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Editor's note: We asked Bob Chern, director of data processing here at the American Angus Assn., to preview this article prior to its publication. His comments were very favorable. He also asked us to remind Angus breeders that the Association can provide Angus breeders with software for herd management.

This software was announced in August of last year and has been demonstrated in Louisville and Denver and was well-received by breeders attending the shows held there. Follow-up contacts with breederswho've purchased this software have produced highly favorable feedback. Call or write the Association for more details concerningthis service and program.

Computers and ranching-who could ask for a more challenging or extreme combination? The computer industry is racing ahead with unlimited potential, whereas the agriculture industry seems headed for disaster, if it's not there already. Unfortunately, the computer industry has not effectively marketed its product to the agriculture sector.

The media has left us with the impression that only youngsters can run computers, and if an adult touches a computer, sparks fly, smoke appears, and data is lost.

We, as farmers and ranchers, can't afford to be afraid of computers-our future is at stake. Granted, computers are not going to save the industry, but their contribution as a management tool should not be overlooked. Agriculture is a business, and you won't find a successful business that doesn't

have organized and detailed records. I'd like to further explain the decisions considered in acquiring a computer, what we learned to beware of in the process, and finally, what we have gotten out of the computer-no smoke, no sparks-only results.

The decision

Three factors should be considered prior to the purchase of a computer. First and most importantly, do you have the necessary records? A cornputer will not keep the records for you or turn you into a recordkeeper. Furthermore, it will require the cooperation of everyone involved in your operation-one person cannot keep track of everything going on at one time. Moreover, the information that comes out will only be as valuable and accurate as the information entered.



Secondly, what do you want your computer system to accomplish, and is your operation large enough to warrant a computer? How much time you spend pencil-pushing is a good indicator. Are you just getting the basics out of your hand recordkeeping system? When you want a loan, do you have a P&L, balance sheet, and/or cash flow at your fingertips? Can you list your cows in order of expected calving dates in five minutes? What about all bulls with yearling ratios above 100 in order of ratio? How about all wheat fields in order of most profitability or according to yield-per-acre?

Lastly, are you willing to invest the time necessary to incorporate the computer into your operation? It will be necessary to research the type of system you will need, learn how to run it, collect and enter the raw data, and finally review and interpret the reports. If you cannot answer these questions positively, check with your local Extension service, computer-user groups in the area, and state and breed associations to see what they offer.

The purchase

"We just purchased a computer!" is often the proud statement you hear from a new owner. Unfortunately, if that's all they purchased, they now own an expensive office ornament. The purchase of a computer prior to the software will undoubtedly lead to

frustration. Software programs are the instructions that tell the computer what to do. Without software, your computer can't do a thing. Because software development is five to 10 years behind computers, many programs are not compatible with certain computers or farm and ranch operations. It can be a costly mistake to find the programs you want and then learn they don't run on your computer.

Software can be simplified into three types: programmed, custom packages, and application programs. Programmed software involves hiring a computer programmer to come in and set up your program based on what you tell him you need. This method is not only costly, but also aggravating if every time you wish to modify your system you have to track down the programmer, who is either out of town or out of business.

Custom packages are already set up-you just enter your own records. This particular kind requires no programming, but limits your flexibility. You can only accomplish what that software company thinks is pertinent or standard to an operation. But, how many of us run a standard operation?

Finally, there are application programs which require some programming, formatting, and designing to fit your own operation. They require more time to learn, but give you more flexibility. Any of the three software types can have bugs or errors, so make sure your product is backed by a reliable source. As you can see, there are advantages and disadvantages with each. Your best bet is to visit fellow farmers and ranchers and explore their computer systems. See how satisfied they are with their present system and what limitations they have encountered. Show them your plans and the capabilities your system will require and see if they'd recommend their system.

Managing records by computer

Organization and error reduction are imperative to good management. Switching over to a computer enabled us to improve our organization and cut down on errors. Our data is entered into the computer only once. This not only eliminates the errors

that occur every time data is transferred or copied in haste, but also the exasperation of tracking down information in five different areas. The data in the computer is permanent, and unlike a slip of paper cannot accidently fall in the trash. Backups orextra copies of our data are made on a regular basis in case of unexpected power outages or fire.

Don't invest in a computer system from "Problem-Free Computers Inc." Purchase from a large, reputable firm that is going to be there in five months or seven years when you need repairs or wish to expand. See what type of learning or training center they provide for new owners. Beware of the salesperson that says, "My system can do anything!" Let the salesperson know when you have a problem, you'll depend on him to solve it. If they won't back their product, you don't want it.

When you purchase farm machinery, it usually takes some experimenting to get the feel of the machine. You don't put your tractor in the shed just because it doesn't do the job you thought-you review your owner's

In the office . . . at Jorgensen's

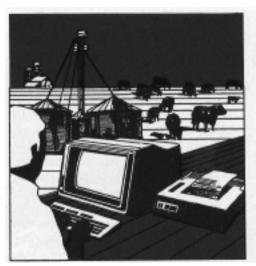
Our cattle program was set up with a data base system. There is a separate program for each herd—Angus, Simmental, Charolais, and Commercial. Each herd has an identical program set up for the production year which begins when the dam is bred and ends when the calf is sold or retained as a yearling. At this time, this program is used for production and performance information. The formulas used for calculations are those provided by the breed associations and the Beef Improvement Federation.

- BREEDING REPORT lists the breeding/exposure date, A.I. bull, pasture, and expected calving date in cow order—expected calving dates are calculated automatically. If a cow was not bred, it also lists her status with a brief explanation.
- CALVING REPORT lists all information concerning the calf—sire, dam, birth date, birth weight, pasture number, calving ease, dam's sire, gestation, and current status. Gestation is calculated automatically.
- WEANING REPORT lists all calving information and automatically calculates adjusted weaning weights and ratios.
- YEARLING REPORT contains birth, wearing, BVR ratios, and yearling information along with pelvic and scrotal measurements if they have been

entered. Adjusted yearling weights and ratios are calculated automatically.

- SIRE'S AVERAGES REPORT computes the birth, weaning, and yearling averages of bulls, heifers, and both sexes of each sire group. This report lists only the averages.
- 6) SIRE SUMMARY separates the calves according to sire groups and then sex. It computes the averages for each sex in a sire group and then for the whole sire group. Different from the Sire's Average Report in that it lists each calf with the data.
- SALE & YEAR SUMMARY lists all the information about a calf—birth, weaning, and yearling as well as sale information—date sold, buyer, address, and price.
- 8) DAM SUMMARY & PROGENY REPORT is a single-page report that contains all the individual performance history on a dam, her calves, and the history of those calves, i.e. sold or retained.
- INDIVIDUAL CALF RECORD is a singlepage report that contains all the performance data on a calf and its sale history.
- 10) REGISTRATION & AHIR FORMS are formatted to print calf data on breed association registrations and performance applications. Blank computer forms can be requested from the associations.

manual, visit with your dealer, and follow up on the problem until you get it solved. Your computer is a farm investment, so treat it the same. Don't procrastinate solving a problem by putting the computer on a shelf-it will end up staying there permanently. Despite the fact my topic is "How Do I Use and Manage Ranch Records," I felt compelled to brief you on the decisions and considerations in purchasing a computer system. I do not want any of you to fall victim to the excitement of computers and jump right in only to realize too late that nothing is as easy as it seems. Time, in the form of research and experimentation, is not wasted when it comes to computers. It's taken us three years to get where we are, and yet we have not reached our potential.



Now to the heart of it-"How do I use and manage ranch records? By computer, of course!" The computer is our primary management tool. Its

only limitation-it can't make a decision for us.

Pre-printed forms are used in the field. Every time an animal is worked, the pre-printed forms provide a double check that the identification and current information corresponds with what is recorded. At one time or another, most of us have felt the frustration of misreading a tag and proceeding to apply the wrong brand or weaning all the calves only to find out one calf has two weights, or worse yet, registering your heifers only to learn that somehow between calving and weaning one of them became a bull.

For our cattle records, our cornputer is programmed to calculate expected calving dates, gestation days, 205- and 365-day adjusted weights and ratios. It's a pleasure to take 30 minutes to input the weights after a long, tiring day of weaning calves and see immediate results, versus spending all night with pencil, calculator, and paper or waiting the two to four weeks for an association to run the data for you. Nonetheless, we still send data to the Association for the national file, but even that has become fun. What used to take days of looking in five different binders only takes minutes to run with a format designed exactly like Association forms.

There is also a report that does registrations and gives each calf a name according to our standard naming procedure.

The computer offers an excellent means of recording inventory where numbers can be quickly adjusted for death loss, sales, and transfers from replacement heifers to cow inventories. The various age groups of our cow inventory are readily accessible for review along with their lifetime production history. This becomes' a valuable tool for culling the cow herd numbers to fit the inventory needs of the ranch. All management processing dates are recorded, such as vaccinations, implants on the commercial groups, breeding, weighing, etc. Since all management practices of this nature can be easily recorded to the individual animal, it becomes a speedy and simple task to identify the lifetime record of all animals in the herd.

Managing production with computer records

Production comparisons provided by computer output are unlimited. The computer's advantage is its large, retrievable memory. If your system is flexible, it will be able to provide a variety of sorts and selections in a matter of minutes or even call up past-year comparisons. As a result, many "what if' questions can be reviewed in a matter of minutes. Managing production with computer records in a diversified farming and ranching operation such as ours, with flexibility in mind, will greatly enhance the total net return on the bottom line.

It becomes much easier to determine values of crops for hay, grain, or silage usage by simply reviewing past gain records from results in past feeding trials. This type of information is easily recalled for review. We can quickly run a value estimate. of a hailed or drouth wheat, oats, or milo

field destined to be used in a salvage situation.

We recall inventory location by using the computer to identify the pasture number for locating cows, calves, or heifers for any specific reason. It's necessary for us to maintain a dozen or more individual pastures due to single-sire usage with our involvement in seed stock production.



All of our feed inventory is weighed as it goes into storage with a cornplete listing computerized for easy identity. The inventory value is determined by market quotes at the time of storage, and daily usage is accounted for as feed is weighed out to each group of livestock which is also recorded on the computer. This system gives us ready access to accurate feed costs per head per day for our feeder and feedlot cattle.

Much of our market strategy is based from computer updates originating through AgriData and compiled by highly respected marketing analysts. AgriData is one of America's largest agricultural information and computing networks. Through our computer, we simply call up AgriData, and the information is at our fingertips. This service gives us access to a wide variety of marketing information for both grains and livestock.

With our known feed costs and upto-date marketing strategy, we can consider forward pricing in a much more intelligent manner than simply taking a good guess without knowing our costs.

Marketing our product with computer records

Marketing our product-in our case, yearling bulls-depends on meeting our customer's needs and maintaining a good customer relationship. Although the computer can never replace the personal touch, it's an ad-

ditional asset.

Prior to our spring sales, we often find customers dropping by to look at our bulls. Rancher Smith is only interested in bulls with a yearling ratio above 100 and birth weight under 85 pounds. In addition, Rancher Smith is pressed for time and doesn't want to wait for you to make a list of the bulls or to keep returning to the office to look up data on a particular calf. By computer, he has a permanent copy of all the bulls that meet his requirements within a matter of minutes. If he'd rather look at the bulls by himself or review the data at home, he has all the information in front of him.

Personalized letters done on our computer system have aided us in maintaining good customer correspondence. Just like the computer salesperson, we need to prove to our customer that we don't forget them once the bull leaves our yard; we guarantee satisfaction. Our bull buyers receive letters three times a yearat sale time, after buying a bull, and a follow-up letter to see how the bull is progressing. Depending on the size of the mailing, we can do it in a matter of one to two days in our office. If we plan to be selling semen in a particular area of a state, we can send personalized letters to all our previous customers in that area.

What type of bulls are our customers paying more money for? Beginning this year, we generated a report containing all the performance data on all sale bulls in order of the highest- to lowest-selling prices. Thinking what your customer is looking for and actually seeing the facts can be an eye-opening experience.

Summary

The computer records system gives us the benefit of an organized recordkeeping system with accuracy. Furthermore, this system has greatly improved the efficiency of our personnel since their own recordkeeping necessary for raw data makes them more aware of their contribution to our operation. This complete recordkeeping system, with updated inventory values and complete identification of all costs, plus a system to accurately appropriate labor costs gives us the needed information to realistically evaluate land values. | do believe the computer for recordkeeping will be the heartbeat for most cornmercial and purebred farm and ranch units in the near future.