

Farm/Ranch Information Systems

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Good management decisions in agriculture, as in any business, are based on good information. Without access to good information, making good decisions is much like trying to drive down an unmarked road. Without a centerline, well-defined shoulders, nor any roadsigns it would be difficult, if not downright hazardous to attempt to reach a specific destination. Accurate and reliable information can provide the sign-posts and indicators necessary for prudent decision-making.

While most operators would agree that adequate information is essential to a well-run business, few are willing to commit the resources necessary to ensure they have the best information possible. Times have changed. It is no longer enough to put in long hours behind the steering wheel or in the saddle to be successful. Today's successful operators must not only work hard but also work 'smart'. This requires the accurate, timely information and a commitment to spending adequate time in analysis. While this may be difficult during down-turns in commodity prices, it is all the more important where apparently small management decisions may have large unforeseen impacts.

Types of Information to Record

Once the decision has been made to develop or improve a farm/ranch information system, one might ask what information should be recorded. At first this question may appear to have a simple answer, however further consideration will show that the answer depends on the manager's need for information. It makes little sense to collect and record information that management has no intention of ever using. On the other hand, many times it is the uncollected information that is most useful in making complex management decisions.

Information can be collected and recorded for every resource on the farm/ranch—financial, livestock, wildlife, human, agronomic and natural resources. While resource documentation can be very general or more detailed, greater record keeping effort should be invested for critical resources. For example, on a western livestock ranch, winter feed may be a limiting resource. That is, winter feed is in short supply more often than other ranch resources. Keeping better records on the use of rangeland may provide enough information to allow the manager to develop strategies for improving range utilization and thereby reduce dependence on winter feed sources.

Sources of Information

Information needed for management decisions can be obtained from many different sources. Generally the best source of information, if available, are records kept by the farm/ranch itself. These records are generally more accurate and up-to-date than the information available from other sources. Below are some information sources you may want to consider

using.

When available, an operation's own accounting records are usually the most helpful source of financial information. If the farm/ranch uses an accountant to prepare tax returns, this may be a good starting point for a financial records system. In addition, banks generally require financial statements and budget information before any loan is made. Another source for asset documentation may be the county assessor's office. They may be able to provide a detailed listing of all farm/ranch assets and their estimated market value. This can be quite useful when drafting a financial balance sheet for the first time.

University publications may also provide valuable information. Bulletins are compiled at many Land Grant Universities on the costs of production for different agricultural commodities. In addition, information may be available from the University or local farm management association on the financial structure and costs of production for farms or ranches in specific areas.

Records of livestock numbers are usually kept up-to-date and are readily available to most farm/ranch managers. However, breeding cow weights and calf weaning weights can be harder to determine. Old sales receipts might supply cull cow weights and/or calf weaning weights. A note of caution here, cull cows are often lighter than those retained in the herd. If all cows are assumed to weigh the same as the cull cows do and feed rations are formulated on that basis, the cow herd will likely receive inadequate feed. Body condition scores and other qualitative evaluations of cow condition can also be helpful in formulating feed rations and for evaluating herd performance.

Few farmers/ranchers keep records on wild-life numbers present on their operation. Those who allow or receive income from hunting may keep records of harvests, however. In addition to these records, state game & fish agency personnel may be able to provide estimates of game populations for lands managed by the operation. Finally, wildlife surveys are not difficult to conduct and may provide valuable estimates of forage consumption by wildlife and income potential from a wildlife enterprise.

Human resources are likely the area most difficult to obtain records for. However, simple, straight forward tools for inventorying this resource do exist. The local county extension office can likely help you get started on a program to better understand this resource. In addition, time scheduling packages are readily available that can make employee scheduling, as well as personal organization more easily accom-

plished.

Sources of information on the agronomic resources include the local Natural Resources Conservation Service (NRCS) office (formerly SCS), the Farm Service Agency (FSA) offices (formerly ASCS), and county Cooperative Extension Service office. In addition, service providers may also have records for services performed on your lands. A list of such providers might include fertilizer dealers, farm cooperative, fuel suppliers, herbicide/pesticide applicators, irrigation district office, conservation district office, soil testing lab, etc. One or more of these information sources may be helpful in reconstructing a crop history, soil fertility record, history of irrigation water use, or other important management information.

Natural resource information can also be obtained from many different sources. However, because it is gathered for a specific geographic location some adjustments may be necessary. For example, precipitation records are easily obtained for the nearest National Weather Service (NOAA) reporting station. However, depending on the proximity of the station to the operation, precipitation amounts can vary greatly. This can have implications for quantities of native forage species produced, amount of irrigation water needed, etc. Local NRCS offices can usually provide soil maps and aerial photos for most agricultural lands. These can be helpful in estimating type and quantity of forages available and corresponding management strategies. The county extension office may also be able to provide additional information on stocking rates, management strategies, and historic patterns of use.

Uses of Records

While keeping records accurate and up-to-date can require a large commitment of time and effort, it is the analysis of these records that makes the struggle worthwhile. Some of the uses of farm/ranch records include: legal and institutional uses, financial control and budgeting, and whole farm/ranch analysis and management.

The Internal Revenue Service (IRS) requires that sufficient records be kept to justify all income and expenses reported on income tax forms. While there are no legal requirements for records on non-corporate farms/ranches, such operations can be required to document all items of income and deductions. A complete, accurate record of the financial resource can be extremely helpful during an IRS examination. Also, some record of self-employment and employee earn-

ings are required by law. Documentation of 'basis', the nontaxable share from the sale of an asset, is also required; it can be obtained from records of purchase price and date of purchase for capital assets. Other required records may include herbicide/pesticide application information, dates and number of head of livestock turned onto public lands, as well as records documenting vaccinations, implants, and feed additives.

Lenders like to see evidence of a good organization with sound management skills when extending credit to borrowers. Several things will be considered in making such a determination. You can expect the lender to request information which will include: evidence of good management and productivity for crop and livestock enterprises and standard financial statements such as a balance sheet, income statement, statement of net worth, and a cash-flow statement for the past year(s). These records and statements allow the lender to look not only at the collateral pledged, but to also evaluate the borrower's repayment capacity. A complete, accurate set of records will provide the necessary information. In addition it will project a business-like, in-control image to the lender.

Just as lenders are concerned with cash flow in analyzing repayment capacities, agricultural managers should also be concerned with cash flow management. It is an important tool, not only in determining when and how much to borrow, but also in deciding when and how much to repay. Preparing a realistic cash flow budget should be regarded as a vital component of the annual record-keeping process. Preparing such a budget can help the manager work through various strategies on paper before it actually happens as the year unfolds, thus avoiding costly mistakes.

Perhaps the most important and often over-looked use of a farm/ranch record system is for analysis. A record system that meets income tax reporting and credit application needs provides virtually all the information needed for evaluating business performance. For example, good records provide the manager information on what variable and total costs of production are and whether the goals of the marketing plan and cash flow budget are being met. A thorough analysis of such records can supply information on strengths and weaknesses of the business, changes in business operations that worked and did not work, profitability of the business, and the financial position of the business. All of this information reflects on the performance of the farm/ranch unit.

If records have been compiled for limiting or critical resources, a whole farm/ranch analysis can be performed. Such an analysis can describe whether re-

sources are being over or under utilized. This may also help management identify new opportunities for income. For example, if the forage resource was under utilized, there may be opportunities to lease out forage or to lease additional cows to harvest the excess. On the other hand, if forage was in short supply, perhaps the manager should consider strategies for obtaining additional forage, reducing the number of cows, or intensifying the management of the resource through rotational grazing. Thus, long term productivity of the resource is protected from damage caused by over use. Without a system for maintaining complete and accurate records, management decisions must be made based largely on secondary information and 'gut feeling'.

Methods of Keeping Records

Many different methods are available for collecting resource information. There are any number of options from paper forms to be filled out by hand to computerized systems that store everything electronically. The best system is one that records, organizes, and reports the information in a timely manner in a form that is meaningful and easily analyzed. A system that is easy to use or is 'user friendly' is even better.

Financial records may have the most options for tracking and management. Systems for maintaining financial records extend from simple checkbooktype hand record systems for cash expenses to sophisticated computer-based double-entry accounting programs. New graphics-based computer operating systems and software that runs on them can help easethe-way to adopting the latter. Furthermore, many software packages designed for the typical household or small business can be a valuable tool in an agricultural setting. The primary consideration when attempting to choose a record keeping system is whether the system will supply the information needed by the manager.

Many easy-to-use software packages collect only basic accounting information—information easily obtained from a checkbook register. Taking the time and effort to enter the information into the computer does not automatically mean the software will supply the information needed. On the other hand, if cash records are what management requires, it makes little sense to invest a lot of time and effort entering details that no one will use.

One of the attractive features of a hand record system is that it can be modified to fit a particular situation or can accommodate additional records without the high cost of purchased software or the requirement of learning to run a new computer program. In fact, for those who do not have a clear idea of the types of information they need, a hand record system is an inexpensive way to experiment until those needs are discovered.

For those unsure of what additional records they should keep or for those just starting out, many professionals are available to help. Cooperative Extension Service offices can assist in identifying alternative systems for keeping farm/ranch records, as well as a system for tracking personal finances. Many university publications are also available through these offices which can help in selecting the record keeping system best suited for various situations. If an accountant is used to prepare tax reports, they often have valuable insights into what will work best for their information needs. In addition, accountants who perform record keeping services for agricultural operations may have valuable insights into what a good system should provide. Finally, bankers, consultants, and other agency personnel can be helpful in identifying record systems to satisfy specific needs.

The final word on farm/ranch information systems is that they are essential to sound management decisions. Without accurate information, decisions are based on 'gut feeling' at best. More information is generally better than less. However, information that is available when it is needed easily outweighs information that takes hours or days to compile. Remember, without access to good information, making good decisions is like trying to drive down an unmarked road—a difficult, if not hazardous proposition.