

This booklet is an excerpt from the class, "Accounting Methods for Progressive Dairies," developed by the Penn State Dairy Alliance and presented by the Penn State Dairy Alliance and Red Wing Software. The goal is to provide you with a clearer picture of the basic accounting principals you need to follow in your daily accounting practices. Learn how to make management decisions and take your accounting system to the next level to provide added benefits you may have never considered.

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Improving Your Dairy Accounting Methods



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Courtesy of Red Wing Software

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Improving Your Dairy Accounting Methods

Accounting! Just the mention of the word can elicit different reactions from people, ranging from boredom to confusion to fear. Accounting is probably one of the most misunderstood concepts of our society, yet it affects the lives of virtually every person on a daily basis. From paying family bills to corporate accounting scandals, which have robbed millions of lifetime investments, accounting impacts individuals and society in general. Possessing some level of understanding of accounting is very important to everyone, especially business owners. Dairy producers are no exception. Simply put, **accounting is a measurement and communication process**. Thinking in terms of this definition, we can begin to see the importance of implementing sound accounting practices in our businesses. If our measurements are wrong because of inaccurate accounting practices, the information we communicate to others is meaningless. On the other hand, if we measure everything in sight, but fail to communicate it to the right people, our efforts are wasted. Accounting is information management.

There are six steps in the information management process. These steps are defined in Figure 1. As we proceed through the process, it is extremely important that we practice sound information management practices to ensure the integrity and accuracy of our data is maintained in each step. If we fail to accomplish this objective the information we are using to make decisions will be useless. The six steps, as they apply to the accounting process are listed below.

Data Collection - Recording transactions in a checkbook or other ledger.

Data Organization - Providing structure to data through a "Chart of Accounts."

Data Processing - Entering data into a computerized accounting system and the calculations needed to produce the resulting numbers needed to report the information (total income, expenses, profit, etc.).

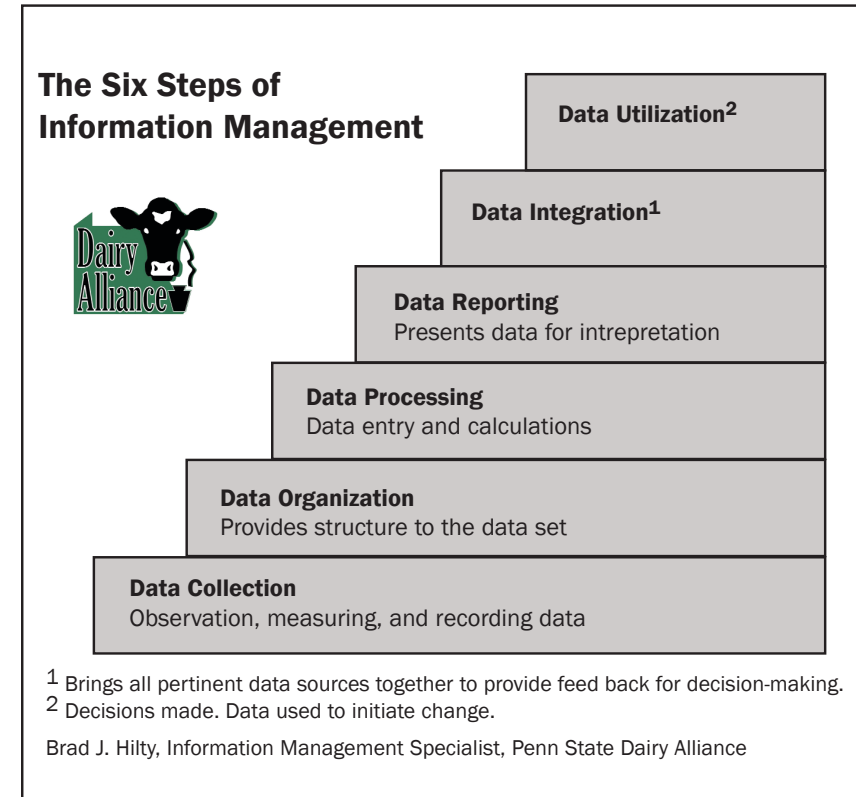
Data Reporting - Generating reports such as income statements, cash flow statements, balance sheets, general ledgers and others.

Data Integration - Bringing data from different sources to calculate per unit costs and other performance measures. Bringing data together from other dairies to develop and compare benchmarks.

Data Utilization - Using the data to make sound management decisions.

When we view our accounting process in this manner, we can see why taking measures to ensure that each step is completed accurately is important. If we forget to write down a transaction, simply because it does not go through our checking account, such as buying and financing a piece of equipment through a machinery dealer, our whole set of records and all the information above that point is inaccurate and in most cases useless. Sound information management is the base of any accounting system.

Figure 1.



There are different forms of accounting, but all conform to the previous definition in that measurement and communication are the primary objectives of each. And all are needed to make management decisions at various levels both within and outside the business. **Financial accounting** is used to measure and communicate business performance to individuals outside the business, such as lenders, investors and advisors. The purpose of **managerial accounting** is to measure and communicate business performance to individuals inside the business for the purpose of daily decision-making. **Cost accounting** measures and communicates information based on the cost of production of a commodity or the cost of operation of various centers within a business. Again, this information is needed by the decision makers of the business. All these different forms of accounting can provide useful information in evaluating business performance, yet many businesses fail to venture beyond the most basic accounting function, **tax accounting**, which measures and communicates the information necessary for filing federal, state and local tax returns. This level of accounting has limited value in managing a complex dairy business.

From a tax standpoint, most farming businesses should be on a **cash accounting** basis. This system offers substantial flexibility in income tax planning. However, when analyzing the financial performance of a business, it is necessary to review a more detailed picture of the financial status. In cash accounting, income is reported when it is received and expenses are claimed when they are paid. A more accurate system of accounting is **accrual accounting**. In accrual accounting systems, income is reported when "the right" to receive it has been established and expenses are reported when they are incurred. Most dairy businesses operate with a certain level of accounts payable, which will certainly affect the expense total of the operation. At the same time, these businesses frequently experience changes in inventory on an annual basis. If these transactions are not accounted for, the information communicated to others, both within and outside the business, is inaccurate. Modern accounting software programs enable producers to employ both systems simultaneously, thus allowing the business to reap the benefits of cash accounting for tax purposes and accrual accounting for managerial purposes.

Managing the accounting system for many dairy businesses is viewed as a boring task that is only necessary to satisfy "Uncle Sam." Records are kept and used solely for the purpose of filing an income tax return. Maintaining a good accounting system is just not a priority in many agricultural businesses. Although computers have made this job easier in recent years, data entry is often done at the end of a long day. Attention to detail is lacking and, in many instances, the person responsible for managing the books lacks the knowledge of basic accounting principles and practices. As a result, the information supplied by the accounting system is inaccurate and useless for making management decisions. In addition, many businesses incur additional professional fees as accountants sift through the data in an effort to recreate the financial transactions of the business and ensure a reasonable level of accuracy in the data they are reporting.

As dairy businesses become larger, and more complex, having accurate data on which management decisions can be based is critical to operating a highly profitable business. In our course, **"Accounting Methods for Progressive Dairies,"** we hope to provide you with a clearer picture of the basic accounting principles you need to follow in your daily accounting practices. In addition, we will discuss how the information you collect can be used to make management decisions and how taking your accounting system to the next level will provide added benefits you may have never considered.

Good accounting habits are built on sound accounting principles and practices that are repeated over and over. That is the key concept...repeatability. However, no amount of work in developing a good system of records is worth the time unless the information is reconciled and used. To improve the accuracy of the records, the entries should be reconciled with the bank, credit card, and open account statements. Reports should be reviewed monthly and analyzed, at least

annually, preferably quarterly. Actual figures should be compared to the previous year and to the budget. Most software programs allow a business owner to program in budgeted figures which were developed based on historical data. Analysis of the income statement (short & expanded) will provide insight as to any weaknesses that may exist. If a certain expense category appears to be out of line, reviewing the general ledger or a journal report may shed light on why the expense is high. A monthly cash flow report is quite useful in evaluating where money is going and in preparing a budget for subsequent years. The more advanced the record keeping system becomes, the more data it will provide and enable the business owner to make better decisions.



The system of accounting employed may differ based on how the information is to be used. However, the purpose of any accounting system is measurement and communication.

Using the Dairy Alliance Recommended Chart of Accounts

Dairy producers must monitor the performance of their business both internally and externally if they wish to develop an accurate picture of how efficiently they are operating. Trend analyses and benchmarks are two tools that enable businesses to accomplish this task. One of the keys to generating good benchmarks that can be used to compare the performance of one business to another is a uniform data set. The adoption of computers in farm accounting practices has enabled producers to keep more detailed records than before. However, little has been done to provide dairy producers and the professionals who serve them with a set of guidelines for entering and processing data. This has resulted in data sets with little uniformity, and in many instances, significant inaccuracies.

In October of 2000, dairy professionals from the lending, accounting and consulting fields were assembled to gather input and develop a set of guidelines for entering, processing, reporting and analyzing data from dairy businesses. One of the objectives of this program was to develop a standardized chart of accounts that can be used with any accounting program to organize and standardize data collection. The Dairy Alliance Recommended Chart of Accounts achieves this objective.

The Dairy Alliance Recommended Chart of Accounts (RCOA) provides a framework on which a comprehensive dairy accounting program can be constructed. There are five basic account types, under which all categories and accounts are included. Those are assets, liabilities, equity, income and expenses. Each account type has several account categories listed within it. These account categories may be referred to as account categories, account groups or main accounts, depending on the computer program used. Transactions should never be entered directly into an account category, unless there are no accounts listed under the account category. The RCOA has been designed to collapse into a one-page Income & Expense Statement. The categories form the framework for doing this.

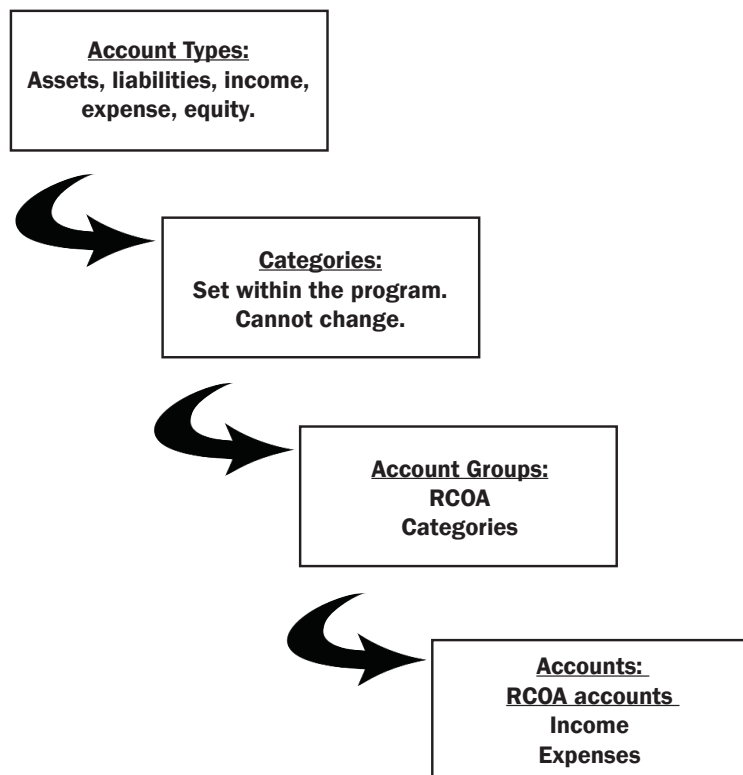
Under each account category of the RCOA is a list of accounts (or sub-accounts). All transactions should be coded into these accounts. This feature enables the income and expense statement to be expanded to provide greater detail for identifying management areas, such as cost control, that may need closer attention. Once the dairy accounting system has been correctly set up, information is easier to manage and is more uniformly organized.

Recommendations:

- 1) Do not add, delete or change account categories.
- 2) The accounts listed under each category are a suggested minimum breakdown of the account category. You may customize the RCOA for your operation by adding or deleting accounts from each category. However, accounts should not be moved from one category to another.
- 3) Do not set up accounts based on vendor names. A good accounting system will allow you to sort data entries by vendor name.
- 4) **Do not enter capital sales or loan proceeds as income; do not enter capital purchases or principal payments as expenses.**
- 5) The diagrams at the end of this bulletin illustrate how the RCOA can be used with the various accounting programs used in dairy businesses. Different accounting packages use different terminology for account categories and accounts.

Refer to the Flow Diagram on the next page to see how common accounting programs used in dairy businesses are set up.

RECOMMENDED CHART OF ACCOUNTS HIERARCHY



ASSETS

Current Assets

Checking Account

Savings Account

Inventories

Hay
Corn
Silage
Haylage
High Moisture Corn
Seed
Fertilizer & Lime
Chemicals

Investment in Growing Crops

Seed
Fertilizer & Lime
Chemicals

Pre-Paid Expenses

Rent
Professional Fees

Non-Current Assets

Co-op Stock/Capital Retains

Buildings

Original Cost and (Accumulated Depreciation)

Purchased Dairy Cows

Original Cost and (Accumulated Depreciation)

Machinery

Original Cost and (Accumulated Depreciation)

Equipment

Original Cost and (Accumulated Depreciation)

Farm Vehicles

Original Cost and (Accumulated Depreciation)

Buildings & Improvements

Original Cost and (Accumulated Depreciation)

Real Estate Improvements

Original Cost and (Accumulated Depreciation)

Real Estate (Non Depreciable)

Farm House
Land

LIABILITIES

Current Liabilities

Accounts Payable

Withholding Taxes

Operating Loan-LOC

Farm Plan

Credit Cards

Deferred Taxes

Non-Current Liabilities

Machinery Loans

Equipment Loans

Cattle Loans

Mortgages

EQUITY ACCOUNTS

Retained Earnings

Contributed Capital

Owner Draws

INCOME - Categories

Milk Income - Record dollar-amount and physical amount., i.e. hundred-weight (cwt), sold.

Livestock Sales - Accounts to include calf sales, breeding stock sales, cull cows, and other livestock sales.

Crop Sales - Accounts for each crop record, dollar amount, and physical amount (i.e. bushels, tons, etc.), sold.

Government Program - Break down to crop and livestock programs.

Crop Insurance Income

Patronage Dividends - Include cash and non-cash dollars. Do not include revolving fund dollars.

Custom Income

Capital Gain/Loss - Gain or loss on sale of capital assets.

Misc. Income

EXPENSES - Categories

Milk Marketing Deductions - Accounts to include milk hauling, dues, and milk marketing fees.

Feed - At minimum, separate into calf and heifer feeds, dairy feeds, forages, and other feeds.

Labor - Split into full-time, part-time, and management labor (owner draws).

Employee Benefits - Payroll taxes, employee insurances, retirement, housing, and utilities (if cash expenses).

Breeding & Registration - Semen, AI-service, and registration.

Veterinary Expense - Vet-medicine, vet-services, and hoof trimming.

Livestock Expenses - BST, DHIA, bedding, marketing, and trucking.

Replacement Expense - Include expenses of replacements for maintaining herd size only.

Custom Hire - Report only crop custom hire and manure disposal expenses.

Supplies - Milk house and parlor supplies and operating supplies.

Crop Expenses - Seed, fertilizer, chemicals, crop storage (Ag Bags), and crop supplies.

Storage Expenses - Crop storage (Ag Bags), forage inoculants and preservatives, and crop storage fees.

Gas, Fuel and Oil - Gasoline, diesel fuel, (propane for vehicles only), oil, and lubricants.

Repairs - Machinery (field machinery), equipment (stationary equipment), and real estate repairs.

Rent and Lease Payments - Land, facilities, machinery and equipment rentals, leases, and ME and cows.

Professional Services - Accounting, legal, and management consulting fees.

Utilities - Electric, telephone, and propane/LP gas for heating.

Insurance - Include liability and hazard insurance, and farm vehicle insurance. No health or employee insurance.

Interest - Mortgage interest and other interest.

Taxes - Real estate taxes, other business taxes, and no payroll taxes (entered under employee benefits).

Misc. Expenses - Include all other expenses, including travel, education, dues and subscriptions, auto and truck, disposal expenses, office expenses, bank fees, and other expenses.

Depreciation Expense - Separate accounts - Machinery and Equipment, Livestock, and Buildings/Improvements (may want to breakdown further to Dairy, Replacements, and Crops).

Note: DO NOT ENTER THE FOLLOWING AS MISC. INCOME

Capital Sales - For Sales of Assets; deduct book value (Original Cost - Accumulated Depreciation) from appropriate asset account and report gain/loss as income.

Loan Proceeds - Increase loan balance of appropriate liability account.

Note: DO NOT ENTER THE FOLLOWING AS MISC. EXPENSES

Capital Purchases - For asset purchases, add original cost to the appropriate asset account (transactions involving trade-ins are more complicated).

Principal Payments - Decrease loan balance of appropriate liability account.

INCOME - Categories & Accounts

Milk Income

Milk Sales - Record dollar amount and physical amount, i.e. hundred-weight (cwt.) sold, include separate accounts for individual components if you wish.

Livestock Sales - Record dollar amount, head sold, and weights (cwt. or lbs.) sold.

Calf Sales

Culls - Raised Cows

Culls - Purchased Cows

Breeding Stock Sales

Other Livestock Sales

Crop Sales - Accounts for each crop, record dollar amount and physical amt., (i.e. bushels, tons, etc.), sold.

Government Program - Break down to crop and livestock programs.

Dairy Program Income

Crop Program Income

Other Government Income

Crop Insurance Income

Patronage Dividends - Include cash and non-cash dividend. Do not include revolving fund dollars.

Custom Income

Custom Machinery Hire Income

Other Custom Income

Misc. Income

Interest Income

Gas Tax Refunds

Misc. Income

EXPENSES - Categories & Accounts

Milk Marketing Deductions

Milk Hauling

Co-op Dues

Dairy Promotions

Milk Marketing Fees

CWT. Program Deduction

Feed

Forages - Internal (Raised) - For enterprise accounting adjustments only.

Grain - Internal (Raised) - For enterprise accounting adjustments only.

Forages - Purchased

Dairy Feed - Grain (Purchased)

Dairy Feed - Protein

Calf and Heifer Feed

Milk Replacer

Minerals

Specialty Feeds

Labor (an additional level can be added for different jobs on dairy, i.e. feeding, parlor operator, animal care, crops, etc.)

Wages - Full time

Wages - Part time

Employee Benefits

Payroll Taxes (943-Employer Share)

Employee Health Insurance

Workman's Comp Insurance

SEP/IRA Retirement Programs

Unemployment Insurance

Education and Training

Employee Housing

Employee Utilities

Misc. Employee Benefits

Breeding, Registration, & Genetics

Semen Expenses

Breeding Fees

Repro Services

Animal Registration Fees

Veterinary Expense

Veterinary - Vaccines and Medicines

Veterinary Services

Hoof Care

EXPENSES - Categories & Accounts

Livestock Expenses

- BST
- DHIA Testing Fees
- Bedding
- Marketing
- Trucking

Replacement Expenses

- Custom Heifer Boarding - Enter fees paid to others for raising heifers off farm.
- Raised Replacements - For enterprise accounting and accrual adjustments for increases in herd size.
- Purchased Replacements - To maintain herd size only.

Custom Hire

- Manure Disposal
- Custom Harvesting
- Custom Planting
- Other Custom Machine Hire

Supplies

- Milk House and Parlor Supplies (can be separate categories)
- Operating Supplies (buckets, chains, boots, ear tags, etc.)

Crop Expenses

- Seed
- Fertilizer and Lime
- Chemicals
- Crop Insurance
- Crop Supplies (baler twine, etc.)
- Crop Consulting

Storage Expense

- Crop Storage (Ag bags, plastic for silage, etc.)
- Forage Inoculants and Preservatives
- Commercial Grain Storage Charges

Gas, Fuel and Oil

- Gasoline
- Diesel Fuel
- LP Gas (for vehicles only)
- Oil and Lubricants

Repairs

- Field Machinery - Tractors, field machinery, and other machinery with wheels.
- Waste Management Machinery - Manure trucks, wagons, and pumps.
- Feeding Machinery - TMR Mixer, feeder tractor, skid loader, and pay loader.
- Parlor Equipment - Milking equipment, repairs, and maintenance.
- Milk Cooling and Storage Equipment - Bulk tank and compressor.

EXPENSES - Categories & Accounts

Repairs Continued

- Feeding Equipment - Silo unloaders, conveyor, and feeding systems.
- Waste Management Equipment - Alley scrapers, stationery pumps, etc.
- Real Estate - Repairs to buildings and improvement.
- Farm Truck - Repairs to farm trucks only (includes pickups for farm use).
- Shop Supplies - Rags, bolts and nuts, welding rods and gas, etc.

Rent and Lease Payments

- Land Rent
- Facilities Rent
- Machinery and Equipment Rental
- Machinery and Equipment Leases
- Cattle Leases

Professional Services

- Accounting and Legal Fees
- Management and Business Consulting Fees

Utilities

- Electric
- Telephone
- Water
- Propane/LP Gas for Heating
- Kerosene for Heating

Insurance - No health or employee insurance; enter these in Employee

- Benefits category.
- Liability Insurance
- Fire & Hazard Insurance
- Farm Vehicle Insurance

Interest

- Mortgage Interest
- Other Interest

Taxes - No payroll taxes; enter under Employee Benefits.

- Real Estate Taxes
- Other Business Taxes

Miscellaneous Expenses - Include all other expenses.

- Travel Expenses
- Education Expenses
- Dues and Subscriptions
- Auto and Truck Expenses
- Disposal Expenses
- Bank Fees
- Other Expenses
- Office Expenses
- Office Supplies (paper, postage, printer ink, copies, etc.)



About the Author

Brad Hilty is the Information Management Specialist for Dairy Alliance, a Penn State Cooperative Extension initiative. Hilty is responsible for defining strategies for progressive dairy producers in business and information management. Before coming to the Dairy Alliance, Hilty served as the owner and chief consultant for his firm, PLS Agri-Management Associates. To contact Brad Hilty, call 717-948-6612 or e-mail Brad at bhilty@psu.edu.

About Penn State Dairy Alliance

The Penn State Dairy Alliance benefits the individual farm in dealing with issues that relate to labor management, business management, information technology, and nutrient management. In turn, these efforts impact the economic viability and quality of life of the dairy industry throughout Pennsylvania and beyond.



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