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The Current State and Value of Farm Record Keeping

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The Current State and Value of Farm Record Keeping

by

Dana M. Marcellino and Christine A. Wilson*

Abstract

Despite the purported merits of good farm record keeping, and heavy investments made by some state Extension programs, little is known about the current state of farm financial records and the value farmers place on those records. Through the use of a survey, this study provides an overview of the current state of Midwestern farm financial records. This study also used a second price auction to determine the values farmers place on their financial records by eliciting the minimum amount farmers were willing to accept to give up their records. Survey results indicate that most farmers have a basic understanding of farm recordkeeping but do not practice more advanced accounting and financial techniques. The auction results indicate financial records are extremely valuable but exhibit wide diversity in valuations among farmers.

Key words: experimental auctions, farm financial records, value of financial information

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Introduction

For almost a century, agricultural economists have demonstrated the benefits of keeping financial records and have advocated sound accounting practices, e.g., Pond (1931) and Arnold (1931). Since 1914, Land Grant Universities have encouraged better farm record keeping by forming farm management associations. However, with the dwindling size of the farm population and increases in technology and in the education of farmers, many have questioned the value of using public resources to support farm record keeping programs. Indeed, today Cornell University, Kansas State University, the University of Illinois, and the University of Minnesota are among the very few that still maintain farm management associations with very detailed modern record keeping activities. The cost of such programs can exceed \$2.6 million per year, with state funds supporting roughly 17% and producer fees and dues supporting the other 83% (Funk 2006).

Nevertheless, evidence exists that the level of record keeping may be sub-optimal. For example, 57% of farm loan applicants in Kentucky did not keep separate records for their farm and household, and only a meager 3% use a computerized accounting system (Ibendahl, Isaacs, and Trimble, 2002). Another study found that 29% of New York dairy farmers never formulated financial budgets (Gloy and LaDue, 2003). A third of farmers report disliking record keeping or paperwork activities and find such tasks among the least favorite farm activities (Lasley and Agnitsch, 2002). While this literature suggests that recordkeeping practices among farmers may be deficient, more importantly, a lack of information exists on the current recordkeeping practices of farmers. Studies on farm recordkeeping habits are either outdated, do not include larger, more competitive farms, or are commodity specific. Current and more generalized research is needed on what financial records producers keep and how those records impact their decision making and this article provides such an overview on current recordkeeping practice.

Several studies have tried to connect farm profitability with recordkeeping practices to underscore the importance of farm records. The results from the studies are mixed and plagued with problems of endogeneity. Ford and Shonkwiler (1994) found that production practices were better than financial management indicators in predicting farm financial success. Mishra, El-Osta and Johnson (1999) and Mishra, El-Osta and Steele (1999) found some statistical evidence of a relationship between record keeping practices and farm profitability. Gloy, LaDue, and Youngblood (2002) found that farmers who focused on profitability goals attained higher profitability, but they acknowledged this might be attributed to farmers selecting goals in areas where they are already proficient. Gloy and LaDue (2003) found evidence that farmers who conducted detailed financial analyses were substantially more profitable than those who either did not perform calculations or who only performed them “in their head.” They also found that farmers who used investment analysis (e.g. payback period, discounted cash flow analysis, cash flow analysis) were substantially more profitable than other farmers. Jackson-Smith, Trechter, and Splett (2004) found a relatively weak link between deeper understanding of financial concepts and greater financial return.

Although the academic literature is replete with examples espousing the merits of farm record keeping and investigating the link between record keeping and financial performance, very little is known regarding the value farmers place on their financial information and the determinants of such value. Clearly, such information is needed as public institutions determine the quantity and

quality of resources to devote to encouraging and supporting maintenance of farm records.

Consequently, the objectives of this article are to: (a) determine the current state of recordkeeping practices of Midwestern farmers, and (b) quantify the value farmers place on their farm financial records. As production agriculture, agricultural economics departments, and Extension programs and services evolve, it is important to understand the current state and value of farm record keeping so that increasingly scarce public funds and other resources are appropriately allocated to programs and so that programs are appropriately designed and targeted so as to create value for our clientele.

Data and Methods

Data collection proceeded in three stages. Participants first completed a written survey, then participated in a willingness-to-accept auction to give up an endowed candy bar, and finally, bids in the non-hypothetical financial records auction were collected.

The survey collected information on the individuals, their farms, and their farm records. The survey consisted of the following: seven questions on record accuracy, six questions on key financial measures, three questions on time spent preparing and analyzing records, one question on the financial training received, one question on computer usage, and six background questions on farm size and personal demographics.

Because this research is interested in valuing a good, e.g., farm records, which is owned by the study participants in question, a 2nd price willingness to accept (WTA) auction was conducted. That is, we sought to measure the minimum amount of money that must be paid to a farmer such that he/she would be willing to permanently give up his/her financial records. Experimental auctions (EA) have become a popular method for non-market valuation. EA have been recently used in agricultural economics literature to determine consumer willingness to pay (WTP) for items ranging from genetically modified food labels (Huffman et al. 2003) to tenderness and flavor in steaks (Feuz et al. 2004) (see Lusk and Shogren for a general discussion on the methodology and a listing of over 100 studies that have utilized experimental auctions). The primary advantage of experimental auctions is that they are theoretically incentive compatible, meaning people have an incentive to truthfully reveal their value for the auctioned good. This is important because numerous studies have shown that hypothetical survey-type questions can lead to drastically over-stated valuations (e.g., see the Meta analysis in List and Gallet, 2001). EA also have the benefit of obtaining a valuation (or bid) from each subject making the modeling of determinants of WTP relatively uncomplicated given the continuous nature of the dependent variable (Lusk and Hudson 2004); in contrast, choice-based valuation methods require assumptions about the nature of the utility function and stochastic processes to determine valuations. Finally, it is important to recognize that for a good, like farm records, regular markets do not exist such that prices (and in turn values) can be inferred. EA's create *real* markets: people exchange real goods at real prices for real money. It may be true that the EA market is different in many respects than many traditional markets, but it is a real market nonetheless.

Of the available experimental auction mechanisms, the Vickrey second-price auction is perhaps the most widely used. The popularity of the second-price auction can be accredited to several of

its characteristics: it is demand revealing in theory, it is relatively easy to explain to participants, and it has an endogenous market-clearing price. In a second-price auction, competitors simultaneously submit sealed bids for a good. The individual with the lowest bid wins the auction and pays the second highest bid price (Vickrey 1961). The second-price auction provides the incentive for study participants to truly reveal their preferences as the auction separates individuals' bids from the market price. The market price (the 2nd highest bid) is separate from one's individual bid; consequently, there is no gain in strategic bidding. Shogren et al. (1994) state, "bidding less than one's true value only reduces the chance of winning at what would have been a profitable price, while bidding more than one's true value increases the chance of winning but at a price that exceeds one's value" (p. 1089).

Several preliminary focus groups and pre-tests were conducted to determine farmers' reactions to the auction mechanism and to determine how to characterize records which could vary greatly in terms of quantity and quality. It was learned that a non-trivial number of individuals were unwilling to bid to give up their records, a finding consistent with our theoretical reasoning. This led us to modify the auction format such that individuals could simply check a box on their bid-sheet indicating they did not want to participate in the auction.

Once respondents completed the survey, they read instructions for the second price candy bar auction. The candy bar auction was used to introduce the mechanism to participants so as to increase understanding. Each participant was endowed with a name brand candy bar and subjects bid, in a second price auction, to sell their candy bar back to the monitor. The lowest bidder won the auction and was paid the second lowest bid amount for their candy bar.

After the candy bar auction, participants were informed of the chance to sell their financial records in a second price auction similar to the one in which they had previously participated. The farmers then completed an inventory sheet identifying the type and quality of records they possessed. For example, subjects were asked whether they maintained a balance sheet, statement of cash flows, income statement, statement of owner's equity, checkbook register, and tax records. For each item listed, farmers were asked if they prepared the item listed, how many of the past five years have they prepared the item, and if the item's form was handwritten or electronic.

After the participants filled out the financial records inventory sheet, they were requested to decide on an amount, e.g., a bid, for which they were willing to sell all the documents listed on their inventory. Because the bid consists of the price at which participants were willing to sell several different types of financial information, the participants were asked to indicate, in percentage terms, the amount that reflected their value for the balance sheet, statement of cash flows, income statement, statement of owner's equity, checkbook register, and tax records.

Several key points were emphasized to the participants. Participants were informed that bids would be collected at several locations over the time period of several days. The lowest bidder across all locations would be contacted later to be informed of their winning. It was also stressed that the auction was not hypothetical; the winner would receive real money for his/her financial records. The instructions emphasized that the winner was expected to give all originals and copies of the records listed on their individual financial records inventory sheet. It was made clear that the farmer with the lowest bid would receive a cash amount equal to the overall second

lowest bid, but he/she would forfeit their records. A tax audit was the only exception to the winner of the auction regaining the right to view his/her records. As in the candy bar auction, it was explained, in detail, why the best strategy was to submit a bid exactly equal to the amount that would make the person indifferent between money and their records. It was explained that no bid was too small or too high. The participants were also told that if there was no amount of money they were willing to accept for their financial records, they could select that option on the bid sheet. An opt-out option was offered to discourage participants from writing down an artificially high bid price out of “protest” and to discourage participants from leaving the bid sheet blank.[†]

Participants in the study came from two main sources. First, 35 people were recruited from a “Top Farmer Crop Workshop” held at Purdue University; the audience was a group of large competitive, commercial producers. Participation in the experiment was part of an optional luncheon session. Second, 37 people were recruited by Purdue University Extension educators to attend one of five sessions in various regions of Indiana. An average of seven farmers came to each session, which took place at a local restaurant or at a county building. To encourage farmer participation, the farmers were given a free lunch for their participation.

Tables 1 and 2 provide summary statistics regarding the demographics of study participants. The data are broken down into our two general participant groups: the county Extension meetings and the Top Farmer Crop Workshop (TFCW) participants. The data are segregated because TFCW participants were *a priori* expected to be larger, more commercial farmers than average. Data indicate the TFCW participants had, on average, 1,500 more acres in crop production and were more likely to have achieved a higher level of education than county meeting farmers. Additionally, the vast majority of the study’s participants were male; 100% of the TFCW participants and 91% of the county meeting participants were male. Finally, the average ages of the TFCW participants and county meeting participants were 45 and 50 years, respectively.

Results

The Current State of Farm Records

The survey’s purpose was to discover the current record keeping practices of Midwestern farmers. The survey examined the average amount of time spent on records, the uses of the financial records, and the accuracy of the records kept. The survey also included questions on the type of financial management education that farmers have received and also how technology is used in recordkeeping practices. Finally, the financial inventory portion of the survey also determined what types of financial records were commonly kept by farmers. There were a total of 72 participants who participated in the survey, however not every participant wholly completed the survey. Consequently, some of the survey questions had less than 72 respondents.

General Recordkeeping Practices

[†] The survey, auction instructions, inventory sheet, and bid sheets are available from the authors on request.

The majority of the survey respondents were the primary record keeper for their farming operation, as shown in Table 3. Eighteen percent responded that someone other than a spouse, a hired accountant, or farm employee, or themselves kept records for their farming operation. When asked to specify what *Other* was, the majority replied some type of family member other than spouse or a business partner. Table 4 displays how much time the farmer or the primary record keeper spends each month preparing and editing farm records. Table 4 also displays how much time the respondent and other farm decision makers spend each month analyzing financial statements. Close to 75% of the farmers spend 0-10 or 10-20 hours a month preparing farm records. As a whole, the respondents spend more time preparing their records than they do analyzing them; 76% of the farmers spent under 10 hours a month analyzing their financial records.

The survey results provided insight on if the respondents used a cash or an accrual accounting system. Eighty-two percent of the farmers surveyed used cash instead of an accrual system. This result is not surprising as farmers file their income tax report on a cash basis. However, a few farmers were using an accrual based system. Although the respondents were asked to only list one type of accounting system, some farmers checked that they used a combination of a cash and accrual system (Table 5).

Accuracy of Financial Records

Part of the survey was dedicated to ascertaining the accuracy of the financial records kept by the respondent. Respondents were asked if they valued their assets on a cost basis, a market basis, or both ways. While market valuation is beneficial for a current wealth measurement, cost-basis is helpful for maintaining consistency among financial statements and measuring the farming operation's contribution to gains in net worth (Barry et al. 2000). The survey showed 78% of farmers either value their assets on a market basis or on a market and cost basis, but very few solely valued their assets on a cost basis (Table 6). Survey participants were also asked if they practiced the preferred recording keeping standards of keeping their farm and personal records separate and if they reconcile their bank statements with their farm records. The results indicate that the majority of the farmers (83% and 78%, respectively) did practice these superior recordkeeping habits (Table 7).

Finally, in attempt to ascertain the level of accuracy of the records kept by the surveyed farmer, a question was asked to determine if the respondent took an annual inventory of their farm so their records would accurately portray their current assets and liabilities. Table 8 indicates that the majority of the farmers did inventory their receivables, payables, unsold production, and purchased inputs. Several of the 71 responding participants completed an inventory on multiple items.

Financial Analysis

In addition to record accuracy, the survey also contained questions to determine the types of financial analyses that the respondents typically undertake. The farmers were asked how often they and their family members or business partners review financial information to evaluate the financial performance of their farm. Table 9 indicates that slightly more than 50 percent review their financial performance annually. Some of the 72 respondents of this question marked more than one answer option on the survey.

The farmers were also asked if they used the financial analysis tools of benchmarking and trend analysis. Eighty-two percent of the farmers did not use helpful benchmarking techniques to determine their farm financial performance (Table 10). The respondents were not specifically asked if they used benchmarking directly but rather if they formally compared their financial performance to farms similar to their own. This question construction might have some impact on the benchmarking response. A larger number of farmers did respond more positively to using trend analysis, as 53% used trend analysis to compare their current financial position to past performance.

The farmers were also asked what profitability measure they most often used to determine their farm's performance. While the survey asked the respondent to only check one measure, several farmers checked more than one profitability measurement. The question was designed to establish which profitability measure was most preferred by the farmer, but the results suggest some farmers measure profitability more than one way. Table 11 indicates that the majority of the farmers measured profitability by net farm income. As previously mentioned, most farmers use cash accounting; consequently, most farmers use net cash income as their main performance measure. A significant number of farmers did use the typically preferred return-on-assets or return-on-equity measures that allow for comparison of profitability of one farm to another farm. Accrual net farm income was also another popular performance measure. The survey found that 10% of farmers used their check book balance as their main profitability measure.

Technology and Education

Since several farmers are now keeping their financial records with the aide of a computer, questions about the role of technology and financial recordkeeping were included in the survey. Almost every farmer surveyed owned a computer. Eighty-seven percent of those who owned a computer also used their computer for financial recordkeeping. Recordkeeping, e-mail, and farm information gathering were popular uses for the computer, but farmers were more hesitant to use their computer for purchasing inputs (Table 12).

In the past decade, several accounting software packages have become available at reasonable prices. The types of software commonly used by farmers range from personal finance and small business accounting programs to farm-specific packages. Of the farmers surveyed, QuickBooks was a popular software (36%). Table 13 displays that 21% of the farmers selected the *Other* choice for a software package. When *Other* was specified, the *FarmWorks* software was a popular response.

In addition to technology questions, the survey participants were asked if they had received any specific farm financial training. Only 57 % (41 responses) of those surveyed had received some type of training. Twenty-eight of the 41 who had training received more than one type of

training or received training with differing focuses. The most frequent type of training was an Extension/University-sponsored workshop or a college class. Popular focuses of the training sessions were learning farm accounting software and measuring and analyzing financial performance (Table 14).

Uses of Financial Records

The survey asked the farmers how they use their farm financial records. Seven potential uses of their records were listed, and the farmers that used their records for a specific purpose also provided a 1-5 rating for that use with a “5” rating indicating a very important purpose. Table 15 shows the specific purposes and the farmer responses. With the exception of enterprise analysis, over 50% of the farmers used their financial records for each of the listed specified purposes. Logically, nearly every participant used their financial records for tax purposes, and taxes received the highest importance ratings. The average rating for each type of record use ranged from 4.02 to 4.87. The survey also specifically asked about the purposes of the respondents’ tax records (Table 16). As required by tax law, the majority of the respondents stored their tax returns in case of a tax audit by the Internal Revenue Service. Seventy percent of the respondents also used their tax returns to shift income and expenses from year to year to manage their taxable income.

Records Kept

The final portion of the survey asked the farmers what types of financial statements and records they annually keep. Ninety-seven percent of those surveyed at least kept tax records and possessed a checkbook register (Table 17). Over 80% of the respondents kept the financial statements of the balance sheet and the income statement, while the statement of cash flows and statements of owner’s equity were less commonplace.

Value of Farm Financial Information

Of the 72 participants in the study, 53 submitted bids and 18 people checked the box on the bid sheet indicating that there was no amount of money they would accept for their records, and 1 person did not complete their bid sheet. Two of the 72 participants did not fully complete their surveys and the bid sheet so their results were not included in the analysis. One completed bid was eliminated from the analysis as the bid was four times the next highest bid and was greater than the operation’s total fair market value for the size of operation indicated on the survey. Thus, a total of 69 bids (including the participants that checked the no-bid box) were included in the analysis. Of those individuals submitting bids, the range was from \$100 to \$2,500,000, with the average bid being \$145,657 and the median being \$25,575. Thus, the one result is that this sample of farmers placed a significant value on their records.

Table 18 reports the distribution of bid prices. Nearly 50% of the bids were in the bid range \$10,001 to \$100,000; roughly 33% were below \$10,000 and 17% were greater than \$100,000. In addition to these bids, another 18 people chose the no-bid option. There are several competing hypotheses regarding such behavior. For examples, it is possible: a) there was truly no amount

of money that they were willing to receive for their records, b) that such people did not understand the auction mechanism and were confused, c) people were “protesting” the auction perhaps not finding it credible, d) that their true valuations were so high they felt they had no chance of winning so they simply did not submit a bid, or e) that they simply did not want to participate.

Values by Record Type

A participant’s bid consists of their value for six potential types of records (balance sheet, statement of cash flows, income statement, statement of owner’s equity, checkbook register, and tax records). After submitting their bid, participants were asked to indicate, of the total bid amount, the percentage value attributable to each type of record. Specific values for an individual record type can be determined by multiplying the assigned percentage by the submitted bid price. Table 19 reports summary statistics for the specific values for the auctioned records.[‡] Table 19 indicates tax records were on average the most valued type of record, followed by the balance sheet. The checkbook register, cash flow statement, and statement of owner’s equity were on average the least valued types of records.

The assigned percentage weights of the individual records also provide insight on what records farmers value most. Fifteen of the 18 participants that did not submit a bid price provided percentage weights for their financial records (table 19). The percentage weights assigned by the no-bidders are in most cases similar to those provided by the participants that submitted a bid price. For both groups of participants, tax records were the most valued records percentage-wise, followed by the balance sheet, checkbook register, income statement, statement of cash flows, and the statement of owner’s equity, respectively.

Conclusions

The financial recordkeeping survey revealed that the majority of the farmers were recording basic financial information and practicing some fundamental recordkeeping habits, but most participants were not using more complicated accounting procedures or analyzing their records to their full potential. The survey results indicate this conclusion many times. Seventy-four percent of farmers spent less than 20 hours a month preparing their records and 90% of farmers spent less than 20 hours a month analyzing their records. The majority of the participants did reconcile their bank statements with their records, and they did keep their farm records separate from their personal finances. However, only a minority used accrual accounting and valued their assets on a cost basis. Another example of how the participants might not be using their records to their full capacity is how a participant measured farm income; 51% used net cash income and 10% used their checkbook balance. However, the participants were less likely to use the more accurate (but more complex) ROA or ROE. The same is true for financial statements, the majority of the participants formulated balance sheets and income statements but the participants were less likely to prepare the less common statement of owner’s equity and statement of cash flows.

[‡] Results include participants that assigned certain records a value of \$0 and presume that participants that did not prepare certain records also valued that specific record at \$0.

This result suggests that financial training targeted to farmers should not be elementary in nature but should build upon their basic financial recordkeeping knowledge. The training should encourage more accurate and precise recordkeeping and teach ways to better measure farm performance. It appears farmers understand net income, but they might not understand ROA or ROE. Likewise, farmers might understand the importance of completing an annual inventory but they do not understand how accrual accounting will benefit their farm. Similarly, farmers will perform a financial review once a year, but they likely do not understand the powerful analysis tools of benchmarking and trend analysis.

A surprising result of the survey was the high use of technology in recordkeeping. Ninety-six percent of the farmers own a computer, and 87% of the farmers used the computer for recordkeeping purposes. When the participants were asked if there was any type of specific Extension workshops they would like to see, often the only responses were that they would like to be able to better understand how to use their financial records software. While many farmers might have a software package they are using for their recordkeeping, they might not be using it to its full capacity, and further training could be warranted.

Another message from this study is that, for the sample of farmers considered, farm records were extremely valuable. On average, individuals bid \$145,657 to give up their farm financial records. Results also suggest wide diversity in valuations with bids ranging from \$100 to \$2,500,000, with close to 50% of bids in the range of \$10,000 to \$100,000. While the bids were wide in range, the majority were not for relative small amounts of money. The overall high nature of the bids submitted suggests that financial records are indeed very valuable to most farmers. While farm record keeping might not be a most preferable activity for a farmer, financial records are a vital part of the farm operation. The result that 25% of the participants refused to even submit a price for the sale of their records further suggests a high value to farmers. It appears most farmers have either heeded the words of agriculture educators or discovered for themselves the importance of financial information.

Financial record keeping is not a new concept that applies directly to field production practices or sophisticated technology which might keep it from being at the forefront of farmer conversations, agribusiness periodicals, Extension meetings, or even university research. While financial record keeping might not be agriculture's latest focus, it still has an important role in production agriculture as indicated by this study's results. Clearly, these findings provide important information for public institutions debating the allocation of resources to encouraging and supporting maintenance of farm records and to new research and training on ways to better record and analyze financial records.

Table 1. Summary Statistics of Participant Farm Acres by Commodity

	Corn	Soybeans	Wheat	Fruits/Veg.	Forage	Other	Total
<u>County Meetings</u>							
Mean	684	533	18	0	22	1	1,257
Median	500	350	0	0	0	0	950
Minimum	0	0	0	0	0	0	0
Maximum	3,200	2,300	200	2	300	25	4,800
Stand Dev.	743	561	43	0	58	4	1,221
Number of Participants	30	29	10	1	11	1	33
<u>TFCW</u>							
Mean	1,381	1,082	226	2	36	27	2,754
Median	1,100	925	0	0	0	0	2,293
Minimum	0	0	0	0	0	0	80
Maximum	3,500	3,000	1,300	60	400	837	7,500
Stand Dev.	1,041	879	425	10	89	144	2,023
Number of Participants	33	32	16	3	9	2	34

Table 2. Summary of Participant Education Levels

	High School Credit	High School Degree	College Credit	College Degree	Graduate Credit	Graduate Degree
<u>County Meetings</u>						
Responses	2	11	7	6	2	8
Percentages	6%	31%	20%	17%	6%	23%
<u>TFCW</u>						
Responses	0	1	8	14	5	6
Percentage	0%	3%	24%	41%	15%	18%

Table 3. Main Financial Record Keeper for the Farming Operation

	Responses	Percentage
Survey Respondent	45	63%
Spouse	11	15%
Hired Accountant	0	0%
Other Hired Farm Employee	3	4%
Other	13	18%
Total observations	72	100%

Table 4. Time Spent on Farm Financial Records

	Hours Per Month					
	0	0 to 10	10 to 20	20 to 30	30 to 40	over 40
<i>Preparing, Editing Records</i>						
Responses	1	29	23	7	4	7
Percentage	1%	41%	32%	10%	6%	10%
<i>Analyzing Records</i>						
Responses	2	51	11	6	0	1
Percentage	3%	72%	15%	8%	0%	1%

Table 5. Types of Accounting Systems Used

	Responses	Percentage
Cash Accounting	58	82%
Accrual Accounting	8	11%
Cash and Accrual	5	7%
Total Observations	71	100%

Table 6. Valuing Assets on a Cost or Market Basis

	Responses	Percentage
Cost Basis	16	22%
Market Basis	28	39%
Combination Cost & Market	28	39%
Total Observations	72	100%

Table 7. Recordkeeping Habits of the Respondents

	Yes	Percentage	No	Percentage
Farm and Personal Records Separate	60	83%	12	17%
Reconciliation of Banks Statements	56	78%	16	22%

Table 8. Inventory Practices of Respondents and Specific Inventories Taken

	Responses	Percentage
Complete an Annual Inventory	52	73%
Receivables	40	77%
Payables	41	79%
Unsold Production (crops, livestock, etc.)	52	100%
Purchased Feeds, Seeds, Fuel, and Supplies	43	83%

Table 9. Frequency of Financial Review

	Responses	Percentage
Never	5	7%
Monthly	14	19%
Quarterly	12	17%
Annually	37	51%
Before a Major Purchase	9	13%

Table 10. Financial Analysis Tools used by Respondents

	Yes	Percentage	No	Percentage
Benchmarking	13	18%	59	82%
Trend Analysis	38	53%	34	47%

Table 11. Common Measures of Financial Performance

	Responses	Percentage
Net Cash Income	36	51%
Return-on-Assets	14	20%
Return-on-Equity	18	26%
Check Book Balance	7	10%
Gross (Total) Cash Income	6	9%
Accrual Net Farm Income	15	21%

Table 12. Computer Ownership and Usage

	Responses	Percentage
Own a computer	69	96%
<u>Computer Functions</u>		
Personal Use	62	90%
Farm Communications (E-mail)	56	81%
Information Gathering	48	70%
Purchase Farm Inputs	23	33%
Farm Financial Recordkeeping	60	87%

Table 13. Commonly Used Financial Software

	Responses	Percentage
Quicken	12	20%
QuickBooks	21	36%
Microsoft product	5	8%
Other	21	36%
Number of Observations	59	

Table 14. Types and Focuses of Financial Training

Type of Training	Responses	Percentage
Extension/University workshop	24	59%
College Class	25	61%
Online Training	1	2%
Other	12	29%
Number of Observations	41	
<u>Focus of Training</u>		
Tax Preparation	18	44%
Farm Accounting Software	22	54%
Measuring and Analyzing Financial Performance	25	61%

Table 15. Uses and Importance of Financial Records

	Responses	Percentage	Mean Rating*
Tax Purposes	70	99%	4.87
Enterprise Analysis	44	62%	4.16
Secure Loans	58	82%	4.49
Evaluating Farm Performance	60	85%	4.19
Aide in Investment Decisions	51	72%	4.02
Help Prepare Future Budgets	51	72%	4.10
Aide in Capital Purchases	60	85%	4.13

*Rating scale: 1=not at all important, 2=somewhat unimportant, 3=neutral, 4=somewhat important, 5=very important.

Table 16. Uses of Tax Returns

	Response	Percentage
Store in case of tax audit	46	65%
Measure of taxable income to measure farm performance	26	37%
Manage taxable income (shift income and/or expenses from one tax year to another)	50	70%
Decide how much income to transfer into living expenses	13	18%

Table 17. Type of Statement and Records Kept

	Responses	Percentage
Balance Sheet	58	84%
Statement of Cash Flows	45	65%
Income Statement	55	80%
Statement of Owner's Equity	42	61%
Checkbook Register	67	97%
Tax Records	69	100%
Number of Observations	69	

Table 18. Bid Value Distribution

Bid Range	Frequency	Relative Percentage	Cumulative Percentage
\$0 - \$1,000	5	9.80%	9.80%
\$1,001 - \$10,000	12	23.53%	33.33%
\$10,001 - \$20,000	5	9.80%	43.14%
\$20,001 - \$40,000	5	9.80%	52.94%
\$40,001 - \$60,000	9	17.65%	70.59%
\$60,001 - \$80,000	1	1.96%	72.55%
\$80,001 - \$100,000	5	9.80%	82.35%
\$100,001 - \$500,000	5	9.80%	92.16%
\$500,001 - \$1,000,000	2	3.92%	96.08%
greater than \$1,000,000	2	3.92%	100.00%

Table 19. Values of Different Types of Financial Records

	Balance Sheet	Cash Flows	Income Statement	Owner's Equity	Checkbook Register	Tax Records
Mean	\$30,747	\$17,477	\$26,180	\$19,016	\$13,420	\$39,755
Median	\$7,500	\$1,575	\$4,500	\$1,000	\$1,875	\$5,000
Minimum	\$0	\$0	\$0	\$0	\$0	\$38
Maximum	\$500,000	\$500,000	\$500,000	\$500,000	\$300,000	\$700,000
Standard Deviation	488,906	\$70,418	\$82,179	\$474,847	\$43,273	\$120,295
Mean Percent	20.35%	10.44%	15.55%	7.40%	18.39%	30.10%
NSB ^a Mean Percent	27.86%	10.00%	14.62%	8.33%	17.86%	32.14%

^a Participants that marked the no submitted bid box.

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