THEME
SOEP: Recordkeeping
Records Teach and Help

The renewed emphasis upon basic education which has been encouraged by the numerous student activities, such as the National at Risk, makes this issue of the Magazine particularly timely. This emphasis upon the sciences and mathematics can actually aid our programs and students.

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 relates to a job, then the law of causality as it relates to learning should be at its ultimate. The steps involved in solving a problem in vocational agriculture can be transferred to the SOEP and records. When these steps are followed through time, after 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 legislators.

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.

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 these 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 educators 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 Handbook:

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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 EFA Member," from the Streem 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 it is time to introduce the following:

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 genuine 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 achieved 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 for it in advance.

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 belong.
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 separate submission dates to the next level of competition.
7. Carry the records for the first year of SOE program from the date of entering school through December 31 of the following or sophomore year in most states; thereafter, closing each year's records 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.

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 "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 kinds 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 help in repairing it and then valuing it at $16,000 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.

4. Unrealistic enterprise returns caused when the value of food, 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 these items, cash and non-cash, 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 entire enterprise for which such items were used, the same value of those items must also 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 sum 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 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 call 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, tilling, or adding drainage.

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 photography, scope of inventory, number of awards and ribbons won, etc. can be best conveyed through photos. Photos can be used in your 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 and captions, these questions should be kept in mind:

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 be best 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 causes blurring.

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 closer 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, don't identify 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 photographic mounting cement which is moisture-resistant, which means the cement will not stain the prints. (Rubber cement or paste that contain water or penetrating solvents may stain the prints or cause them to crinkle.) Be sure to use proper cement 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, real words and a direct 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 and captions, these questions should be kept in mind:

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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.

Have students transfer information into the recordbook through weekly assignments using the "cut and paste" problem method.

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

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by William G. McVay

The Recordkeeping System

There is 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.

1. I would like to suggest two programs that have real possibilities in the swine industry. The Swine 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 initial 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 operation. 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 Keeping is shown in Table 2.

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 classroom, 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 include some 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 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 agriculture, 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 levels of agriculture.

Records/FFA

Throughout 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 areas. 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/SEOE

Records relate directly to SEOE 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 SEOE's recordkeeping 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 record system for vocational agriculture students. Good record keeping should become the basis for decision making within the SEOE program. Record checking should be a part of each SEOE visit an instructor makes to the farm or placement site.

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 SEOE 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 types of SEOE, 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. The better the teacher 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 a good deal of 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 recordkeeping theories and concepts are understood. It behooves the teacher educator to determine the skill levels of the students and make 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, postsecondary, 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 record 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 and 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 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 indentify 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 SEOE 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 recordkeeping 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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The Missouri Farm Business Analysis Record Book was developed in 1974 for use in both high school and adult vocational agriculture programs. At present, over 3,000 copies of the record book are sold each year.

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

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Students should be introduced to recordkeeping on the microcomputer as they prepare for teaching vocational agriculture.
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 in teaching and in the classroom. 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 recordkeeping as a form of a bookkeeping. 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 P. Defiance High School, Defiance, Virginia 24435.

Emphasis

The essential element for improving recordkeeping among students is their own attitude. This attitude starts with the teacher. If the teacher does not believe in the value of good accurate records, neither will 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 attitude 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 log 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 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 book 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 receive feedback as it is to receive the checks. Several of the best methods for providing feedback are to discuss with students the results of the review of the SOE program. 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 guidance and 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 SOE 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 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 one way to get interest in promoting recordkeeping practices and SOE programs. No student enjoys talking about weak programs and shabby, inaccurate records.

Teacher visits for SOE programs and instruction on recordkeeping means a lot to students, and makes the recordkeeping teacher one of the most alluring 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 programs as well. 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 teacher knows 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 it easier for students to learn more about recordkeeping, and it makes it easier for students to learn more about recordkeeping.

In addition, a microcomputer can provide more motivation for students. It also gives students more dimension to analyzing records and underlines the importance of accurate records. Therefore, recordkeeping and SOE programs can 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, students have a tangible link to their achievement. A cash payment is given for the 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 aid and a source of pride as well. When 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. The student must also have a record book. This presents a real life situation for students to practice their 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.
Motivating Students for Recordkeeping

(Continued from Page 13)

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 realized 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, FFA, the 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 towards recordkeeping 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.)

By Gary Sanders

(Editor's Note: Mr. Sanders is a Vocational Agriculture Instructor at 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

be or she gets 130 bushels of corn per acre, then I ought to get at least 145 bushels per acre." In addition, they fail to consider the unexpected which yields when in actual fact they sell on a dry basis.

3. Farmers tend to over-estimate their livestock production gains, and feeding efficiencies. This generally results in the following factors: (a) they do not consider the runts, culls, and bottom-bottoms and the effect they have on the herd’s production average, (b) they do not consider death loss and the amount of food and expenses the "goners" incur before dying, (c) they do not consider the cost of feed (while it may not be fair to charge this loss against the livestock enterprise, it is still feed that must either be replaced or sold for livestock to 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. Many articles are written about the farmer with a hog finishing operation with a feed conversion efficiency (FCE) rate of 3.75 lbs. of feed per pound of pig gain (ADG) of 2.1 lbs. or a beef feedlot operation with an ADG of 1.62 lbs. The above numbers, which do take into account the previously stated 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 their numbers, or are they going to use a FCE of 3.0 lbs. or 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 Southeast Minnesota report, the average farm family of four spent $20,504 for personal and family living expenses. This total includes less than $50 for personal entertainment expenses (that's 4,100 miles at $5.25/mile), less than $1,200 for housing expenses, and less than $1,500 for all personal taxes (real estate, state, 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 for their products. 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 the farmer is about the prices they will receive for their various 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 all of their crops and livestock, they may not sell their products according to their cash flow plans. Admittedly, many farmers who store their crops do not update the cash flows as frequently as they would if they had to have sales 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 money either was deposited in an account to draw interest or used to pay off outstanding loans. Then loans which usually carry a higher interest rate than those for farmers who hold their market animals past ideal market weight just because the price is rising may also elude the same question. Besides losing interest, risk of disease and death losses, they are also suffering from less efficient and more costly feeds, and extra animal care. 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 they are 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 restricted only as a tool for 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 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, must reinforce the fact that lenders are trying to change their attitudes. We would like to see farmers who are working with obtain the loan as much as the farmers themselves do. That is, the 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 for places to make adjustments 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 implementation of the microcomputer into our schools and vocational agricultural education 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
Budgets: Look Great on Paper, But ...  
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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 relies 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 farmers 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 one does, the one with the stone in it) happens to fit ... OUCH!

Loans

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

1. Operating loans are used primarily for financing the necessary costs of an operation and should be kept current. Special feeder livestock loans will also fall into this category.

2. 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 purchase of livestock and equipment purchases.

3. Long-term loans are used in virtually all situations to finance real estate purchases. Who 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.

| Loan Type | Total Net Worth | Budget Capitalization | Long-Term | Long-Range | Total | Interest Expense
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate-term</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 financially 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 chicken 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 loan needs for on-farm retirement. 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 is focuses on the 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-turneried. So not only will the farmer have a better feeling for where cash flows may be heading, but the lender will have more confidence in the projected assets inventorized on the farm. Because these flows are 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 referred to as pro-forma income statements. I have created two categories and 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 formal and makes broader assumptions as 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 better 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 these costs 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 encompases the entire operation from bushes of corn fed per pig to the pounds of milk.

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Securing Financing Based on Records  
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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 4  
Whole-Farm Budget Summary Report

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
<th>% Change</th>
<th>1985-86</th>
<th>1986-87</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Income</td>
<td>$50,000</td>
<td>10%</td>
<td>$45,000</td>
<td>$49,500</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$30,000</td>
<td>5%</td>
<td>$28,500</td>
<td>$31,325</td>
</tr>
<tr>
<td>Net Profit</td>
<td>$20,000</td>
<td>15%</td>
<td>$16,500</td>
<td>$18,175</td>
</tr>
</tbody>
</table>

### 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 is one of the things that requires more commitment of your time. 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, which, in turn, require an overall view of how they are arrived at and the results of the projections.

### Income Tax Management for Farmers

Income tax management may be used synonymously with tax planning or tax management. The idea behind this, in terms of tax planning, is that tax evasion, although many of the suggestions made in this article may indeed involve postponement of taxes due, this 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 future. When the items 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 income tax (income tax included) but you have the obligation 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 analyze and evaluate 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.

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**THEME**

**Income Tax Management for Farmers**

By Dwain N. Vangness and Gary A. Thome  
(Editors Note: Vangness and Thome are Vocational Agriculture Instructors at Southwest High School, Ada, Minnesota 56009)

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 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 blanks to indicate whether you may have a desire to challenge some of the regulations.

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suggested that you utilize specific item lines for any government payments as income:
1. Storage payments.
2. ASC facility loans.
3. Livestock held for sale, sold or diverted 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 own taxing situation. 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 dependent, 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 selling property for deferred selling 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) selling crop insurance as payments in year of receipt, (b) reserving or setting aside eligible crops prior to year's end — if you call these income by this method (again, be sure to review the specifics of this method), and (c) taking advance payments on crops even though delivery may not take 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 pay your 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 above method.

4. Advance purchases of ordinary expenses if your level of "taxable income" is too high. Make certain that this is the right purchase for good business practices and also they are a blending and legitimate sale. IRS frowns on merely paper transactions. Items such as feed, fertilizers, chemicals, and seed are examples of ordinary expense purchases which can be made. The business must have the items on inventory, 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 years, but buildings, drainage tile, crop machinery, or livestock equipment must be ready for use within the taxable year to delay or prepay expenses, but it is based on the basis value of capital purchases. Remember, this is a credit on your taxes. 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) 5-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 12-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 25 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, 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 above three classes. Also, a 15-year depreciation includes certain differences which are the same method and years within the year of purchase which are the same method and years within the year of purchase.

So far, incentives have been made for tax management for specific one-year periods of time. This may be proper for small farmers and for small expenses, but tax management should involve more than one year. The reason to postpone or accelerate income could involve several situations. For example, it could involve several years, and certainly the purchasing of capital assets and properly choosing the depreciation method will involve several years, and 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. Tax management is not expected to pay more than your share at any time.

This article was never intended to inform you that you are going to get out of paying taxes but to level out the highs and lows that can occur from 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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SOEF: Importance in Urban Areas, by Kenneth Parker - May

SOEF: Urban Areas, by Richard M. Hyken - May

SOEF: Urban Vocational Agriculture, by Jerry F. Dover, John McKean and David Pandles - May

Tropical Fish Farming, by Eric Fryman - May

SOEF: Urban Programs - A New Direction, by Robert J. Berkey - May

Urban SOEF: A Vehicle for Growth, by Dale Perito and Donald Smith - May

Urban SOEF: Can It Survive, by Mike Johnson - May

Teacher Education
Achieving Quality Programs: A Real Education, by Cordill Putnam and J. Thomas Austin - July

Achieving School Teacher Education Programs, by Max Ambrose - July

Developing a Superior Preservice Program, by Paul R. Vaught and Michael A. Stack - July

In-field Practicums: A Confidence Builder for Preservice Teachers, by Philip Zurbrick and Gen M. Miller - July

Leadership Preparation for Our Teachers, by Vernon D. L. Littell - July

Preparing Teachers for a Changing World, by R. Paul Martin - July

Quality Preservice Programs Begin With the Teacher, by John L. Boshart - July

Teacher Interests: A Change by C. Van Sathermore - July

Technical Skills for Teachers, by Ray Simon - July

Technical Skills for Your Program, by Edward W. Osborne - July

Teacher Education Inservice: A Core Course, by Carl R. Wester - December
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 Hodges, Ohio State.)

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