	41	47
Age distribution	<i>percent</i>	<i>percent</i>	<i>percent</i>	<i>percent</i>	<i>percent</i>
18-24	1	1	3	13	3
25-39	8	11	16	34	26
40-54	34	42	36	36	44
55-64	29	27	28	13	20
65+	28	19	18	4	7

Sources: 2006 ARMS and 2003-06 ATUS.

Table 3. Daily Time Use of Farmers/Ranchers, All Employed and Self-Employed Persons, 2003-06

	Average hours per day			Participation rate			Average hours per day per participant		
	Farmers	All Employed	Self-Employed	Farmers	All Employed	Self-Employed	Farmers	All Employed	Self-Employed
Personal care	8.43	9.04	8.80	100.0%	100.0%	100.0%	8.43	9.04	8.79
Eating & drinking	1.46	1.23	1.32	97.9%	95.2%	95.7%	1.49	1.29	1.38
Household activities	1.71	1.52	1.51	64.7%	72.2%	69.0%	2.64	2.10	2.19
Purchasing goods & services	0.62	0.77	0.66	29.7%	46.6%	43.0%	2.10	1.64	1.53
Caring for household members	0.30	0.54	0.60	20.8%	28.6%	29.1%	1.46	1.88	2.06
Caring for non-household members	0.24	0.22	0.23	11.3%	13.4%	13.5%	2.14	1.67	1.71
Working	6.79	5.74	6.30	80.9%	69.5%	79.1%	8.39	8.25	7.96
Working only	6.43	5.29	5.88	80.9%	69.4%	79.1%	8.00	7.62	7.43
Work travel	0.35	0.44	0.42	43.2%	59.5%	57.0%	0.82	0.75	0.75
Education	0.09	0.21	0.12	2.0%	5.3%	3.0%	4.58	4.02	4.07
Organizational, civic, religious	0.33	0.26	0.31	14.1%	11.8%	14.4%	2.38	2.20	2.15
Leisure & sports	3.70	4.20	3.88	90.4%	95.2%	93.6%	4.10	4.41	4.15
Telephone calls, mail, email	0.12	0.14	0.13	17.2%	21.9%	21.8%	0.68	0.63	0.61
Other	0.20	0.14	0.14	12.8%	11.0%	10.8%	1.54	1.28	1.34
Sample size	474	37,877	4,494						

Source: American Time Use Survey, 2003-06.

Table 4. Weekday and Weekend Time Use of Farmers/Ranchers, All Employed and Self-Employed Persons, 2003-06

	Weekday, Average hours per day			Weekend and Holidays, Average hours per day		
	Farmers	All Employed	Self-Employed	Farmers	All Employed	Self-Employed
Personal care	8.20	8.69	8.55	9.03	9.86	9.41
Eating & drinking	1.41	1.17	1.24	1.59	1.38	1.52
Household activities	1.69	1.24	1.27	1.75	2.18	2.14
Purchasing good & services	0.69	0.65	0.60	0.45	1.05	0.80
Caring for household members	0.32	0.56	0.62	0.25	0.49	0.55
Caring for non-household members	0.26	0.19	0.21	0.21	0.31	0.28
Working	7.59	7.31	7.64	4.69	2.01	2.80
Working only	7.16	6.75	7.12	4.55	1.86	2.62
Work travel	0.43	0.57	0.52	0.15	0.15	0.19
Education	0.10	0.25	0.14	0.05	0.12	0.08
Organizational, civic, religious	0.20	0.16	0.21	0.69	0.51	0.58
Leisure & sports	3.20	3.53	3.27	5.01	5.78	5.50
Telephone calls, mail, email	0.12	0.14	0.14	0.10	0.13	0.12
Other	0.20	0.13	0.12	0.18	0.17	0.21
Sample size	252	18,454	2,278	222	19,423	2,216

Source: American Time Use Survey, 2003-06.