

# AGRICULTURAL GUIDE

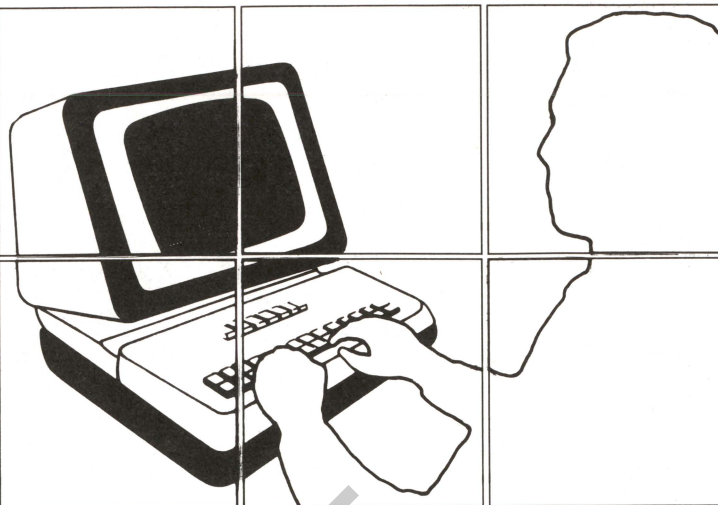
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Computers

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## Selecting a computer for the farm

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Computers have been used in agriculture for many years. They were present but not so visible. Today, the microcomputer can help improve your management ability. A computer can keep records, analyze them, and perform many management tasks. Although farmers have mechanized many farm operations, they still do much planning and management by hand.

This guide sheet explains what a microcomputer can do on the farm and gives suggestions to help you decide what to buy. For more information, see University of Missouri Extension Circular 952, "A Computer For Your Farm—Some Things to Think About."

### Understanding the computer

Computers involve two major items: hardware and software. Hardware refers to those components that you can see and touch—the electronic and mechanical parts. Software refers to the instructions that tell the computer what to do and how to do it—storing, retrieving, calculating, etc. Software programs must be specific to nearly every purpose.

### Basic computer components

All computers have four major components. The functions of these components are input, processing, output, and storage.

**Input.** A keyboard similar to that on a typewriter is the most common device on a farm computer.

**Processing.** The central processing unit (CPU) per-

forms the calculations and processes the information. The CPU consists of a microprocessor chip and some memory capacity. Memory is measured in terms of K or thousands of characters. For example, a 64 K unit has a memory capacity of about 64,000 characters.

**Output.** The most common output device is a display screen—cathode ray tube (CRT) or monitor—much like that of a television set.

**Printer.** For most farm business applications a printer is a necessity. Although you could copy information from the screen with pencil and paper, the drudgery would defeat the purpose of having a computer.

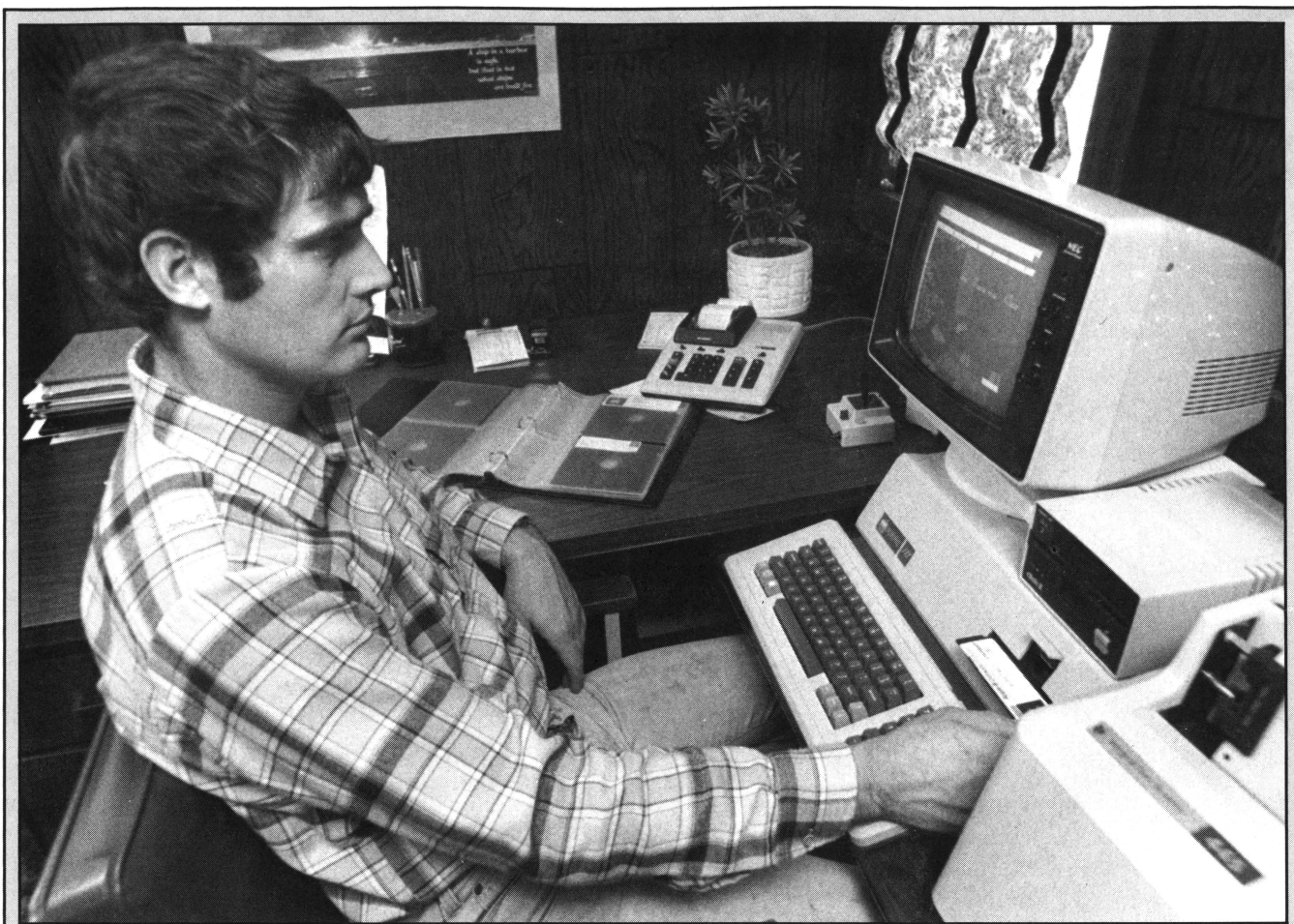
**Storage Devices.** When the computer is turned off, information stored in temporary memory disappears. Therefore, data and programs are placed in permanent storage.

**Floppy discs.** Most farm business computers use a disc drive and floppy discs for storage. These are either 5½- or 8-inch-diameter discs of plastic, similar to a phonograph record, coated with magnetic material.

**Cassette tape.** Computer tapes are similar to audio tapes. Although the cost of storing data on tapes is much less than with discs, they are not well adapted to business applications.

### Farm computer uses

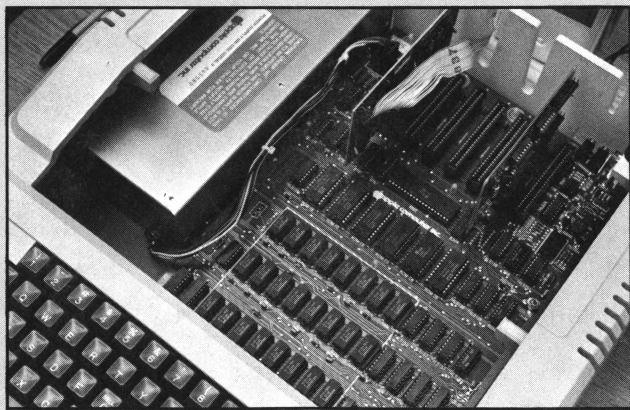
**Financial records.** Nearly all studies indicate that a financial record system is the first priority for most



Budgeting and planning are good uses of a computer on the farm.



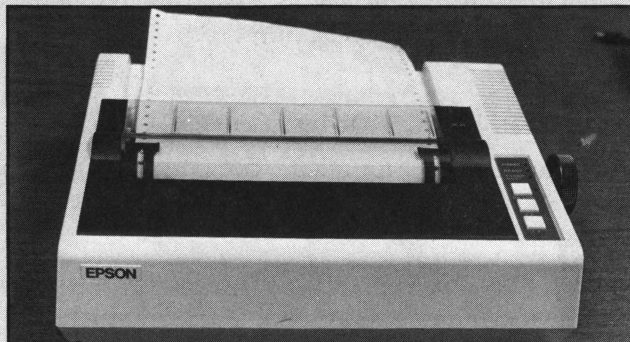
Display screen, keyboard, and printer.



Central processing unit.



Floppy discs.



Printer.

farmers looking at computer applications. Most farmers find that they require a record system written specifically for the farm. More and more of these programs are becoming available.

**Production records.** Many farmers want to keep more detailed information on fields, crops, cow herds, or farrowing units. Computers offer the opportunity to keep detailed records and receive timely reports.

**Budgeting and planning.** Comparing and selecting among alternatives—whether between crops or between different types of machinery—often involves computation. With computers, you can compare many alternative plans, budgets, and prices. A computer can easily furnish answers to “What If” questions.

Cash flow planning by hand is tedious and time-consuming. An electronic worksheet program is easily adaptable for making cash-flow projections.

## Buying and adapting a computer

The following five steps may help you buy a computer for your farm business.

**1. Learn about computers.** This is a new technology, and it is important to understand how computers operate. It's not necessary for you to learn all the details, but you should know their potential and their limitations. An increasing number of seminars and short courses are available to help you learn more about computers. Many bulletins and pamphlets are appearing on the market. Dealers are a source of information but should not be your only source. Other farmers and neighbors who have a computer are one of the best sources of good ideas about how a computer can be used on the farm.

**2. Decide on applications.** Probably the key to adapting a computer to a farm operation is deciding exactly what you want it to do for you. What records, reports, or information do you want to get from the computer?

Let's say you want to use the computer to keep records on your cow herd. First, you must decide exactly what information on the cow herd you want to keep and what reports you want from the computer. Will you want production, health, and breeding reports?

**3. Select software.** Once you decide what you want the computer to do, then you can look for software that will produce that information. Software or computer programs tell the computer exactly how to solve the problem. If you want reports on your cow herd, you'll want to locate a computer program that is capable of generating the information that you want.

**4. Select hardware.** After you've found suitable software, look for hardware that will run those programs. Not all computer programs will run on all computers. Therefore, it is important to match computer software and hardware.

Again, consider the cow herd example. It's possible that you might find a program that does exactly what you want but runs on only a certain brand of computer. This program may be important enough to dictate your choice of hardware.

By choosing the important software first, you will also know how much memory and disc storage capacity you'll need. Software often has specific requirements for memory and storage.

**5. Select hardware and software vendors.** Selecting a computer hardware and software vendor is like selecting a machinery dealer. You will want one who knows your problems, who will be around to answer questions, and will provide the services you will need.

## Computers in the future

Computers will continue to evolve. We don't know exactly how computer applications will evolve. But we know that this is an exciting and interesting area of the future, and that farmers will rapidly adopt them for their operations.



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