

*The*

# Agricultural Education

June, 1984  
Volume 56  
Number 12

Magazine



## THEME SOEP: Recordkeeping

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Articles and photographs should be submitted to the Editor, Regional Editors, or Special Editors. Items to be considered for publication should be submitted at least 90 days prior to the date of issue intended for the article or photograph. All submissions will be acknowledged by the Editor. No items are returned unless accompanied by a written request. Articles should be typed, double-spaced, and include information about the author(s). Two copies of articles should be submitted. A recent photograph should accompany an article unless one is on file with the Editor.

**PUBLICATION INFORMATION**

THE AGRICULTURAL EDUCATION MAGAZINE (ISSN 0002-144X) is the monthly professional journal of agricultural education. The journal is published by THE AGRICULTURAL EDUCATION MAGAZINE, INC., and is printed at M & D Printing Co., 616 Second Street, Henry, IL 61537.

Second-class postage paid at Henry, IL 61537.

POSTMASTERS: Send Form 3579 to Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, Virginia 23111.

**SUBSCRIPTIONS**

Subscription prices for THE AGRICULTURAL EDUCATION MAGAZINE are \$7 per year. Foreign subscriptions are \$10 (U.S. Currency) per year for surface mail, and \$20 (U.S. Currency) airmail (except Canada). Student subscriptions in groups (one address) are \$4 for eight issues. Single copies and back issues less than ten years old are available at \$1 each. All back issues are available on microfilm from Xerox University Microfilms, 300 North Zeeb Road, Ann Arbor, MI 48106. In submitting subscriptions, designate new or renewal and address including ZIP code. Send all subscriptions and requests for hardcopy back issues to the Business Manager: Glenn A. Anderson, Business Manager, 1803 Rural Point Road, Mechanicsville, VA 23111.

**EDITOR'S PAGE**

**Records Teach and Help**

The renewed emphasis upon basics in education which has been encouraged by the numerous studies, such as THE NATION AT RISK, makes this issue of the MAGAZINE particularly timely. This emphasis upon the sciences and mathematics can actually aid our programs and students.



By LARRY E. MILLER, EDITOR  
(Dr. Miller is a Professor in the Department of Agricultural Education at The Ohio State University.)

**Teaching**

The quest to improve the understanding and abilities of students will eventually manifest itself in the revision of the curricula in the schools. How will this affect vocational agriculture? The goal of improving the thinking skills of students can help us examine what we teach and how we teach it.

Vocational agriculture has its base in the sciences because the production of food and fiber is based upon the sciences. We have real life examples of the phenomena of science which can provide for increased student understanding of the desired principles.

The problem solving processes utilized in teaching vocational agriculture provide unique strategies not only for teaching students appropriate thinking processes but for the application of scientific principles. Mathematical principles have the same applicability.

Recordkeeping provides a means of utilizing principles which aid in problem solving or decision making. The need for the records themselves are numerous and the articles in this issue highlight that need. The learning which results from the process of recordkeeping is worthy of note.

When decisions are made by the student which affect their financial well being or their level of competence related to a job, then the law of readiness as it relates to

learning should be at its ultimate. The steps involved in solving a problem as learned in vocational agriculture can be transferred to the SOEP and records. When these steps are followed time after time, the law of repetition is utilized which aids learning.

**Helping**

Just as records help a student make decisions during and following a project, the cumulative records of a department provide valuable information about the total program. The same analogy can be made at the state and national level. The summaries of the records are not required by some states or on a national basis.

These data should be collected even if they are not required by legislation or regulations. Political reasons alone would justify their collection. Data which describe the magnitude of the capital investment and income gained by students would be good evidence to provide to legislatures. A system should be re-established to produce these data. The benefits accruing from the recordkeeping efforts of students and teachers thus could aid the total profession.

**THEME**

**Recordkeeping: An Opportunity?**

Recordkeeping is sometimes viewed as a detailed, time-consuming chore. It is also viewed as a necessary evil which should be accomplished as painlessly as possible.

Have we been guilty of supporting such negative views of recordkeeping? Perhaps not intentionally, but have we supported such attitudes by our actions and the impressions we give our students? It is the contention of the authors of theme articles in this issue that SOEP recordkeeping is a positive aspect of our program. It offers one of our greatest opportunities to teach career-relevant knowledge, skills, and attitudes, and it should receive a strong emphasis in vocational agriculture.

**Reasons for Keeping Records**

There are many reasons why students, farmers, and



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agribusinesspersons should keep records. Some of the more important ones are:

1. Records are needed in completing applications for FFA awards and advanced degrees. The STUDENT HAND-

(Continued on Page 4)

## Recordkeeping: An Opportunity?

(Continued from Page 3)

BOOK (1977) states that "winners in the Proficiency Award Programs are selected on the basis of written applications based on records of the students' SOEP" (p. 83).

2. Records are required for filing income tax returns. In the 1983 *FARMER'S TAX GUIDE*, it is emphasized that "your books should contain all the information you need to figure your income, deductions, credits, and other items that you have to show on your income tax return" (p. 2).

3. Records are necessary to obtain credit. A financial statement (also called a net worth statement or balance sheet) is usually required as a part of every loan application. Some lending institutions also require an income statement (also called an operating statement or a profit and loss statement) and a cash-flow statement (also called a sources and uses of funds statement). A complete set of records is essential in preparing these statements.

4. Records are required in order to do a business analysis. Various physical and financial factors and ratios are developed and compared with previous years and with other businesses to measure progress and find ways for improvement.

5. Records are essential in short- and long-term planning. Although the future cannot be predicted with certainty, historical records provide the best indication available of the probable outcomes of a plan. After a plan has been implemented, records are necessary to determine the actual outcomes and provide a basis for making decisions about needed adjustments.

### Content of Theme Articles

Some of the most important aspects of SOEP recordkeeping have been addressed in the theme articles. The authors have provided useful and practical suggestions for dealing with numerous concerns. In some instances, the authors addressed recordkeeping in relation to SOE pro-

grams while in other instances, the topic was addressed in relation to farms, ranches, and agribusiness. The authors used what they felt was the most logical approach to cover the topics, recognizing that the principles covered for farms, ranches, and agribusinesses are equally applicable to students' SOE programs.

Since students may view recordkeeping negatively, a number of ideas are presented for motivating students to keep records. A virtual revolution is underway today in the area of microcomputers. The use of microcomputers in recordkeeping is discussed in detail in one article and is included in most of the other articles. Although we tend to think of recordkeeping only for ownership SOEP's, its importance is also stressed for placement SOEP's.

The articles address the kinds of records to keep and how to use them in relation to the reasons for recordkeeping presented above. The topics addressed are preparing award applications, income tax management, securing financing, improving crop and livestock production, and budgeting. The responsibility of teacher educators in training teachers in recordkeeping is discussed and a strong case is made for including SOEP recordkeeping in the preservice training for teachers.

### Concluding Statement

After reading the theme articles, I hope you will view recordkeeping as an opportunity, not a problem. It is an opportunity to teach our students how to use record information in problem solving situations. It is also an opportunity to assist our students in becoming computer literate in our field. What better way can we prepare our students for success in what Naisbitt (1984) has called the information society.

#### References

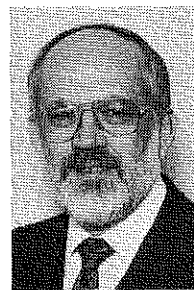
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## THEME

# Preparing Winning Award Applications

Completing an application form can be a frightening and disheartening experience without the proper understanding and detailed records. Consider your own frame of mind if you were to sit down on the evening of April 14 to complete your income tax form if you have no income or expense records, nor ever had the opportunity to read the form. It would not be a pleasant experience. To prevent your students from undergoing such an unpleasant experience, we suggest that the entire recordkeeping aspect of the SOE program and the Proficiency Award Program be made a part of the instructional program.

For students to effectively complete an application form, they must know what the requirements are far enough in advance to allow sufficient time to develop and implement a plan to achieve what is required on the application form.



By ROBERT SEEFELDT AND CHLENE LEGRIED

(Editor's Note: Mr. Seefeldt is an FFA Program Specialist and Ms. Legried is an FFA Staff Intern, National FFA Center, Alexandria, Virginia 22309.)

## Teaching Strategy

So, where do we begin? Since the basic ingredient of a winning application is a comprehensive SOE program that is supported by detailed records, it appears that the best place to begin is with the incoming freshmen students. We suggest that a unit of study be conducted with all freshmen students shortly after school starts in the fall to cover the following:

1. Planning and developing an SOE program.
2. Basic recordkeeping principles.

The best way to help students plan an SOE program is to have them make as many of the decisions as possible. To begin this process, use Chapter II, "To be an FFA Member," from the *STUDENT HANDBOOK*, followed by a review of the various FFA degree requirements. Through this unit of study each student is made aware of what SOE is and some of the immediate and long-term benefits that can be obtained from a well planned SOE program. Using this method, each step is not only a small nonthreatening thing, but it is forcing each student to begin making decisions that require an SOE program and records. Now is the time to introduce recordkeeping.

Since for most students recordkeeping can be a boring and uninteresting topic, it is best to introduce the principles of basic recordkeeping in small doses and in terms that can be readily understood by a beginning student. In order to keep records on their SOE programs, students will need a working knowledge of the following:

1. Why recordkeeping is necessary.
2. How to take an inventory.
3. How to keep daily enterprise expense and income records.
4. How to figure depreciation.

Now that each student has an appreciation for and a general knowledge of recordkeeping, it is important that they be given an opportunity to use their new skill in a learning situation. This can best be accomplished by using the canned problem approach. The canned problem method allows each student to make daily entries into a practice record book from a written instructional problem. Using the following format, students will become fully acquainted with the recordbook that will be used with their SOE program as well as to utilize the teacher's time most effectively:



For students to effectively complete an application form, they must know the requirements far in advance.

1. Have each student transfer information into the recordbook by making short assignments each week. (Probably, two months' records at a time would be a large enough dose.)
2. The day that the assignments are due, use a portion of the scheduled class time to review, grade and make necessary corrections.
  - a. Make transparencies of each page of the recordbook with the correct entries so that students can correct their own or their peers' homework.
  - b. After the homework has been graded, have students make the necessary corrections in their book.
  - c. Follow this procedure until all entries have been made into the practice recordbook.

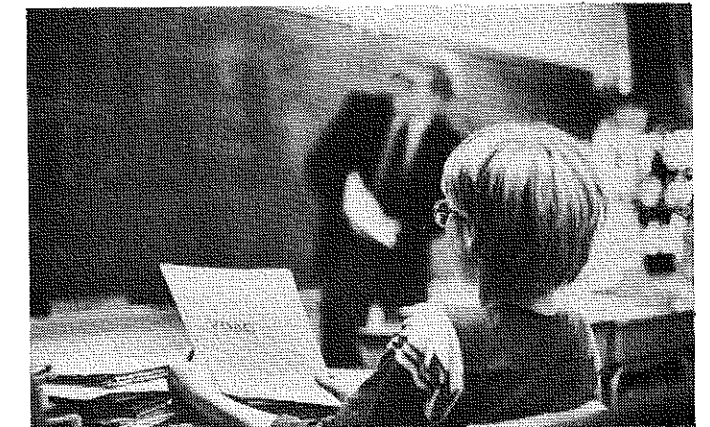
All of the materials needed to conduct this unit with the National FFA Recordbook are available for purchase from the National FFA Supply Service. With minor adaptations, these canned problems can be used with any state adopted recordbook.

Assuming that all of the above described preliminaries can be taken care of by Christmas vacation, those students whose SOE programs should logically start on January 1 should be ready to go. Others should be started at the appropriate time.

SOE programs will not continue on their own. Instructors will need to schedule class time to be used with students' SOE programs. A suggested schedule may be:

1. The first several months allow a set amount of class time to be used in short segments to assist and provide encouragement.
2. Use a portion of the class time on the last Friday of each month to bring records up-to-date and do an accuracy check.
3. During the summer months, schedule at least one home visit per student to observe progress being made, answer questions and discuss merits of the SOE program with the parents.
4. Use several class periods at the end of the year to:
  - a. Close out the past year and set up the next year's records.

(Continued on Page 6)



The best place to begin an award-winning application is with the incoming freshman students — planning and developing SOE programs and learning basic recordkeeping principles.



## Preparing Winning Award Applications

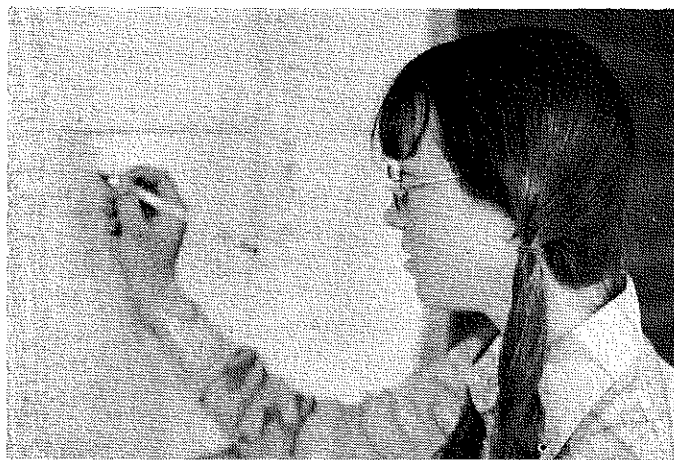
(Continued from Page 5)

- b. Analyze results by determining efficiency factors and discussing management practices used and develop goals for next year.
5. Transfer the results from the past year's records to the appropriate proficiency and/or degree application form.

### Completing the Application

Completing an application is not difficult when the basic information requested is available. The trick is to use the information in a way that best describes the student's program. After all, once the application leaves the local level, the only things that will be known about the program will be what has been put on the application. Before beginning to complete an application, all students need to consider the following:

1. Before you begin, read all the instructions.
2. Complete the application as of January 1 of the year in which the award is sought. No achievements accomplished or inventory acquired after this date should be included.
3. Neatly complete the application. A cluttered application is not as impressive as one which has effectively used white space.
4. Record an activity only once. Place it where it appears to apply the best.
5. Always use the latest revised forms.
6. Check with your State FFA Office to determine when and where the applications are due. Each state may have a different submission date to the next level of competition.
7. Carry the records for the first year of SOE programs from the date of entering school through December 31 of the following or sophomore year in most states; thereafter, closing each year's record on December 31. If different in your state, indicate the dates you use in the "Record Year" column.
8. Type the final copy of the application.



Have students transfer information into the recordbook through weekly assignments using the "canned" problem method.

9. Be sure the application has all the required signatures.
10. Place the application in an FFA award application folder. Larger application holders such as photo albums are bulky and difficult to handle.
11. Prepare two copies of the application. Send one to the next level of competition and place the other in your chapter file as a permanent record.

### Application Danger Zones

Unrealistic and inaccurate information can prevent many excellent programs from receiving the recognition they deserve. Obviously, unrealistic or inaccurate information readily makes the entire application suspect. Some areas of the application have a tendency to point out unrealistic or inaccurate information. Several areas that students need to be especially careful about are:

1. **No clear explanation of where money was received to purchase items listed in the inventory.** If the applicant's investment exceeds the total earnings, it is important to explain in the section titled "list gifts and/or inheritance which are reflected in your present net worth" from where the additional investment came.
2. **Unrealistic or inaccurate scope of enterprise for the SOE program.** For example, the total number of head of livestock on hand as of December 31 of the last year covered by the application can not be greater than the total number of different head owned during the year. The number in the ending inventory can always be less because some way have been sold, butchered, given away, or died, but never more.
3. **Unrealistic explanation of how total investment was obtained.** Claiming a 33 percent share of family machinery for helping to repair it and then valuing it at \$18,000 is unrealistic. This is an unrealistic amount when compared to the wage one would normally receive for repairing machinery. If the machinery ownership was actually transferred to the student, it more appropriately should be listed as a gift.



This class is using the last Friday of the month to bring SOE records up to date.

4. **Unrealistic enterprise returns caused when the value of feed, equipment and other supplies that were available on the home farm and used by the applicant in exchange for labor, but did not appear as part of the total expenses.** The value of all items, cash and noncash, used with a particular enterprise must be included as a part of the total expenses. In addition to charging all noncash items as an expense for the enterprise for which such items were used, the same value of these items must also either be recorded as "other earned income" or "income other than earnings." By following this procedure the student's net worth during the years covered by the application will never be greater than the total source of all income received.
5. **Unrealistic reporting of applicant's responsibilities.** One example would be farming 180 acres of land, raising 200 head of cattle, 80 feeder pigs and attending a college on a full-time basis living away from home. The student in this case needs to explain the arrangements that were made to take care of the program while away at school.
6. **Failure of the program to show growth over the years covered by the application.**
7. **Failure of the December 31 inventory for one year to be exactly the same as the beginning inventory for the following year.**
8. **Distortion of income and/or expense items of inventory by increasing the value without something physically happening to cause the increase.**
  - a. A purchased calf will increase in value due to growth.
  - b. A piece of machinery will only increase in value if renovated or repaired and the useful life extended.
  - c. A piece of land will increase in value only if improvements have been made such as fencing, terracing, or adding topsoil.
9. **Increasing the net worth during the years covered by the application more than the total income obtained from the following:**
  - a. Income generated by that portion of the SOE program being used to apply for recognition.
  - b. All other earned income generated by the SOE program.
  - c. All other non-SOE program earned income.
  - d. The value of gifts and inheritance.

### Showing Your Achievements With Photos

Many accomplishments may best be pointed out through the use of photos. Although photographs count only 5 percent of the total possible points, they can be instrumental in telling the story of the project. Quality of livestock, scope of inventory, number of awards and ribbons won, etc. can best be conveyed through photos. Photos can add impact to the application; that is, if they are good photos. Like the old saying, "A picture is worth a thousand words."

However, before selecting a photo and writing a caption

the applicant needs to determine how best a certain photograph can strengthen the application. Before choosing photos ask these questions:

1. What are the strengths of the completed written application?
2. What are the weaknesses of the completed written application?
3. What additional information is available about the project but is not requested in the written application form?
4. Can the application best be improved by using photos to enhance weaker aspects or photos that will complement the strengths of the application?

After deciding what you want to accomplish with the photos and captions, select photos that show the applicant's involvement, depict safety practices and tell a story.

### Taking the Photo

1. Hold the camera steady and gently squeeze the shutter release for clear, sharp pictures. Camera movement creates fuzzy pictures.
2. Keep the camera lens clean. Lint creates misty looking pictures.
3. Make sure you have the proper lighting. Refer to the film instructions for exposure recommendations.
4. Choose camera angle carefully for dramatic pictures.
5. Have only one center of interest for each picture. Watch out for cluttered backgrounds and try to eliminate distracting elements.
6. Move in close to your subject when possible. Close-up pictures have more impact than distant ones.
7. Take more than one shot of the same activity to provide a selection.
8. Have the subject dressed reasonably in clean clothing and when possible have the subject identified with the FFA. However, do not have the student wearing an FFA jacket in an inappropriate setting.

### Mounting the Photo

Photos that are properly mounted and which have appropriate captions will add much to the application. It is advisable to use a photograph mounting cement which is moisture-resistant, which means the cement will not stain the prints. (Rubber cement or pastes that contain water or penetrating solvents may stain the prints or cause them to wrinkle.) Be sure to center the pictures and mount them on construction paper or other paper of the same weight and quality. Neatness is a key to quality applications.

### Writing the Caption

Use the 50 words allotted for captions to effectively show knowledge about the project and additional information not requested in the written application form. Always use meaningful, measurable and factual words.

Finally, have a person who does not know the project review the photo and captions for technical knowledge and specific skills or management practices applied.

# Improving Crop and Livestock Production Through Better Records

The basis of all farm operations is some kind of crop and/or livestock production. High efficiency in the production of both of these is necessary for high profit for the overall farm operation. Table 1 shows that profit per acre goes up and cost per unit of production goes down as yields increase. This relationship between yields, costs and profits is true of all agricultural production.

Table 1

Estimated Costs and Returns per Acre for Rotational Corn, 1983 Indiana Data

Item	Costs and returns	
	115 bushels	140 bushels
Yield	115 bushels	140 bushels
Price per bushel	\$ 3.40	\$ 3.40
Gross value	\$391.00	\$476.00
Total direct costs	\$133.95	\$160.30
Total indirect costs except labor & management	\$174.90	\$189.00
Total cost	\$308.85	\$349.30
Returns to labor and management	\$ 82.15	\$126.70
Cost per bushel to produce	\$ 2.69	\$ 2.50

How can farmers tell when they are making a profit with a certain enterprise? How can they determine what is limiting production? How can they tell if they are making progress from year to year? The basic pattern needed is as follows:

1. They need to know what factors may limit profitability in their enterprises.
2. They need to set realistic goals in regards to each of these factors.
3. They need to set up a recordkeeping system to evaluate the goals they have selected.
4. They need to analyze their records and to use these records as a basis for making desirable changes within their operations.

## Factors Affecting Profitability

It is difficult to give specific factors for all crops and livestock. Table 1 shows that yield per acre is a very important factor on all crops. Returns per dollars worth of feed fed is one of the best general indicators of profitability in all livestock. It is difficult to obtain on farms where several kinds of livestock are kept. Detailed enterprise accounts are needed to get a meaningful figure.

Swine will be used in this section and the next as an example. Some profitability factors for swine are:

### Reproduction and Sow Productivity

- Conception rate (sows settled in a certain length of time)
- Number of pigs farrowed
- Milking ability (litter size at 21 days)
- Number of pigs weaned per litter



By WILLIAM G. McVAY  
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### Feedlot Performance

- Growth rate (average daily gain or days to 230 pounds)
- Feed conversion (pounds of feed per pound of gain)

### Carcass Traits

- Loin eye area
- Carcass length
- Back fat depth
- Percent lean
- Meat color, marbling, and quality

### Soundness

- Underline — number, spacing
- Feet and legs
- Absence of genetic abnormalities

### Conformation Type

- Body depth and width
- Skeleton size
- Muscle size and shape

### Setting Goals

Hog producers need to keep several factors in mind in setting production goals for their herds. The first question to ask is what effect will a particular factor have on the profitability of my herd? If farmers are selling hogs on live weight alone, soundness and sow productivity would affect their profits more than carcass merits. A farmer selling on the new percent lean basis would be more concerned about carcass traits.

Another factor to consider is heritability. Is a factor the result of genetics or management? In general, reproductive factors have low heritability, feedlot performance is medium and carcass traits are high. In other words, we can change reproduction easier by management rather than by buying a boar with such traits. But regardless of how the change will occur, farmers need to know what is limiting their production. Farmers will need to set their own goals on the factors they feel are most important to them.

## The Recordkeeping System

There is available a large amount of materials in this area: books, software, and programs. Each producer needs to see which system will most nearly meet his or her needs as outlined.

I would like to suggest two programs that have real possibilities in the swine industry. The Sow Production Index was developed by Ohio State University. It is a method to identify superior, borderline and poor performance of females in the herd. It is a tool to use to check upon pigs farrowed, 21 day litter size and pigs weaned per litter. It puts all this data into an index figure. The American Yorkshire Club and most extension services have systems like this. All do an excellent job in measuring reproduction efficiency.

The National Pork Producers Council has developed a system entitled "Procedures to Evaluate Market Hog Performance." This system uses visual soundness score, feedlot performance, and carcass data to arrive at the final value for an animal. This system will give the producer the pounds of lean pork produced per day of age. As will be noted, this system incorporates several of the profitability factors discussed earlier. It has real merit for the progressive minded pork producer.

### Evaluation of Record Findings

Records are of no value in themselves. Records are only valuable if they are used to make desirable changes within the operations. Records can only indicate the problem; they can not solve the problem. In using records, two points of view should be considered. Farmers need to compare their results to other similar farms within the area or state. Professional managers have always said if farmers want to be successful, they must be above average in the important profitability factors. The 1982 record summary for Indiana's Purdue Record keepers is shown in Table 2.

Table 2  
Comparisons of Profitability Factors for Large Hog Farms for Purdue Record Keepers 1982<sup>a</sup>

Item	Average of all producers	Most profitable third	Least profitable third
Pigs weaned per litter	7.8	8.1	7.4
Returns per dollars worth of feed fed	\$2.31	\$2.44	\$2.12

<sup>a</sup>"EC250, 1982 Farm Business Summary," Cooperative Extension Service, Purdue University.

Swine producers could use such data to determine how they stand with their contemporaries.

Another evaluation farmers need to make in looking at their records is to see how they compare with themselves over time. Table 3 shows some profitability factors for a dairy farm in the Whitko School area. By looking at such data, this dairy farmer can see that this general trend over the last three years has been improvement.

Table 3  
Comparison of Farmer A's Records over the Last Three Years

Item	1980	1981	1982
Average number of dairy cows	40	37	38
Milk receipts per cow	\$1,602	\$1,908	\$1,931
Pounds of 4 percent milk per cow	13,390	14,955	15,320
Returns per dollars worth of feed fed	\$1.76	\$1.59	\$1.84

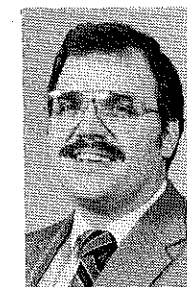
In summary, farm profits are related to crop and livestock production efficiency. Farmers need to be above average in the important profitability factors for their enterprises. The only way they can tell if they are above average is to keep good records. They then need to use these records to make desirable changes within their operations. We, as agriculture teachers, need to teach and assist farmers as they go through the processes outlined in this article.

# Training Teachers in Recordkeeping

Instruction in recordkeeping is one of the most important parts of the vocational agriculture program. Records and records instruction are both a necessary and integral part of each of the three components of vocational agriculture; namely the classwork, FFA, and SOE program. A teacher cannot be successful without doing a good job in records instruction since it affects all areas of the program.

### Records/Classroom

Records instruction should be initiated early in the first year and should coincide with the establishment of the SOE program. Each vocational agriculture class offered should contain records instruction, starting with receipts and expenses, and then following with inventories, depreciation, financial statements, and profit and loss statements. Also included in recordkeeping in vocational



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agriculture are FFA leadership records and records relating to awards.

A class period is often set aside for records updating and grading on a periodic basis. Records instruction is an integral part of classroom instruction in all vocational agriculture classes. Records should be graded regularly and



## Training Teachers in Recordkeeping

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be a part of each student's quarterly grade. Records are also a part of instruction in production and agribusiness, post secondary programs and adult education programs. A vocational agriculture teacher needs to be prepared to teach both ownership and placement records in the classroom on all of these levels.

### Records/FFA

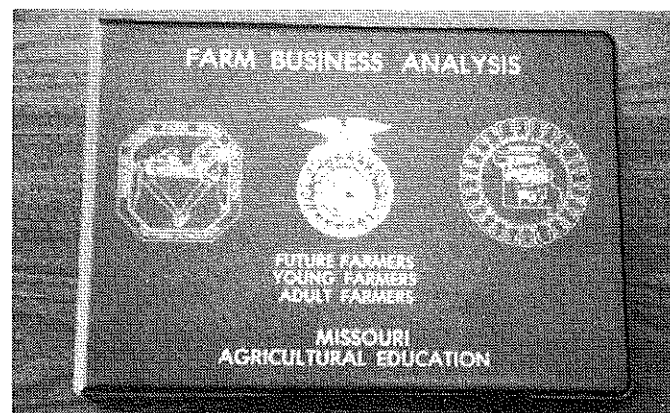
Through the channels of advancement by degrees and awards, records become an important and integral part of the recognition phase of the FFA organization on all levels. All FFA membership degrees include requirements relating to the SOE program which includes good records, whether for ownership or placement programs.

Records also relate to various FFA awards. Proficiency awards are based on records of achievement in the various SOE area. FFA awards are also given to Missouri students competing for the best beginning record book and best completed record book, both in the ownership and placement records categories. For students to be able to achieve degrees and awards, they must have accurate and defensible records for all years in vocational agriculture.

### Records/SOEP

Records relate directly to SOE programs, whether ownership or placement. The reason we spend so much time and energy on records in vocational agriculture is that it has been recognized that most vocational agriculture students are preparing for entrepreneurial occupations. Records are a must for any business, whether a farm or a farm supply store.

It is just as important for students to learn skills in recordkeeping as it is for them to learn production skills in growing crops and caring for livestock. Thus, the SOEP/records partnership is a key spoke in the vocational agriculture wheel. Tax reporting, credit planning, financial analysis, and production enterprise analysis are all necessary outcomes of a records system for vocational agriculture students. Good records should become the basis for decision making within the SOE program. Records checking should be a part of each SOEP visit an instructor makes to the farm or placement site.



The Missouri Farm Business Analysis Record Book was developed in 1974 for statewide use in both high school and adult vocational agriculture programs. At present, over 3,000 copies of the record book are sold each year.

## Teacher Training Responsibility

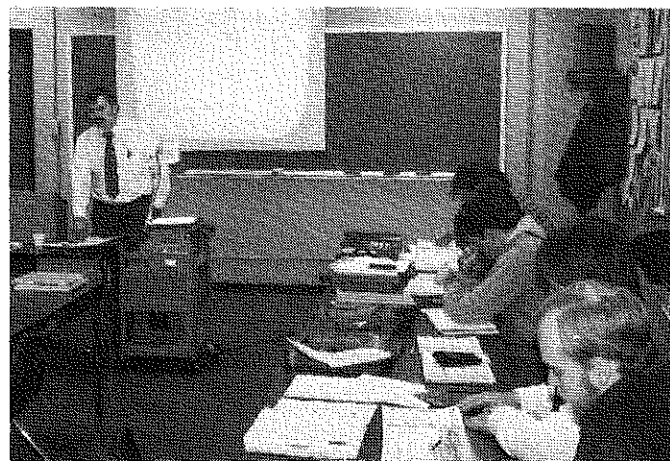
When recognizing the important position that records training holds in all areas of the program, it is apparent that the teacher education institutions have an important responsibility in seeing that both present and future teachers of vocational agriculture are adequately prepared to teach records. As I reflect on my first several years as a vocational agriculture teacher, I can remember many frustrations and problems in helping students keep good records. I had been through the vocational agriculture program in high school and received good records instruction in conjunction with my own SOE program.

My recordkeeping instruction in the university was limited to a small segment of a general farm management course in agricultural economics. I am sure we spent some time in discussion of records in the agricultural education classes, but in-depth instruction in recordkeeping was not offered. At the time, most persons preparing to be vocational agriculture teachers were a lot like me, coming from the farm and having a regular vocational agriculture experience to fall back on as they began their teaching experience. Consequently, we learned as we taught.

Since that time, more and more teachers of vocational agriculture are coming from nontraditional programs and many are lacking a personal background in vocational agriculture. In addition, the vocational agriculture program itself has become more diverse in its offerings in terms of types of SOEP, thus creating problems in getting teachers prepared in records instruction. The teacher education programs must respond to these increased needs of both present and future teachers by making sure they have minimum competencies in recordkeeping when they go out into the teaching world.

How does the teacher education institution fulfill its responsibilities in outfitting teachers with adequate skills in recordkeeping? There are four steps that must be completed:

1. Determine present status of recordkeeping skills among the students. One of the real problems in training teachers in records is that they vary in their present skill levels. Depending on the course requirements before student teaching, there is often a great difference in the records skills of student teachers when they come to the block semester. Some of them will have had a good deal of



Students in Rohrbach's class complete two sets of sample records, one for ownership and one for placement.



This bookshelf at the Boonslick Area Vocational-Technical School, Boonville, Missouri, shows that the students' record books are shelved right alongside their class notebooks.

coursework relating to recordkeeping along with considerable personal experience while others may not have kept any records themselves and have little or no related coursework.

It is also common that the recordkeeping experiences of students is with different recordkeeping systems and even though any complete records system contains the same components as others, familiarization and procedures with any one system must be learned even though basic records theories and concepts are understood. It behooves the teacher educator to determine the skill levels of the students and meld their skills and levels of experience together so that they will all walk out the door with at least similar minimum competencies.

2. Necessary recordkeeping competencies must be identified. The teachers need to have a clear understanding of the importance of records in their vocational agriculture programs and the competencies they will need to acquire in order to be adequately prepared to teach. These competencies should then be taught in teacher education classes, whether preservice or in-service, in much the same manner as they will be taught in the secondary, post secondary and adult vocational agriculture programs.

3. Teach the students a recordkeeping system. The students must be able to keep records in an acceptable records system. A complete year's sample entries should be recorded and the record book should be started and completed just as it would be by a secondary, post secondary, or adult student. This should be done for both ownership and placement records, since nearly all teachers will be involved with both in the field. This records instruction should include instruction on receipts and expenses, inventories, depreciation, financial statement, profit and loss statement, cash flow, enterprise records, and FFA participation records. The main goal here is that the teachers are able to keep good records using the state's adopted system so they can do an adequate job with their own students and not penalize them in terms of awards and degrees by having inadequate records.

4. Teach the students how to teach records. As we work with teachers and future teachers in records instruction, we need to concern ourselves with more than just recordkeeping skills. The teacher educator should serve as a role



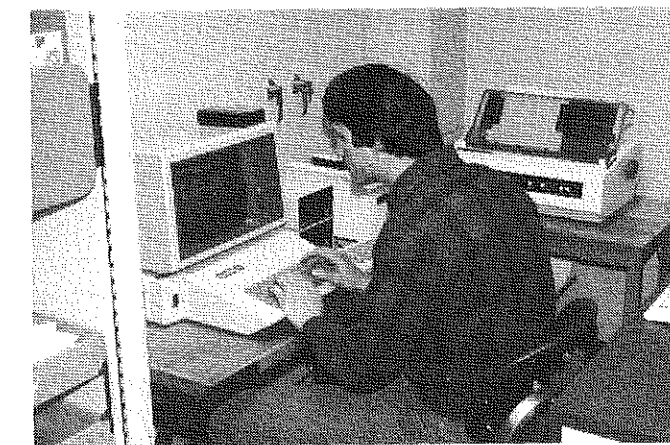
This student at Boonslick AVTS uses the vocational agriculture laboratory room during a free period to get caught up on his record book.

model in teaching records. Teaching techniques and procedures should be demonstrated. Teachers' records should be graded by the teacher educator in that same manner as the teachers should grade records, both on a daily basis and a quarterly basis.

Considerable time should be spent in helping students identify when and what records instruction will take place in each vocational agriculture class. Timeliness is important in terms of getting records started and completed for reports and award applications. The students need to have a feel for how records instruction will fit into all levels of their programs. It is important to help students identify when an ownership system should be kept, when a placement system should be kept, and how to handle students with both placement and ownership SOE programs.

If a teacher education institution can accomplish the above tasks, then a fair amount of time is being spent in preparing teachers in recordkeeping. There are so many things we would like to do in the small amount of time that we have that it is difficult to do it all. During the past 10 years or so, great progress has been made in SOE records training. I know that this is true in Missouri and would like to describe how records training is taking place in our state.

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Students should be introduced to recordkeeping on the microcomputer as they prepare for teaching vocational agriculture.

## Training Teachers in Recordkeeping

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### The Missouri System

Prior to 1974, a dual system of recordkeeping was in use in vocational agriculture departments in Missouri. In many departments, freshmen and sophomores kept records with one system and were then converted to another system as they became juniors and seniors.

In 1974, the Research Coordinating Unit of the Department of Elementary and Secondary Education funded a project to develop a coordinated recordkeeping system for all levels of vocational agriculture instruction. The Missouri **Farm Business Analysis** record book was the result of the project. It is now used by nearly all of the secondary vocational agriculture students as well as a large number of adult farmers throughout the state. It has been widely accepted as an outstanding recordkeeping system.

The philosophy has been established that high school students will learn a recordkeeping system that they can stay with after they graduate. When the record book was first introduced, in-service workshops were held in each of the 13 areas of the state in order to prepare teachers in using the system. Since that time, in-service workshops and classes have been utilized to update teachers periodically with changes and new information.

The student teachers are introduced each semester to the record book in a two credit hour class entitled F-307 — The Teaching of Agricultural Management. Approximately one-third of the course is devoted to records instruction. The student teachers complete exercises in both the ownership and placement record books and end up with a model book that they can use as they begin teaching. Time is also spent in how records instruction for adults is managed, both in class and on the farm.

Graduate classes in farm business management analysis are taught each year for vocational agriculture teachers planning to work with records instruction for adult farmers.

SOE records have become much improved in Missouri since the development of a statewide recordkeeping system and a course on agricultural management that all students must take in order to be certified to teach. In addition, all proficiency award and state farmer degree applications are accompanied by the student's record books in order to verify the applications.

### What About the Future?

Microcomputer seems to be the magic word. We in Missouri are experimenting with microcomputers and recordkeeping programs and are looking for a program that will fill the same type of need as the Missouri **Farm Business Analysis** record book has fulfilled. A number of teachers are already helping students keep their records on the microcomputer and many more are in the wings. As a statewide microcomputer recordkeeping system evolves, we in teacher training will have a responsibility to make sure our student teachers get the preservice experience and that teachers in the field get adequate inservice training in using the system and making it relevant to the vocational agriculture program.

Good SOE programs are the key to successful vocational agriculture programs. Records are a necessary part of all SOE programs. Therefore, we as teacher educators must recognize the importance of providing training in recordkeeping for teachers and teacher trainees and spend adequate time and resources to make certain that the job gets done.

the students. Therefore, the teacher must personally believe in records and be committed to teaching recordkeeping with zeal and enthusiasm.

The personal attitude of the teacher will be reflected by the attitudes of the students. Teachers must sell themselves on recordkeeping before they can persuasively convince others of their value. If the teacher has the right attitude and enthusiasm about recordkeeping, the mechanics for teaching it becomes much easier. With a few incentives and continual emphasis on the value of records, students will view records as an essential, not a necessary evil.

There are several things that teachers can do to stress recordkeeping. Of course, the obvious is periodically to grade student record books. However, this should not be taken lightly. A periodic grading of student record books does not mean that they are graded twice a year. To keep a good tab on the books of students, they must be graded at least every six weeks, preferably every month if possible.

A thorough checking of record books is essential. Each time a record book is reviewed, it gives the instructor an opportunity indirectly to visit the SOE program of the student. You should be able to accurately check the progress of a student's program, and analyze production expenses and incomes if it happens to be a production enterprise. It offers an opportunity to spot management errors and make suggestions for improving management techniques. Take plenty of time to review each book and do not hesitate to make several comments. By just placing a grade in the back of the record book does not tell the student how thoroughly you have reviewed his or her book.

After record books have been checked it is just as important to review the books with the students. This offers a great opportunity for individualized instruction on recordkeeping. Even better, review the record book when making the SOE visit.

Record books can be reviewed in a group or classroom situation. In this case major problems can be pointed out and recordkeeping problems can be discussed with student feedback. Do not be afraid to allocate class time to teaching and reviewing principles of recordkeeping. Some teachers designate one or two days per month for student recordkeeping. Again, this is proof to the students that you as a teacher take recordkeeping very seriously.

Students like to talk about their SOE programs. Use this to reinforce the recordkeeping concept. I have students give oral reports on the progress of their SOE programs and give summaries of their SOE records. After each report classmates can comment on the report and give suggestions for improving management and/or recordkeeping. I feel that this is time well spent in promoting recordkeeping practices and SOE programs. No student enjoys talking about weak programs and skimpy, inaccurate records.

Teacher visits for SOE programs and instruction on recordkeeping means a lot to students, and makes classroom instruction more effective. Like most all other vocational agriculture teachers, I feel this is one of my weak areas. However, I do like to stay in touch with students' SOE programs and visit as much as possible. Visits do tie recordkeeping and SOE programs together. Students like to show off their projects and want the personal interest that the vocational agriculture teacher can provide. Relating recordkeeping to SOE is much easier when the teachers know the students and their programs.

### Motivating

To stress accuracy in recordkeeping, microcomputers offer a big motivation. With a few budgets, students can quickly learn how small errors can lead to big mistakes. By changing a few variables in a budget students can see the impact that small changes can have. A microcomputer makes recordkeeping and record analysis more tantalizing for students. It also gives more dimension to analyzing records and underlines the importance of accurate records.

There are several other techniques which can be used to provide more motivation for students. Numerous contests and awards can be based on the record book, or can relate to the record book rather strongly. Our chapter annually recognizes the student who maintains the most accurate and complete record book at our parent-member banquet. An engraved pen and pencil set is given to the winner, and an additional cash award is planned for this year's winner. When students complete proficiency award applications, only information in the record book is allowed on the application. Students learn quickly that good recordkeeping practices and competitive proficiency applications go hand-in-hand. Cash prizes are also given for chapter proficiency award and star award winners on the chapter level. The cash prize for these awards stimulates students to improve SOE programs and improve their recordkeeping practices.

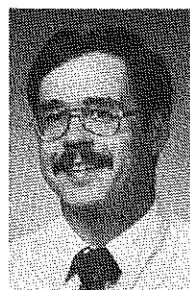
If your FFA chapter has an animal chain or a member loan program, then the record book can be a valuable teaching tool and a selection tool. Before placing any animal with a member, we evaluate the recordkeeping practices of the student. The chapter loan program which we have established requires the student applicant to submit a list of SOE projects, current records, and a financial statement from his or her record book. This presents a real life situation for students to encounter and puts practicality into recordkeeping. For students to accept recordkeeping and to concentrate on keeping accurate records, they must see how recordkeeping is essential to vocational agriculture.

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## THEME

# Motivating Students for Recordkeeping

Recordkeeping is perhaps one of the more difficult topics for a vocational agriculture teacher to teach. It can be a very dry and boring experience for the teacher and the students. Recordkeeping can also be very complicated and involved if taught in a thorough fashion. Consequently, it is very difficult to motivate students to become interested in recordkeeping. For these reasons and others, recordkeeping has been slighted in the classroom and many students have not received the instruction they need on the topic. Also, SOE records and recordkeeping practices have fallen short of their expectations. Students may like having SOE programs and enjoy the learning experience associated with their programs yet they may despise records and any form of a record book. What can be done to put more emphasis on recordkeeping and generate student interest in the topic?

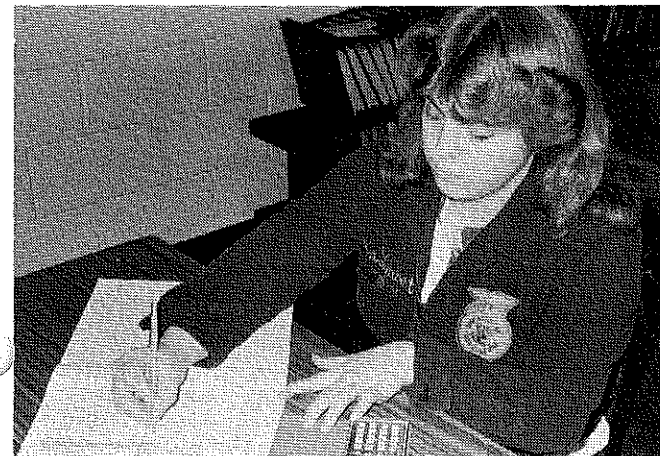


BY MARTIN AUVILLE

(Editor's Note: Mr. Auville is a Vocational Agriculture Instructor at Ft. Defiance High School, Ft. Defiance, Virginia 24437.)

### Emphasis

The essential element for improving recordkeeping among students begins with the teacher and his or her attitude towards recordkeeping. If the teacher does not believe in the value of good accurate records, neither will



Teachers should allocate class time to teaching recordkeeping.



## Motivating Students for Recordkeeping

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One last means of motivation which I will mention centers around student grades. Since this is a less desirable means of motivation, I saved it for last, yet I realize that it may be effective in some cases. By placing an important grade on the student's SOE program and recordkeeping, it does motivate some to improve by some other means. They need to see value in learning recordkeeping practices and want to become proficient at recordkeeping. Grading strongly on recordkeeping also reinforces the teacher commitment to promoting good recordkeeping. Some students enjoy records and will take full advantage of this grading procedure to make very good grades in this area.

### Summary

In summary, it should be realized that there is no magic

to motivating students when it comes to recordkeeping. No one single activity is the answer. A combination of activities which complement each other and reinforce the value of recordkeeping is what makes it work. In correct perspective, recordkeeping ties classroom instruction, SOE, and FFA activities together. In many cases, motivation is not the problem, it is the attitude which needs the improvement. With proper teacher and student attitudes and activities to reinforce the value of recordkeeping skills, recordkeeping can be an asset instead of a liability for any vocational agriculture department.

### The Cover

Recordkeeping is entering a new age that can greatly ease the labors of maintaining and analyzing the supervised experience program. (Photograph courtesy of Mike Mulder.)

## THEME

# Budgets: Look Great on Paper, But . . .

How many times have we heard that statement — usually finished with a variation of “. . . they never work out the way they're supposed to”? The number of times is probably in direct proportion to the number of times that we have introduced the word “budget” into our vocational agriculture teaching programs. Whether we work with FFA members and their SOE programs, young farmers, or adult farmers, all of whom are the same people — just at different stages of career development with different SOE programs — we need to emphasize that budgets are management tools. As management tools, they may be just as important as a tractor in a long-term farming operation.

### A Budget

Before we get too far along, let's define the term “budget.” A budget is nothing more than a plan for the use of a commodity (usually money) — how much are we going to have available and how are we going to spend it. When we add the time factor (when does it happen?) to our budget we have a “cash flow” statement. Since the two terms are so closely related, they are often used interchangeably (no doubt, they will be used interchangeably in this article).

We generally classify farm budgets as either “enterprise” or “whole farm” budgets. The enterprise budget will let us know how profitable each enterprise in the farming operation (i.e., SOE program) will be. When we combine all of the enterprise budgets, we have a plan of projected income and expense for the whole farm for the year (or other time period). Obviously, if the individual enterprise budgets are not correct, the whole farm budget will not be correct. It should also be noted that budgets and cash flows need to be prepared, reviewed, and updated at times other than when the farmer goes to talk to the banker (lending institution).



By GARY SANDE

(Editor's Note: Mr. Sande is a Vocational Agriculture Instructor at St. Charles High School, St. Charles, Minnesota 55972.)

### Why Don't Budgets Work?

Let us take a look at some of the reasons why our farmers (students) have so much difficulty in preparing budgets and cash flows that work.

1. Farmers prepare a budget only to satisfy the banker — until they get the loan — but have little or no intention of following the plan or even looking at it until it is time to renew the loan. An example of this type of farmer is the one who (a) applies for a crop or livestock operating loan, (b) receives the loan, (c) feels so good about having the money available that he or she stops by the truck dealer on the way home, and (d) uses the loan money to trade for a new four-wheel drive pickup. Question: Could this be the reason that the new PCA office buildings are being constructed out in the country — miles away from the truck dealerships? Question: How many of the farmers in your area having forced auctions have been guilty of this practice?
2. Farmers tend to over-estimate their crop yields. In addition to being “eternal optimists,” many feel that they are at least as good as if not better farmers than their neighbors. “If the neighbor says

he or she gets 130 bushels of corn per acre, then I ought to get at least 145 bushels per acre.” In addition, many estimate their wet yields when in actuality they sell on a dry basis.

3. Farmers tend to over-estimate their livestock production, gains, and feeding efficiencies. This generally results from the following factors: (a) they do not consider the runts, culls, and bottom-enders and the effect they have on the herd's production average, (b) they do not consider death loss and the amount of feed and expenses the “goners” incur before dying, (c) they do not consider the waste and spoilage of feed (while it may not be fair to charge this loss against the livestock enterprises, it is still feed that must either be replaced or is not available for sale), and (d) they use magazine article gains and efficiencies, not considering that very few articles are going to be written about the average farmer. How many articles are written about the farmer with a hog finishing operation with a feed conversion efficiency (FCE) rate of 3.76 lbs. and average daily gain (ADG) of 1.21 lbs., or a beef feedlot operation with an ADG of 1.62 lbs.? The above numbers, which do take into account the previously listed factors, are the averages from actual farms in the Southeast Minnesota Adult Farm Management Program in 1982. Are most farmers going to prepare a budget based on those numbers, or are they going to use an FCE of 3.0 lbs., ADG of 1.8 lbs. for hogs and ADG of 3.0 lbs. for beef?
4. Farm families underestimate how much they spend for household and personal living expenses. From the 1982 Southeast Minnesota report, the average farm family of four spent \$20,504 for personal and family living expenses. This total includes less than \$820 for personal automobile expenses (that's 4,100 miles at \$.20/mile), less than \$1,200 for housing expenses, and less than \$1,500 for all personal taxes (federal and state income, self-employment or social security, and household share of real estate taxes).
5. Farmers, in preparing enterprise budgets, value their crops and feeds produced at high market prices, but charge the feeds against the livestock enterprises at the cash cost of production. This practice produces unrealistic predictions of high profits, profits that show up only on paper!
6. Farmers are too optimistic about the prices they will receive, especially if the price is not locked in with a forward contract or hedge. It seems that the more financial difficulty a farmer is in, the more optimistic he or she is about the prices commodities will bring (at least when preparing budgets).
7. Farmers do not follow a marketing plan that fits in with their budgets and cash flows. Motivated by the desire to sell at the top of the market, they do not sell their products according to their cash flow plans. Admittedly, many farmers who store their crops do receive a higher price than they would have received by selling direct at harvest. Does the higher price offset the risk, insect damage,

spoilage, and lost interest? By lost interest, I am referring to the interest that could have been earned if the crop had been sold and the money either deposited in an account to draw interest or used to pay off outstanding loans. Then loans which usually carry quite high interest rates. Livestock producers who hold their market animals past ideal market weight just because the price is rising must also ask themselves the same question. Besides losing interest, risking disease and death losses, they are also suffering from less efficient and more costly gains, and risk being docked for overweights. Add to this the fact that they are adding to the poundage supply of the commodity — a situation that will cause prices to drop — and when to they usually drop? Prices plummet just as the farmer is finally ready to sell.

### What About the Banker?

The banker or lender is also partly responsible for the farmer's attitude towards budgets and cash flows. Let us ask a few questions about the bankers who are making farm loans:

1. Does the banker realize the management value of good records, budgets, and cash flows, and place proper emphasis on them in loan determination? Or, are they regarded only as a formality with loan determinations based strictly on the net worth statement?
2. Does the banker require that a marketing plan be developed, that prices and profits be locked in, etc.?
3. Does the banker do follow-up work to monitor how closely the budgets and marketing plans are being followed?
4. Does the banker require last year's income tax returns and farm analysis report to check the validity of figures used in budgets and cash flow projections?

### Where Do We Fit In?

Too often, farmers regard lenders as being adversaries to their farming operations. They feel the budgets, cash flows, etc. that must be filled out in order to obtain loans are, at best, nothing more than time-consuming nuisances. We, as educators working closely with the farmers, sometimes take our role as farmer advocate too seriously. We lose our objectivity, over-sympathize with the farmers, and merely reinforce their thinking rather than trying to change their attitudes. We would like to see farmers we are working with obtain the loan as much as the farmers themselves do. If the original budget or cash flow that is prepared does not work out to a point where we figure a lender would go along with a loan, do we go back to look for places to make changes in the management of the operation, or do we go back and look for places to make adjustments in the numbers that were put in the budget?

The introduction of the microcomputer into our schools and vocational agriculture departments has made it much easier for us to be guilty of adjusting the numbers. No, I am not against using the computer for preparing budgets, cash flows, etc. In fact, I have been demonstrating the use

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## Budgets: Look Great on Paper, But . . .

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of computers for farm management applications for the last three years. We must, however, keep the job of the computer in the correct perspective. It can only handle the information that is provided. If we feed in prejudiced or incorrect information or assumptions, we cannot expect the results to be realistic and useful.

All of the previously mentioned problems with setting up budgets and cash flows can be eliminated or reduced if we have a good set of farm or SOEP records to work from. These records need to include more than just cash income and cash expense as required by the IRS. The income, expenses, feed fed, etc. must be allocated to the various enterprises on the farm including the household as a separate enterprise. The records also need to be analyzed to determine which of the farm enterprises contribute the most to the overall farm profit and which enterprises may be losing propositions year after year.

Is it reasonable to expect a lender to support financially a perennially losing enterprise? A regular analysis will also show trends that are developing in the farm operation and let farmers know if they are progressing toward the farm and family goals. Do we insist that our farmers (students) keep accurate records, including all household and financial information, that they have the records analyzed, and that they make use of the analysis reports?

The farmers who does not have a complete and accurate

set of records and analysis of the farm (whole farm and enterprise) is at a definite disadvantage when it comes to completing a budget. This farmer must rely on university and farm management group averages and estimates for numbers to put down on the budget sheets. I have nothing against these averages, and make frequent references to them. I realize that they use assumptions and generalizations that may not be at all applicable to the individual farmer's situation.

The budget should also include income taxes as a part of the expense category. We need to educate farmers to the fact that there is nothing wrong with paying income taxes! In fact, the only farmers who pay income taxes are those who are showing a profit. Too often, farmers make management decisions designed to avoid taxes when they should be making decisions that will result in the greatest after-tax profit.

### Does It Hurt?

No, it has not been my intention to only criticize, but rather to call attention to some practices and attitudes that need to be changed. These changes must be made to enable farmers, lenders, and educators — working in honest and open cooperation — to take advantage of the potential that budgets have as management tools.

I fully realize that not every farmer, banker, and vocational agriculture instructor makes the mistakes and errors mentioned in this article. But . . . if the shoe (yes, the one with the stone in it) happens to fit . . . OUCH!

## THEME

# Securing Financing Based on Records

The past several months have caused many serious questions to arise concerning the economic conditions of the agricultural community. These questions are especially serious for those directly involved in the financing and production of agricultural products. These difficult economic conditions have been, and promise to continue to be, the elements that will bring new approaches to our problems in agricultural production and financing.

To look at the present and future of securing financing, we should look at a few important factors. These factors are: (a) the objectives associated with the financing, both the farmer's and the lender's, (b) the type of financing available and the information appropriate for receiving that financing, and (c) the sources of reliable information to give a basis to our decision making process.

Without objectives there is no direction or progress, and without progress there will be a dissatisfied financial institution and an unhappy farmer. These objectives of the borrower and lender may or may not be similar, depending on the situation. It is probably safe to assume that profitability and risk are common concerns for both par-



By MICHAEL A. MULDER

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ties. A farmer may also consider quality of life, income security, building equity, and the health and welfare of the family as important factors associated with setting objectives. The lender may be interested in building a strong loan portfolio which minimizes risk for the institution, in serving the needs of the community, and in meeting the requirements of the governing bodies of the institution. Objectives are important and both parties should understand the concerns of the other so that common goals can be established.

## Loan Categories

The next important factor is the type of financing available and the information appropriate for securing that financing. First, we should look at the broad categories of loans and their uses:

- Operating loans** are used primarily for financing the normal production costs of an operation and should be kept current. Special feeder livestock loans will also fall into this category.
- Intermediate-term loans** are used to finance capital purchases with a repayment schedule of between 1 and 7 years or, in some cases, as high as 10 years. Intermediate debt is most commonly used to finance the machinery and equipment purchases.
- Long-term loans** are used in virtually all situations to finance real estate purchases.

What I believe to be appropriate information for these types of loans is shown in Table 1. The following paragraphs will describe these tools for gathering information.

Table 1  
Information Aids for Loan Analysis

Loan type	Net worth	Enterprise budgets	Business flows	Transitional inc. proj.	Long term inc. proj.
Operating loans	X	X	X	-	-
Intermediate-term loans	X	-	X	X	-
Long-term loans	X	-	-	X	X

It is generally agreed that all financial decisions should begin with a close look at the net worth position of the borrower (see Table 2). It is important to know exactly where a farmer stands before taking on any new risks. The balance sheet should be used to evaluate liquidity, solvency, and risk with the help of ratios such as the current and intermediate ratios, the debt to equity ratio, and cost measures like the debt service per acre and fixed interest expense per year.

The enterprise budgets (e.g., crop and livestock budgets) are a grassroots look at an investment. They can be very misleading though, if oversimplified you can visualize the farmer that can budget every enterprise in his/her operation and show that each enterprise is profitable. In reality, this farm may be losing money because costs like family living, taxes, debt repayment, and other related operating expenses are being forgotten.

## Flows

The next decision aids listed are the business flows. I include two flows in this category: a cash flow (see Table 3) and a production flow. The monthly cash flow has become a common tool for farmers in the past several years and it is a good tool for determining operating loan needs far in advance. This enables farmers to structure sales and purchases so that they are compatible with the limits of the cash flow.

The production flow is similar to the cash flow in that it shows the inflow and outflow on a monthly basis, but the production flow reflects farm production. The bottom line on a production flow should tell us on a periodic basis the livestock and crops produced, bought, sold, fed, and in-

ventoried. So not only will the farmer have a better feeling for where cash flows may be heading, but the lender will feel more confidence in the projected assets inventoried on the farm. The objective of both of these flows is that the borrower and the lender know where the business is heading. Combining the use of cash and production flows will help accomplish this.

The final two categories are most similar to what we in the past have called pro-forma income statements. I have created two categories for the income statement. The first is a 1 to 7 year budget that looks at specific predictable events that will affect the financial position of the farm. The second is less complex and makes broader assumptions as to the future of the business. The critical assumption here is that the next 1 to 7 years are more predictable, and a projection can be finer tuned to look at each specific year. In a long-range projection you really don't know what machinery will be replaced in a specific year, but you have a relatively good idea of the dollars needed yearly for capital replacement.

To be a useful tool though, we should again go beyond recording just dollars and include our projected production. This budget may then be better named a whole-farm budget (see Table 4 for summary report of a whole-farm budget). It is a budget which encompasses the entire operation from bushels of corn fed per pig to the pounds of milk

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Table 2

Financial Statement for: Joe Sample Date: 12/10/83

	Current Market Values	Tax Basis Values	Current Market Values	Tax Basis Values
<b>Current Assets:</b>				
Cash & Savings	0		Accounts Payable	0
Accts Rec.	0		Personal	0
Crop Inv.	1,825		Notes	0
Feeder Lvstk.	8,453		Chattel/ECC	79,779
Supplies	0		Real Estate	7,953
<b>Total Current -&gt;</b>	<b>10,278</b>	<b>10,278</b>	<b>Total Current -&gt;</b>	<b>87,733</b>
<b>Intermediate Assets:</b>				
Breeding Lvstk	8,500		Notes	0
Auto & Truck	3,600	3,600	Chattel/ECC	0
Mach. & Equip.	80,000	75,000	Accounts Payable	0
Life Insurance (Cash Value)	6,777		Personal	0
Securities	0			
H.H. & Pers.	1,200			
<b>Total Intera. -&gt;</b>	<b>100,077</b>	<b>95,077</b>	<b>Total Intera. -&gt;</b>	<b>0</b>
<b>Long Term Assets:</b>				
Bldgs & Tile.	0	0	Real Estate Debt	81,259
Farm Real Est.	300,000	79,840	<b>Total Fixed Liab. -&gt;</b>	<b>81,259</b>
<b>Total Fixed -&gt;</b>	<b>300,000</b>	<b>79,840</b>	<b>Total Liabilities -&gt;</b>	<b>168,992</b>
<b>Total Assets -&gt;</b>	<b>410,355</b>	<b>185,195</b>	<b>Net Worth -&gt;</b>	<b>241,363</b>
			<b>Flt Liab. &amp; H.W. -&gt;</b>	<b>410,355</b>
			<b>Interest Liability -&gt;</b>	<b>6,213</b>

- Number of Dependents
- Insurance on Crops
- Buildings
- Mach., Equip., & Lvstk.
- Age
- Physical Condition
- Have you been involved in bankruptcy? Yes \_\_\_ No \_\_\_
- Are any suits pending against you? Yes \_\_\_ No \_\_\_

The foregoing statement is submitted for the purpose of obtaining credit. It is true and correct in every detail and fairly shows the financial condition of the applicant(s) at the time indicated. The applicant(s) will promptly notify the bank of any subsequent substantial change in such financial condition. The bank is authorized to retain this financial statement, whether or not the credit requested is approved, and to check the credit of the applicant(s) or any other information contained herein.

\*Any willful misrepresentation of this statement could result in a fine and/or imprisonment under provisions of the U.S. Criminal Code, 18 U.S.C. 1014.

Date \_\_\_\_\_ Applicant Signature \_\_\_\_\_  
Date \_\_\_\_\_ Co-Applicant's Signature \_\_\_\_\_  
(where applicable)

## Securing Financing Based on Records

(Continued from Page 17)

per cow. To be accurate in our projections we must be using these numbers at some point in the planning process, so we could just as well be recording our assumptions so that they can be evaluated as we accumulate more information.

Table 3													
CASH FLOW SUMMARY													
NAME: Joe Sample DATE: 5													
CASH INCOME	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTAL
1. Reg. Cash Balance	1000	5316	88	1341	883	8876	54716	31847	47135	45545	57777	1454	1000
18. Cash From Savings													
2. Feeder Pigs					2812	2829	3134	0	2773	2884	3192	0	17425
3. Finished Hogs	13200	13200	13200	14256	18533	18533	18049	24735	18470	18418	17972	27240	218527
4. Sows & Billis	900	900	900	900	900	900	900	900	900	900	900	900	10800
5. Beans			360			360							720
6. Corn Sales													
7. Soybean Sales					21000	45500							66500
10. Capital Sales													
11. Custom Work Income													
12. Co-op Cash Dividend													
13. Misc. Farm Income													
14. Non-Farm Cash In													
13. Other Money Borrowed													
14. Borrowed Money-In. 62			8000		8500								24500
15. ....													
<b>16. Total Cash Income</b>	<b>15100</b>	<b>27416</b>	<b>14588</b>	<b>24977</b>	<b>44128</b>	<b>76979</b>	<b>78920</b>	<b>59683</b>	<b>69278</b>	<b>67748</b>	<b>87842</b>	<b>29394</b>	<b>339172</b>
<b>CASH EXPENSE</b>													
17. Livest. Bght for Resale													
19. Veterinary	796	796	792	875	883	883	883	885	885	885	885	885	10334
20. Misc. Livestock Exp.	397	397	394	477	480	480	480	482	482	482	482	482	5516
21. Feed Purchased	5537	5537	5485	6385	5648	5542	5590	6640	5745	5708	5656	6640	70453
22. Fertilizer													
23. Crop Chemicals													
24. Seeds & Plants													
25. Other Crop Expense													
26. Custom Work Hired													
29. Mach. Rep. & Oper. Livestk	200	200	200	200	200	200	200	200	200	200	200	200	2400
31. A.E. Repair & Upkeep													
32. Gas, Fuel & Oil	175	175	175	175	300	300	300	300	400	175	600	175	3450
29. Mach. Rep. & Oper. Drops													
33. Auto & Truck Expense													
34. Labor Hired	302	302	302	302	305	305	305	305	305	305	305	305	3650
38. Taxes - R.E.													
37. Rent				13000									39000
31. General Farm Expense	100	100	100	100	100	100	100	100	100	100	100	100	1200
35. Insurance				500									3000
36. Utilities	115	115	115	115	115	115	115	115	115	115	115	115	1380
37. ....													
38. Interest, Not A.D.L.													
40. Interest from In. A.D.L.	163	206	244	284	222	57	0	0	0	0	43	43	1262
41. Total Cash Expense	7784	7828	8306	22114	8252	8701	7973	7048	10233	7971	34388	8946	141644
41a. Surplus or Def. (-)	7316	19188	6282	26863	38876	62166	68847	50635	59045	57777	53454	20628	197528
<b>CAPITAL PURCHASES-CASH ONLY</b>													
42. Breeding Hogs			900			1000							1900
43. Machinery & Equipment		2500			5000								7500
44. Livestock Equipment			1000					1500					2500
44. Bldgs. & Improvements													
46. Total Capital Purch.	0	2500	1900	0	5000	1000	0	1500	0	0	0	0	11900
46a. Surplus or Def. (-)	7316	17688	4341	2883	30876	67216	68847	49135	57045	57777	53454	20628	185628
<b>OTHER</b>													
47. Non-Farm Capital Pur.													
50. Family Living	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	24000
48. Non-Farm Investments													
49. Income, S.E. & S.S. Tax		15000											15000
51. Addition to Savings													
52. Min. Checking Balance													
53. Total Other Cash Used	2000	17000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	39000
53a. Surplus or Def. (-)	5316	88	2341	883	8876	65216	68847	47135	57045	57777	51454	18628	146628
<b>DEBT PAYMENTS</b>													
54. FSB Real Estate							35000				35000		70000
55. CCC R.E. Payment								1500			1500		1800
56. FSB Non-R.E. Pymts.								10000			15000		25000
57. Other Non-Real Estate													
58. A.D.L. Payments-In 64	0	0	1000	0	20000	18500	0	0	0	0	0	0	8000
59. Total Debt Payment	0	0	1000	0	20000	18500	0	11500	0	0	50000	8000	136000
59a. Surplus or Def. (-)	5316	88	1341	883	8876	54716	31847	47135	45545	57777	1454	10628	10628
<b>PROJECTED ANNUAL OPERATING LOAN (A.D.L.)</b>													
60. Beg. A.D.L. Balance	15000	15000	23000	22000	30500	10500	0	0	0	0	0	0	8000
61. Ending A.D.L. Balance	15000	23000	22000	30500	10500	0	0	0	0	0	0	0	8000
62. A.D.L. Borrowing				8500									24500
63. A.D.L. Interest Paid	163	206	244	284	222	57	0	0	0	0	43	43	1262
64. A.D.L. Repayment			1000		20000	18500							39500
65. Ending Cash Balance	5316	88	1341	883	8876	54716	31847	47135	45545	57777	1454	10628	10628
65a. Min. Checking Balance													
66. Beg. Savings Balance	0	0	0	0	0	0	0	0	0	0	0	0	0
67. Balance in Savings	0	0	0	0	0	0	0	0	0	0	0	0	0
68. Enter A.D.L. 1 Int. (-)	13.00												

Table 4  
Whole-Farm Budget Summary Report

Livestock Work Units	797	Crops Produced	455,622	Net Cash Farm	
Crop Work Units	653	Change in Inventory (14,130)		Income	188,638
		Crops Fed to		Depreciation	34,500
Total Work Units	1450	Livestock	100,503	*Farm Profit (Loss)	154,138
Estimated Labor Hrs.	14496	Net Value of Crop		*Accrued Profit (Loss)	148,833
Total Tillable Acres	1352	Sales	369,249	Capital Purchases	65,000
Livestock Sales	311,203	Crop Sales + Livestock		Principal Pymts. Due	105,524
Livestock Purchased	6,798	Margin	673,654	Family Living	66,500
Margin	304,405	Direct Livestock Exp.	118,419		
		Direct Crop Exp.	185,744		
		Net Allocated Exp.	8,950	& S.E. Tax	
		Livestock	10,700	*Net Cash Flow	(48,386)
		Crops	5,850	*Adjusted Cash Flow	(53,691)
		Interest Expense	155,354	*Change in Net Worth	82,333

### Using Records

And this leads me to the final area that exists in this approach to securing financing. This area is the use of farm records which is the cornerstone for any goal setting as well as for developing even the simplest financial projections. Without some historical data and analysis, projections are only someone's best guess. Notice that I refer to both historical data and analysis. Records are only good for filing taxes if they are not analyzed. Unfortunately, analysis requires more comprehensive information. But without analysis, determining past performance can be little more than measuring past earnings. These measures are not useful when the time comes to determine whether to expand the dairy herd or buy more cropland. To make these decisions, it is necessary to have enterprise records that show efficiencies, trends, risk, and an overall return for the investment.

According to one definition, analysis is a method of resolving complex problems into simpler or more basic ones. In farm production you cannot correct a problem if you do not realize a problem exists and you cannot determine where problems lie if you do not analyze and use your historical records of performance. The intensity and complexity of farming today will not allow farmers to sit back and let things happen instead of taking charge and making things happen.

### The Future

When looking at the future of financing, we should try to evaluate the future tools needed to secure that financing. I do not believe the tools described here are new ideas. But the ability to make use of these tools is very new. With the aid of the microcomputer, our ability to manipulate large quantities of data is greatly enhanced. It is now feasible to project the profitability of buying land, leasing equipment, or purchasing feeder pigs in a matter of minutes rather than hours. The ability to do these projections will bring the changes we will experience. Better recordkeeping systems will be required to gather the necessary information and better technical knowledge will be required to analyze and interpret the records. And more on-farm education will be needed to provide this technical education. Whether this is done through public education or private industry, it will happen, and already is. This will be looked back on as the Information Age for the farming industry in the years to come.

What does this mean to farmers in the future? They will have to become more professional in their business management. From production to marketing, the farmers

will need more information than ever needed before to manage the operation profitably. From the lenders point of view, financial projections will become more widely used but the importance of good character and past performance will not be overshadowed by the projections.

My advice to all those involved in the process of securing financing with the use of financial projections is the following:

1. Proceed carefully, but proceed. Be sure the information you use to make projections is reliable.
2. Only begin to analyze and interpret results when a complete understanding of how they are arrived at exists.
3. Follow-up the projections with detailed records to measure the accuracy of the projections and the results of your decisions.

## THEME

# Income Tax Management for Farmers

Income tax management may be used synonymously with tax planning. There is no rhyme, reason, or implication that this management tool should be implied to mean tax evasion, although many of the suggestions made in this article may indeed infer postponement of taxes due. The article will deal with federal regulations only and these may or may not concur with your individual state regulations.

There are two methods commonly used by which farmers may plan their tax management: (1) Cash method or (2) Accrual method.

The cash method infers that income is recorded as income in the fiscal year when the dollars are received and expenses are recorded as expense in the fiscal year when the bills are paid. There are exceptions to these basic rules which will be discussed later.

With the accrual method, all items of gross income from farming operations are included in gross income when you earn them, even though you may receive payment in another tax year. Correspondingly, business expenses are deductible in the tax year in which you become liable for them whether or not they are paid. Most farmers may choose the cash method as the records may be easier to keep and do lend themselves to better tax management. You must be consistent in your method used from year to year.

Other methods may be used for reporting federal taxes if used the first year you file taxes and are consistent from year to year. You may need to receive permission from the Internal Revenue Service to use your particular method.

Remember, you are not expected to pay more than your share of any imposed tax (income tax included) but you have an obligation as a citizen of the United States to pay your share. Also, as a concerned citizen and taxpayer, you may have a desire to challenge some of the regulations.

4. Continue to use the decision-making process. Redefine the problems, identify and select the alternatives with the aid of financial projections, and record and analyze the results of your decisions.

Securing financing should always involve projecting the profitability of being leveraged. Although many farmers believe it is the lenders responsibility to determine whether an investment is profitable, it is the farmer that mortgages the farm and signs the notes. The farmer should be the one deciding whether an investment is good or bad while taking advantage of the advice of the lender and using the tools the lender may have available. No matter how much the process of securing financing changes, the final decision will be the burden of the farmer.



By DWAIN N. VANGNESS AND GARY A. THOME  
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Please do this properly:

1. Contact your Congressman or Congresswoman.
2. Work through a farm organization.
3. Work through a local form of government — township, county, or state.
4. Get elected to Congress and try to change the regulations.

A well organized set of farm business records is a must for proper tax management. You should enter the income in proper sequence according to your fiscal year and under the proper categories. You may wish to use corresponding categories that relate to the Schedule F for federal tax purposes. Expenses should also be entered in proper sequence and under the proper categories. Again, you may wish to use corresponding categories that relate to the Schedule F for federal tax purposes. It is permissible and may be desirable to be more specific with your income and/or expense entries and then merely combine them at year's end. Also, Schedule F contains blank lines where you may wish to enter a specific item of income or expense. It may also be

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## Income Tax Management for Farmers

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suggested that you utilize specific line items for any government payments as income:

1. Storage payments.
2. ASC facility loans.
3. PIK income — crops sold or diversion and deficiency income. This may avoid an audit due to suspected failure to include these types of income.

### Tax Management Tools

Now, for some specific tax management tools. These suggestions are in principle okay, but you may have to relate them to your area of tax planning. For example, our suggestions will relate mainly to the livestock and crop farming located and common to Southeast Minnesota.

Adequate ordinary income to balance the ordinary expense, plus family dependents, plus depreciation, plus the standard deduction or itemized deductions — this is the heart of tax management.

Try to maintain a constant level of taxable income from year to year. If this is not accomplished, the risk of changing your tax brackets from year to year is too costly in tax dollars due. You may accomplish this in several different ways:

1. Postpone income by (a) delaying sales of crops or livestock until the following year or years, (b) deferring payment for sales until the following year, (c) deferring contract sales, (d) reserving or sealing programs of grain and calling this income in the year the loan is closed out (be sure to become familiar with these specific details), and (e) deferring crop insurance payments until the next taxable year.
2. Handle income as advance payments by (a) calling crop insurance as payments in year of receipt, (b) reserving or sealing eligible crops prior to year's end — if you call these income by this method (again, become familiar with the specifics of this method), and (c) taking advance payments on crops even though such delivery may not have taken place, and (d) selling all commodities that are ready for market if you are satisfied with the price. Any advance in price may be less than the value of good tax management.
3. Delay payments of ordinary expense until after the close of your tax year. For good public relations you will want to work closely with the agribusinesses so they will understand your tax management concepts. Items such as fertilizer, chemicals, feed, repairs, and fuel are expense only when paid under the cash method.
4. Advance purchases of ordinary expenses if your level of "taxable income" is too high. Make certain that these purchases are for good business practices and also they are a binding and legitimate sale. IRS frowns on merely paper transactions. Items such as feed, fertilizer, fuel, chemicals, and seed are examples of ordinary expense purchases which can be made. The business must have the items on inven-

tory. You do not have to have the purchases delivered to your farm.

5. Purchase of capital assets. This has been a good tax management tool for many year, but buildings, drainage tile, crop machinery, or livestock equipment must be ready for use within the taxable year. Also, a 10 percent investment credit is allowed on the basis value of capital purchases. Remember, this is a credit on your federal tax. However, beginning with the 1983 calendar year, one-half of the investment credit must be subtracted from the basis prior to depreciation calculations on the federal return. Again, individual states may have their own regulations regarding some of these calculations.
6. Choose a different depreciation method. The 1981 tax laws attempted to simplify depreciation methods. There are basically three classes which farmers may use:
  - (a) 3-year class property — includes cars, light trucks and breeding swine and some horses. Within this class you have several possibilities: (1) 3-year Accelerated Cost Recovery System (ACRS) which amounts to 25 percent of the basis in year 1; 38 percent of the basis in year 2; and 37 percent of the basis in year 3. (2) alternate ACRS method — you may choose either a 3-year, 5-year or 12-year straight line method, but only one-half year's depreciation is allowable in year of purchase. Note: All items within a class must use the same method and years within the year of purchase.
  - (b) 5-year class property — includes property which is not 3- or 10-year property. This class includes most farm machinery, livestock equipment, single purpose livestock and horticultural structures, livestock that are not 3-year property, and tile drainage systems. Again, within this class you have several possibilities: (1) 5-year ACRS which amounts to 15 percent of the basis in year 1; 22 percent of the basis in year 2; and 21 percent of the basis in years 3, 4 and 5. (2) alternate ACRS method — you may choose either a 5-, 12- or 25-year straight line method, but only one-half year's depreciation may be utilized in the year of purchase. Again, for all items within the 5-year class you must use the same method and years within the year of purchase.
  - (c) 15-year real property — includes all real property, such as farm buildings not included in the 5- 10-year property class. Two major differences under this method are: (1) all items do not have to be treated the same way, and (2) the one-half year rule does not apply. All calculations are done from a table provided by IRS. Also, 15-year property may be changed to a useful life of 35 or 45 years. Please refer to Chapter 8, of the 1983 Farmer's Tax Guide for more information.

Now you should be able to visualize the benefits of choosing different depreciation methods for a specific year and also from year to year.

So far, inferences have been made for tax management for specific one-year periods of time. This may be proper for ordinary income and ordinary expense, but tax management should involve more than one year. The reason to postpone or accelerate income could involve several years, the reason to delay or prepay expenses could involve several years, and certainly the purchasing of capital assets and properly choosing the depreciation method will involve several years of added "depreciation expense" and investment tax credit.

### Ethics

Remember, tax obligations are a necessary part of our

American way of life. Also, is not the result of paying taxes a blessing in lieu of the alternative of never having enough money to go around? But, you are not expected to pay more than your share at any time.

This article was never intended to infer that you are going to get out of paying taxes but to level out the highs and lows that can and do result from poor tax management. If you plan to pay on accumulated debts every year, then there must be a profit in your business; and if you make a profit, you are going to pay some income tax. Congratulations!

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# Stories in Pictures

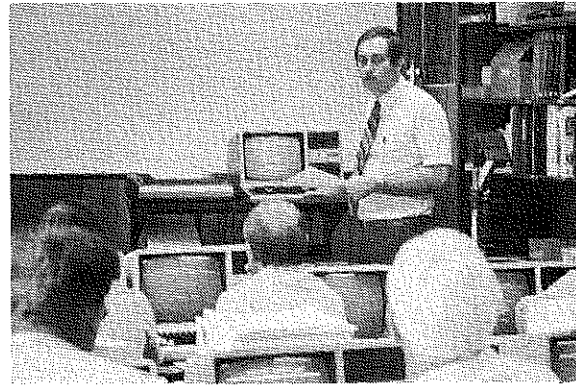
## Recordkeeping Pervasive Throughout Program

Preservice



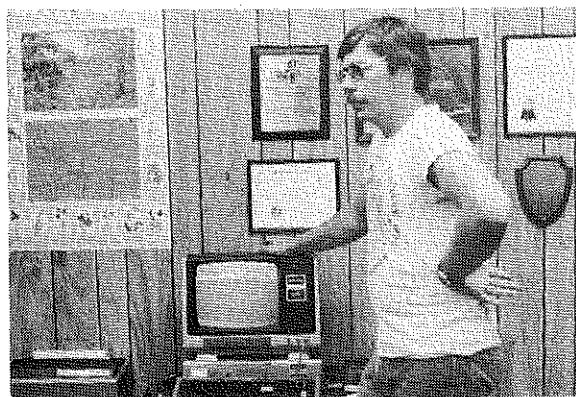
Prospective teachers receive training at their student teaching centers. (Photograph courtesy of Gilbert Guiler, Ohio State.)

Inservice



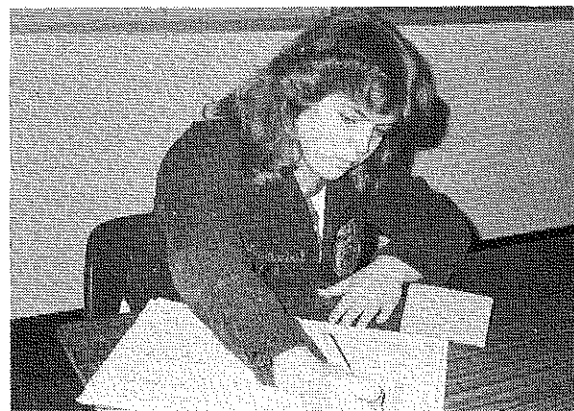
Teachers keep their skills and knowledge up-to-date through workshops and courses. (Photograph courtesy of Jimmy Cheek, University of Florida.)

Adults



Adults and young farmers benefit from instruction in recordkeeping. (Photograph courtesy of Nebraska Young Farmers.)

Classroom



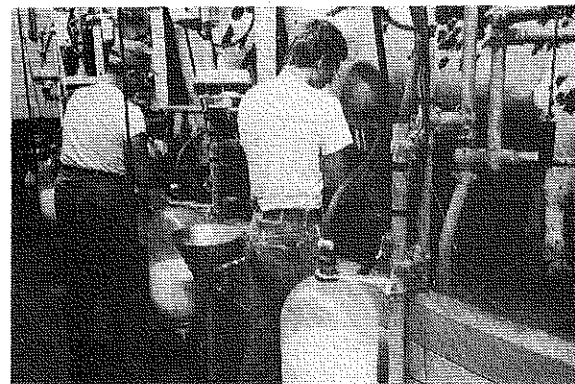
Class time is allocated to instruction in recordkeeping. (Photograph courtesy of Martin Auville.)

On-the-Job



Individualized instruction in competencies related to recordkeeping occur in many placement/cooperative programs. (Photograph courtesy of Lowell Hedges, Ohio State.)

On-the-Farm



Production agriculture requires accurate recordkeeping and analysis. (Photograph courtesy of the National FFA Center.)