

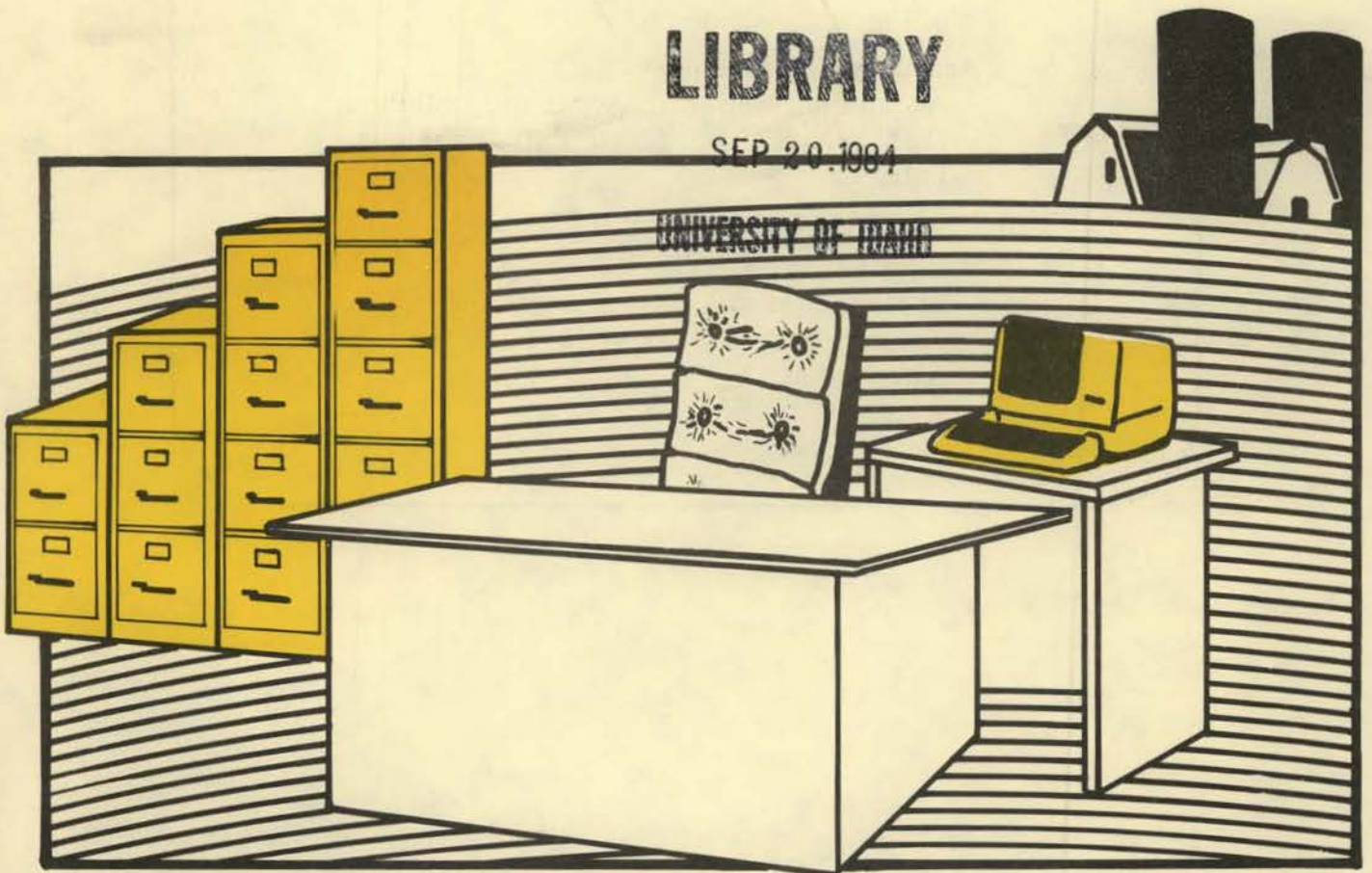
Selection and Implementation Of a Farm Records System

J. F. Guenther and R. L. Wittman

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Selection and Implementation Of a Farm Records System

J. F. Guenthner and R. L. Wittman

Every farm or ranch business has a responsibility to establish and maintain some form of a record keeping system. Federal and state laws require as a minimum that sufficient records be maintained to file (and substantiate if audited) federal and state income tax returns.

A successful farm business, however, needs and uses records for many other evaluation and decision making purposes. Some of the most common applications for good records are:

1. Measuring operating and financial performance;
2. Supporting requests for operating and capital credit;
3. Establishing proper insurance coverages for farm principals and capital assets;
4. Providing a basis for estate valuation and estate planning;
5. Serving as a basis for analyzing investments in farm expansions or depreciable assets;
6. Measuring the profitability of individual enterprises where multiple enterprises exist in an operation;
7. Keeping track of production inventories; and
8. Developing a sound marketing plan.

Good records, properly structured, can also be helpful for maintaining effective communication with landlords, partners and other family members. They are also an essential asset for completing requirements like government census reports and Agricultural Stabilization and Conservation Service (ASCS) crop reports. In the absence of proper records, business decisions must be made on the basis of "gut feel" and "emotions."

Such an approach can often lead to foregoing more profitable opportunities. If operating losses start accumulating unnoticed, the business can reach a financial state from which it can no longer recover. The operator finds himself bankrupt, sold out and looking for new employment.

Beginning and Building A Record System

Farm record systems vary considerably in the amount of information collected, methodology of recording data and the structure of final outputs. Every farm manager must determine:

1. How much information he needs and wants for management purposes;
2. Who should develop the information; and
3. What system will be used to guide the structure of the final output?

The balance of this publication will expand on the above three points.

Determining Needs From a Record System

The introduction outlined eight common applications of a good record system. Before defining what inputs are needed for a record system, we need to define the outputs desired. The following types of reports are common products of a basic record system: transaction journal, general ledger, balance sheet, depreciation schedule, inventory reports, income statement, enterprise reports, employee records, family living records, income tax reports (1040F), cashflow statement and statement of changes in financial position.

Many of these reports are absolutely essential — such as income statements, balance sheets and tax reports. The only reports that could be wholly or partially optional are: enterprise reports, statement of changes in financial position, cashflow report and family living records. Some reports may be included as part of others. For example, inventory reports and depreciation schedules are generally included as part of the balance sheet. A brief overview of each of the listed reports follows. To see how each report interrelates, see Fig. 1.

Transaction Journal — This is simply a detailed recording of financial transactions occurring during the year. Data required for the journal include check or deposit number, date, amount, description and classification code. The transaction journal could be maintained in a hand record book, checkbook register or computerized system.

The journal is essential for compiling other reports such as the general ledger, balance sheet, income statement, etc. It is also an important means of assuring an audit trail in the business. The transaction journal can be maintained on a cash or accrual basis using a single- or double-entry accounting system. Accounting systems will be explained in more detail later in this publication.

General Ledger — This is a compilation type of report that reflects accumulated totals for all operating capital and financial transactions. A properly

constructed general ledger should allow you to observe at a glance:

1. Total dollars (and related quantity) of income generated and expenses incurred in each income and expense category you have defined;
2. Total capital sales and purchases;
3. Total borrowings, repayments and balances owed to creditors;
4. Total account receivables and payables (if on accrual system); and
5. Total assets in each asset category.

The general ledger becomes the primary tool for preparing financial reports for the business. Income and expense related totals are extracted from the general ledger to prepare the income statement. Asset, liability and net income balances are used to generate a new balance sheet. The ideal record system will have the capability of generating a general

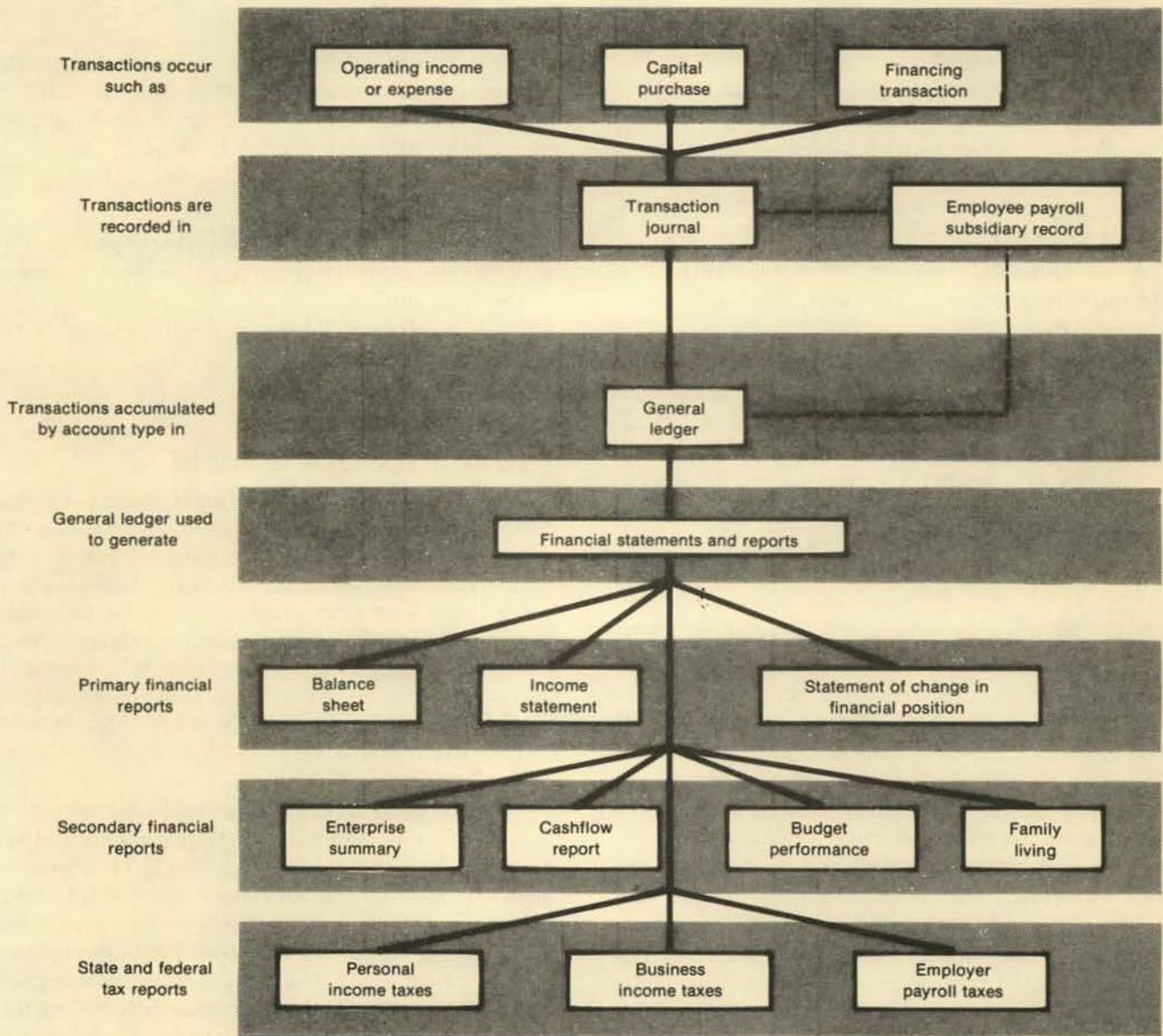


Fig. 1. Record system flow chart.

ledger report showing beginning balances, total additions and subtractions and ending balances in each account.

Balance Sheet — The balance sheet is analogous to a financial snapshot of the business on a specific date (preferably at fiscal yearend). It is a compilation of all assets, liabilities and owner equity or net worth. Properly constructed, the balance sheet should segregate assets and debts into current, intermediate and long-term (or fixed) categories. Ideally, it should also reflect cost vs. market valuations for assets, debt and equity. The balance sheet is a critical document for measuring two key financial performance indicators:

1. **Liquidity** — measured by working capital level (calculated in dollar form as current assets - current liabilities, or in ratio form as current assets divided by current liabilities; and
2. **Solvency** — measured by degree of leverage (leverage ratio or debt/equity ratio calculated as total debts divided by total equity).

Depreciation Schedule — This schedule includes the detail concerning all depreciable capital assets. It is an integral part of both the balance sheet and the income statement. Because of its complexity and record keeping implications, however, it is treated separately in this writing. The depreciation schedule should contain the following items:

1. Description of asset;
2. Date of purchase;
3. Cost;
4. Method of depreciation, years life and salvage value;
5. Investment credit information;
6. Accumulated depreciation; and
7. Net book value.

The depreciation schedule is used to calculate the annual depreciation expense and gains or losses on depreciable capital assets sold. Capital assets are written off, or depreciated, over their anticipated useful life. The amount charged off each year reflects wear and tear and obsolescence incurred. The annual depreciation expense is included as an expense item in preparing the annual income statement. Gains on capital sales occur when proceeds of a sale exceed the book value of the asset. The amounts recorded on the balance sheet include total cost less accumulated depreciation. The difference is displayed as book value.

Tax laws concerning depreciation seem to change perpetually. These changes impact your records. *The Farmer's Tax Guide* should be obtained annually and used as a reference for maintaining depreciation information properly. *The Farmer's Tax Guide* is available from IRS or most local Extension offices.

Inventory Reports — A listing of inventory also comprises an integral part of the balance sheet. For farm management purposes, however, some operations have a need for a stand alone inventory tracking system. Such systems can range from simple, hand kept records (such as a cattle tally for livestock) to exotic computer generated inventory programs (most generally seen in feedlots, large grain or fruit and vegetable shipping operations. These reports can be valuable for planning a marketing program or monitoring collateral pledged to a lender.

Income Statement — Also known as a profit and loss statement, this report shows the net income for the farm. It includes such elements as income generated from farm production, operating and overhead expenses, depreciation expense, gains on disposal of capital assets and nonfarm income and expense. It can be prepared on a cash or accrual basis (more on this later).

The income statement enables the producer to analyze the profitability and financial efficiency of the farm in both dollar and relative terms. Primary relative measurements include such items as:

1. **Return on Assets** — Net income divided by total assets; and
2. **Return on Equity** — Net income divided by net worth.

The income statement can also facilitate analysis of financial efficiency ratios such as:

1. Ratio of operating expense to value of farm production;
2. Ratio of depreciation expense to value of farm production; and
3. Ratio of interest and/or capital debt service to value of farm production.

Enterprise Reports — These reports are simply a derivation from the basic income statement that reflects profitability or performance of specific enterprises within the farm. An operator raising crops and livestock can use an enterprising option to allocate income and expenses to each enterprise and determine how much each is returning to the total farm. Such reports can be prepared on a gross dollar or production unit basis.

Employee Records — A farm business is required to keep detailed records on each employee on the payroll. Information that is normally maintained is time or hours worked, gross pay and/or advances made, federal and state income tax withholdings and Social Security withholding. This detail provides a basis for:

1. Preparing numerous state and federal payroll reports (i.e. Social Security deposits, unemployment returns, income tax withholding); and
2. Providing employees with yearend W-2 statements.

Requirements for handling employee data vary substantially depending on the type of business (farm or nonfarm), the nature and number of employees and dollars of payroll. To properly plan record keeping needs, each employer should get a copy of *IRS Circular A — Agricultural Employer's Tax Guide* which is available from IRS Forms Distribution outlets.

Family Living Expense Records — Some may desire to keep detailed records of family living expenses. These expenses generally fall into the following categories:

1. General living and consumption — nondeductible (i.e. food, clothing, gifts, entertainment, insurance and household operation);
2. Tax deductible living expenses (i.e. medical, taxes, interest and contributions); and
3. Capital expenditures, investment and borrowings.

Records must be kept for the second category to file personal tax returns. Also, records must be maintained in the third category in situations involving capital assets or investments that may be sold at a future date. You must retain data on purchase cost and the cost value of improvements made to establish a tax basis at the time of sale.

Income Tax Reports — Federal and state income tax returns must be filed for both personal and business income. Your record system must provide sufficient detail to prepare these reports. Some record systems (usually computerized) actually produce a Schedule 1040F "Farm Income and Expenses."

Most farm operations are eligible to file for a credit for federal tax on gasoline, fuel and oil. The credit is based on gallons purchased. A record system that tracks quantities as well as dollars would be helpful for preparing such a report. *The Farmer's Tax Guide*, mentioned previously, is an excellent reference for planning what information you must record to properly file your returns.

Cashflow Statement — This statement shows all sources of funds generated by the business and all outlays for operating, capital and borrowing activities. It can be generated on a 12-month spreadsheet or done on a yearly summary basis. It provides an excellent tool for preparing the coming year's projected cashflow statement or budget.

Statement of Changes in Financial Position — This is also known as a funds statement and is used to analyze what accounted for the changes in the balance sheet from one year to the next. It shows how the combination of funds from operations, capital transactions and financing decisions accounted for changes in working capital, assets, liabilities and owner's equity. This report has been one

of the most complicated, least understood and consequently the most seldomly used financial reports in agriculture. As your business becomes more complex, however, and your record system becomes more sophisticated, it may be an appropriate report to develop.

Accounting Methodology

The kinds of output you can get from a set of records has been covered at length. Now let's focus on some of the alternative approaches that exist for recording transactions. Each farmer has to decide three things before embarking on the recordkeeping chore:

1. What accounting period or fiscal year to use?
2. Will income be recorded on a cash or accrual basis?
3. Will a single- or double-entry system be used to record transactions?

A discussion on each of these points follows.

Accounting Period — Taxable income must be computed for a fixed 12-month accounting period each year. A new taxpayer can adopt either a calendar year (Jan. 1 to Dec. 31) or a fiscal year basis for reporting. A fiscal year is any 12-month period ending on a date other than Dec. 31. Most farmers file on a calendar year basis. This is done in most cases because their personal returns were always filed that way, and no consideration was given to the benefits of a fiscal year.

The issues to consider when selecting an accounting period are:

1. What 12-month period will most accurately reflect a "normal year's" operation?
2. What tax year ending date will be most desirable for tax planning, marketing flexibility and presentation of a meaningful yearend financial status?

A crop operation can be used to reflect on these two questions. One might agree that many crop operations should be using a fiscal year ending Aug. 31, Sept. 31 or Oct. 31 to match the accounting period with the production and marketing year. Such a designation would facilitate matching most of the expenses for producing a given crop with the income generated.

From a marketing standpoint, a fiscal year ending earlier than Dec. 31 would give the flexibility to market crops closer to harvest and still use forward pricing to plan sales just before or after the fiscal yearend to achieve tax planning objectives. Many crop operations have lost a good marketing opportunity because of trying to defer income into the following year — a decision that may have involved holding the grain for 5 months after harvest. (This applies to the cash basis taxpayer.)

Look too at the impact of preparing a balance sheet on Oct. 30 vs. Dec. 31. The October statement will reflect the position of the business at its best. The old year is through; the crops are either sold or on hand, and limited or no outlays have been put into the new year's crop.

The selection of an accounting period will likely vary depending on the industry, geographic location, season and the approach an operator normally follows to market his product. Each farmer/rancher should discuss this with his or her professional accountant and explore the accounting period that best fits the operation. If the farm is on a calendar year basis, a change to a fiscal year basis usually requires obtaining consent from the tax commissioner and filing a "short period" income tax return.

Accounting Method: Cash or Accrual — The two common methods of computing income are (1) cash and (2) accrual. Under the cash method, income is reported in the year it is actually or constructively received, and expenses are recognized in the year paid. Most farmers and ranchers use the cash approach. It offers considerable flexibility for income tax planning (i.e. sales and purchases can be moved between tax years to level income and maximize after tax net).

The cash method has the disadvantage of not showing a true income picture for a normal year's operation. For example, a grain grower could sell his current crop and some of last year's crop (held in storage) in the same tax year. The income is all taxed in the current year even though the stored grain was really a "value of farm production" for the previous year.

Under the accrual method, income is accounted for when the right to receive it comes into being. Expenses are deductible in the year actually incurred (or obligated), regardless of whether they have been paid with cash. In calculating accrual net income, agricultural operations start with a cash basis income and adjust for changes in inventories, accounts receivable, prepaid expenses and accounts payable. Although the accrual method lacks the tax planning flexibility of the cash method, it gives a more accurate picture of true profitability from year to year.

A person who uses the cash accounting method for tax reporting should prepare his income statement on the accrual basis for management information purposes. An important consideration when setting up or selecting a record keeping system is: will it provide an income statement that can easily be converted to accrual basis for management purposes?

Single Entry vs. Double Entry — The last choice you must make is whether to record transactions using a single-entry or double-entry system. Historically, most accounting systems on farms and

ranches have been single entry, whereas nonfarm businesses generally have used a double-entry system. Simply put, in a single-entry approach, a single entry is made to record each receipt or expenditure. Each entry is treated as if the offsetting entry were cash. At the end of the accounting period, all asset and liability accounts must be adjusted for net cash generated or used, additions or deletions of capital assets and borrowings and repayments on loans.

A cash basis income statement can be prepared from a single-entry system, but you cannot directly generate a balance sheet or an accrual basis income statement.

In a double-entry system, two equal and offsetting entries are made for each transaction that occurs. This follows the traditional accounting models that require:

Assets must equal Liabilities + Owners Equity
Debits must equal Credits

A double-entry system requires a sound understanding of accounting principles. It also requires that considerably more entries be made than with single-entry systems. The advantages of using a double- vs. single-entry system are:

1. Accuracy of bookkeeping is enhanced. (Since debits are always offset by credits, books are kept in balance more easily.)
2. Financial statements, particularly balance sheets and income statements, can be generated directly from a double-entry system.

One way to show the difference between the two methods is to trace the recording of a series of transactions for a simple farm operation. Assume a rancher starts the year with a cattle inventory (weaner calves) worth \$4,000; cash in the bank of \$6,000; and no debts, leaving owner's equity or net worth of \$10,000. Now let's review six financial or operational events that could occur during the year and discuss the record keeping implications for a **single-entry cash** method vs. **double-entry accrual** method. Refer to Fig. 2 to see how the transactions for each event are recorded. The italicized figures represent single entry figures; the other figures represent double entry.

Event 1 — Feed is delivered to ranch. Feed increases total assets, hence a debit to inventory. Since it is purchased on account (rather than c.o.d.), the offsetting entry is a credit to accounts payable.

Event 2 — The feed invoice is paid by check. Cash is reduced (credited), and the accounts payable is offset (debited). Note that the mere purchase of feed is not expensed until it is consumed, hence no feed is charged to expense at this time under an **accrual** system. Under the **cash** single entry system, however, an entry would be made at this point (when check is written) for feed expense of \$5,000.

Event 3 — Cattle are sold and shipped with payment due in 15 days. Income earned is credited for \$9,000, and an entry (debit) is recorded in a reduction of inventory. The cost basis of cattle sold (\$4,000), therefore, must be recorded as an adjustment to income (debit), and the inventory account must be reduced (credited) by the cost of cattle removed from inventory. Note, even though the cattle are not paid for, the sale has taken place; a price is fixed, therefore, income is recognized under the accrual method.

Event 4 — Once cattle are shipped, the feed bin is inventoried indicating total feed consumed worth \$3,000. Feed consumed is taken out of inventory (credited) and charged as an operating expense (debited).

Event 5 — Payment is received for cattle sold. Cash is increased (debited) by \$9,000, and the account receivable is eliminated (credited). Note at this point that the receipt of cash payment would generate a single entry under the cash method to income to \$9,000.

Event 6 — The year is over, and time has come to close out the income and expense accounts. Accrual basis income of \$5,000 exceeds accrued expenses of \$3,000 by \$2,000. The net income of \$2,000 is closed out (debited) and added (credited) to owner's equity on the balance sheet.

In summary, the double-entry accrual system reflects a net income of \$2,000. It also generates account totals that can directly generate a yearend balance sheet and income statement. As can be seen from Fig. 2, year-ending assets are still in balance with the total of liabilities and owner's equity.

In contrast, the single-entry cash system reflects a net cash income of \$4,000 — \$9,000 cash sales less \$5,000 cash expenses. The \$2,000 difference in net income arises because the cash basis:

1. Wrote off the full \$5,000 of feed purchased (even though only \$3,000 was consumed) overstating true expense by \$2,000; and
2. Included the full \$9,000 of cattle sales as income in the current year when in fact the "value added" and sold since the first of the year was only \$4,000, overstating income by \$5,000.

In addition, the financial records under the single-entry cash method do nothing to record the financial events that do not involve a receipt or outlay of cash. (i.e. converting feed consumed from an inventory to an expense).

The previous illustration shows the two extremes in simplicity and the complexity of accounting. In the real agricultural world, many farmers who keep accrual records use what is called a "cash and inventory" method of accounting. Under this approach, books are maintained during the year on a cash

Fig. 2. Transaction journal.

Transaction No.	Date	Transaction description	Income statement		Balance sheet				
			Income	Expense	Cash	Assets A/C Rec	Inventory	= Liabilities + Owner's equity	
	Jan. 1	Beginning year's balance	0	0	6,000	0	\$4,000	0	10,000
1	Sept. 5	Feed delivered to ranch Increase inventory; set up accounts payable					5,000 dr		5,000 cr
2	Oct. 10	Pay for feed by check Reverse accounts payable; reduce cash balance		5,000	(5,000) cr			(5,000) dr	
3	Nov. 10	Cattle shipped and sold Set up accounts receivable; record income — cattle Adjust income for cost of cattle sold; adjust assets for inventory reduction	9,000 cr (4,000) dr			9,000 dr		(4,000) cr	
4	Dec. 1	Feed consumption checked Charge expense for feed; reduce inventory — feed		3,000 dr			(3,000) cr		
5	Dec. 15	Payment received for cattle Increase cash account; reverse accounts receivable	9,000		9,000 dr	(9,000) cr			
6	Dec. 31	Total income and expense Net income = Transfer (close) net income to owner's equity Record owner's equity increase from income	5,000 2,000	3,000 2,000 dr					2,000 cr
		End of year balances	0	0	10,000	0	2,000	0	12,000

basis. At yearend, adjustments are made for changes in inventories, accounts receivable and payable, to generate an accrual basis net income statement. You can see that this is a workable system affording simplicity during the year yet enabling yearend financial reports to be prepared using accrual concepts.

A case between single-entry cash vs. double-entry accrual has been illustrated. Also possible is to use a double-entry system for a cash basis taxpayer. The system you elect to use is really a matter of the accuracy desired in the system and your proficiency in accounting principles.

Physical Production or Field Records

The primary focus in this publication has been on financial records. Another important area of records involves physical or production records. This could involve **field records** for crop operations or **herd management records** for livestock producers. Farm managers should retain at a minimum some centralized records of key activities in each of these areas.

Items that might be recorded in a **Field Record Book** for each field could include:

1. Field location/legal description;
2. Total acres and arable acres;
3. Current crop planted;
4. Cultivation records — date, type of application (i.e. plow, disk, harrow, cultivator, hours/application);
5. Seeding information — amount seeded per acre, drill settings, variety, date, seed source;
6. Fertilizer information — amount per acre, application method (starter, aerial, ground, sprinkler system);
7. Chemical applications — amount per acre, method (planter, aerial, ground, sprinkler system), weather at application, nozzle sizes, gallons per acre in carrier, pressure settings;
8. Soil test and petiole analysis information;
9. Notes on special weed problems, diseases, hail, etc.;
10. Rain and irrigation water applied and/or soil moisture readings;
11. Growing degree days;
12. Harvest information (date, weather, yield, quality, etc.); and
13. Storage conditions.

A **Livestock Herd Record Book** should be used to keep records on:

1. Herd tallies by class of livestock;
2. Birth records — date of birth, problems experienced;

3. Weaning dates and weights;
4. Feed records — amounts and rations;
5. Herd health records — vaccinations;
6. Breeding herd replacement information; and
7. Pasture carrying capacity and annual utilization/rotation records.

Detailed records could also be maintained for machinery operations and repairs as well as a host of other areas.

The main reason for raising this issue is that some operators may desire to integrate some of the physical or production type of records with the financial record system. This requires a highly sophisticated record system design and a considerable amount of planning before such a system can be implemented effectively.

Record Keeping Options

Many of the considerations about what you should get out of a record system as well as methodology of keeping records has been covered. Now you should turn to systems that can be adopted to keep records. This discussion will focus on the following kinds of record systems:

1. Shoebox;
2. Hand kept record ledgers — bound versions and pegboard systems;
3. Automated or computerized systems — service bureau mail in and personal computer systems; and
4. Farm records associations.

Shoebox System — This system is where the farmer simply collects all receipts, checks, invoices, bank statements, etc. in a shoebox. At yearend (or possibly selected intervals during the year), the shoebox is delivered to a professional bookkeeper or accountant who is expected to summarize the data into an income summary for tax reporting purposes. While it may meet the need for tax filing, this system leaves the farmer blind during the year as to the financial performance of the business. Other errors may creep in if the bookkeeper and/or producer is unable to properly categorize an April expense the following January.

Hand-Kept Record Ledgers — Individuals can get preformatted record books or ledgers to keep books by hand. For many smaller or less complex businesses, the hand record book may be the most practical and efficient system. The record book is simply updated periodically as checks are written and receipts are deposited. Various types of ledgers are available from office supply stores, state Extension services, agriculture lenders and farm supply dealers. These ledgers are usually found in two forms:

1. **Pegboard systems** — Set up in pegboard or ring binders that permit addition of pages and reports

depending on the size of business, number of transactions, etc., and

2. **Fixed page booklets** — Record books are bound to a set size and configuration.

A popular pegboard system is the *Ideal Farm and Ranch Bookkeeping Ledger* available in office supply outlets (suggested retail \$19.95). It allows recording of income, expenses, payroll, depreciation information and other miscellaneous data.

Record keeping booklets that have been widely used among agricultural operations included *Farm Family Record Book* available from FmHA, *Farm Record Book* from Washington State University, Pullman, and Extension Service record books published in many states (i.e. Illinois, Wisconsin, Minnesota and Georgia).

Most hand kept record books have good provisions for tracking cashflow. But, many come up short in providing worksheets for preparing yearend balance sheets, income statements and budget projections for the coming year. An excellent resource for these purposes is the *Coordinated Financial Statements for Agriculture* system developed by Dr. Thomas Frey and Dr. Danny Klinefelter. The system includes a set of forms plus a manual of instructions for completing a balance sheet, income statement, cashflow statement and a statement of change in financial position. (Available from *Agri-Finance* magazine, Skokie, Illinois, for about \$15.) This system has been adopted nationally by the FmHA and numerous commercial banks as a preferred, standardized system for presenting financial statements.

Computerized Systems — More and more farmers are using computerized systems for record keeping. The following will focus on two types of systems — Computerized Service Bureau or mail in systems and farmer-owned computer systems.

Computerized Service Bureau systems have been in existence on a wide scale since the 1960s. In essence, the farmer records, organizes and codes transaction data on some periodic basis (usually monthly) and forwards it to a service bureau for processing. Output from these systems varies from simple income/expense summaries and check registers to more sophisticated systems that also generate yearend financial statements, tax returns, etc. Fees are usually set at a fixed amount per year plus a surcharge tied to the number of transactions.

A system of this kind can be attractive for the farmer who wants the advantage of a computerized system for efficiency but does not want to acquire a computer of his or her own. Samples of widely used systems in recent years include:

1. *Agri-fax* — offered through Production Credit Associations;

2. *Farmfax Mail-In Records* — offered through AMEC, Bozeman, MT;
3. *AgData* — offered by AgData Systems, Gridley, CA; and
4. *AgRec* — offered by Agri Management Technology, Salem, OR.

With the advent of cheaper and more sophisticated computers (both mini- and microcomputers), you should see mail in or service bureaus on a more localized basis than seen in years past.

The other approach to getting computerized records is to buy your own computer. The late 1970s introduction of Apple and Radio Shack microcomputers paved the way for a revolution that is seeing increasing numbers of computers owned by farmers. A computer is only the machinery (or hardware) that operates software — programmed instructions that enable a computer to perform specific tasks. Farmers who are considering purchasing a microcomputer for record keeping purposes need to look at the following questions:

1. What software will provide the kind of records I want to keep?
2. What hardware will run the desired software most efficiently and economically?
3. What dealer is most likely to provide the service and support I need to become proficient in operating my own system?
4. Who in my operation has the time to enter the information into the computer on a daily, weekly or other periodic basis and get meaningful information from the computer?

Looking at the first question, a myriad of software packages are being marketed nationally for keeping records. Some of the more widely known and locally available programs are:

1. **Ag-Finance** by Countryside Data, Idaho Falls, ID;
2. **Agri-Ledger** by Small Business Computer Systems, Lincoln, NE;
3. **Comfab** by Rich Olson, F.A.R.M. Computer Consulting, Garfield, WA;
4. **Datamaster** by IBM (for System 23 minicomputer);
5. **Farm Ledger** by Harvest Computer Systems, Alexandria, IN;
6. **General Ledger** by Red Wing Business Systems, Red Wing, MN;
7. **Secretary of Agriculture** by FBS Systems, Aledo, IL;
8. **Simdisk** by Simplot Data Systems, Boise, ID; and
9. **Valcom** by Valmont Industries, local Valmont irrigation equipment dealers.

The above listing does not constitute an endorsement of any of the systems, nor does it imply that a program not contained herein would not be a good

option. The list does contain a good cross section of programs that provide choices between:

1. Single- and double-entry systems;
2. Cash vs. accrual systems;
3. Numeric vs. alphabetic coding systems;
4. Straight general ledger vs. full line accounting systems; including payroll, depreciation, inventory tracking, etc.;
5. Enterprising vs. no enterprising capabilities; and
6. Automatic check printing vs. hand written checks.

Hardware selection is the next consideration. In 1983, companies sold more than 200 computer models that cost less than \$5,000. You could not possibly find time to evaluate objectively all the options. Some of the most common brands that are presently being used by farmers and ranchers include Apple (III, II plus, IIe), Radio Shack, Vector Graphic, Kaypro, Digital (DEC) and IBM.

Let us reemphasized that the software decision comes first. Then you should look at the computer hardware that will run that software. To assess the cost of going to a personally owned computer, you should compare costs of the key components usually required to "set up shop." These include:

1. Central processing unit (CPU) — usually 48 to 64K minimum storage capacity;
2. Disk drives — most record systems require two drives;
3. Monitor or screen;
4. Printer;
5. Supplies — paper, diskettes; and
6. Software programs.

Farm Records Associations — Another approach to record keeping is to join a farm records association. These associations can involve hand kept or computerized record systems. Several states have offered a service like this through Farm Business/Farm Management programs, farm cooperatives and Ag. Extension. These associations often provide fieldmen to assist individuals in preparing and analyzing records. Some also consolidate individual farmers' data into composite summaries for analysis of individual operations against group averages. Some interesting opportunities for comparison arise from having access to a larger data base created under these programs.

Summary

We've covered considerable ground in this publication on evaluating and selecting a record system for a farm or ranch operation. You must do some serious planning before jumping into the first record keeping approach that comes along. You must define what reports are needed from a system, who will keep the records, what fiscal year will be used and what accounting methods will be followed.

Twelve types of output from a record system were outlined earlier. The farm manager must decide how many of these reports are essential for operating the business. When deciding whether to report income in a calendar year or a fiscal year, many operators may be wise to abandon "time honored custom" and adopt a fiscal year approach.

The selection of an accounting method (cash or accrual) should be weighed carefully. Ideally, if you select the cash method for tax reporting, the record system should still generate an accrual set of financial records for management evaluation purposes. The decision to go with a single-entry or a double-entry method of recording must weigh the simplicity advantages of the first method against the advantages of the latter in accuracy and capability to generate financial and management reports directly.

In selecting an actual record system, you can go with a simple record book, a computer system (in-house or service bureau) or join a farm record association. The route you follow should be based on the size and complexity of the farm business. Don't get a cannon to kill a fly when a fly swatter will do. Conversely, don't try to bag an elephant with a pea shooter.

Keeping records is a necessary and important aspect of managing a farm or ranch operation. In the future, those who don't do an effective job of this chore could find themselves working for a neighbor who does.

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