
Buying a Computer for Your Farm or Ranch

Quick Notes...

The application of computer technology for farm management is one of the most exciting trends in agriculture today.

Both hardware and software will continue to improve as more farmers use computers to make better management decisions.

Every farm, ranch and home based business with moderate sales should seriously consider buying a computer for record keeping and decision making. Before deciding to buy a computer, ask yourself two questions: 1) Do I really need a computer? and, 2) Will it pay for itself? Keep in mind that not everyone is computer compatible. Some people simply do not have the personality traits that will lead to a long and harmonious relationship with a computer. If you have the opportunity, take an introductory computer applications class.

This will give you a better idea of what a computer can and cannot do, as well as expose you to a variety of computer hardware and software. Over the past few years, the technology has become much easier to use and cheaper to buy. If you decide to purchase a computer, some items to consider are below.

Determine What You Want the Computer to Do

Computers can serve many purposes in business management, such as record keeping (financial and production records), financial analysis, investment analysis, enterprise budgeting, tax management and planning, etc.

Take time to visit with software dealers, neighbors and friends with computers, vo-ag. instructors, extension staff, or anyone else with experience with computers. These will help to determine if your expectations are realistic and to get ideas on how to use a personal computer.

Many business managers buy computers assuming they will save time. This is seldom the case. For the time spent, however, you should have better information on which to base production, financial, and marketing decisions. Your ability to make timely decisions should be enhanced.

Other common uses for a computer are word processing, spreadsheets, database management, encyclopedias, games, electronic mail, and on-line services.

Determine Which Software Will Accomplish Your Objectives

Once you have decided what you want your computer to do, then you must locate software that will do it. Computer items are divided

Into two general areas: hardware and software. Hardware includes things like the computer itself, the screen, the printer, etc. If you have to plug it in, it is probably hardware.

Software, sometimes referred to as computer programs, includes things that “run” on the computer and allow the computer to operate. Software has been developed to perform many different tasks and new computer programs are constantly being developed. Likewise, older and more successful computer programs are constantly being revised and improved. Some different types of software include: operating systems, word processing, spreadsheets, database management, accounting, inventory management, personal finances, and presentation graphics.

The operating system is one computer program that every computer must have in order to operate. It tells the computer the guidelines under which it can operate. Popular and stable operating systems are: Windows XP, Windows Vista and Mac OS. All computer programs are written for a specific operating system. It is important when buying software that you make sure it will run on your operating system, including your particular version.

Familiarize Yourself with Terminology and Trends in Software and Hardware

Some common terminology you should be aware of are:

Processor

The central processing unit (CPU) is the engine of the computer. The processor is about the size of a quarter and is referred to by its model number which indicates its relative power.

MHz Speed

Megahertz (MHz) refers to the computer's clock speed. This is not like a clock that tells time. This is how fast a computer can process data. So, a computer that has a 500MHz clock is doing something 500 million times per second. A 1 GHz computer does something 1 billion

times per second.

RAM

Random Access Memory (RAM) measures the memory available for the computer to use with software programs and data. It is the computer's work area.

Hard Drive

The hard drive is technically called a hard disk drive. The hard disk drive is a storage facility for a computer just like a grain bin is a storage facility for grain.

Hard disk drives are referred to by the amount of information they can hold. A megabyte is 1 million bytes and a gigabyte is 1 billion bytes. For our purposes 1 byte is one character. A hard drive that can hold 1 GB (gigabyte) of data is called a 1 GB hard drive. The average one page letter takes up .005 MB.

Floppy Disk Drives

A floppy disk is similar to a grain wagon. It is a way of moving data from one place to another. A floppy disk drive is the part of the computer that reads and writes the data to and from the floppy disks. The primary floppy disk size is 3 ½ inches square.

USB Flash Drive

A Flash Drive or Jump Drive are data storage devices integrated with a USB interface. They are typically small, lightweight, removable and rewritable. Flash Drives offer potential advantages over floppy disks. They are smaller, faster, hold more data, and more reliable.

CD-ROM

A CD-ROM drive is the device on the computer that reads CD-ROM disks. CD-ROMs are used to distribute computer software, including games and multi-media applications.

DVD-ROM

The basic difference between a DVD-ROM and a CD-ROM is that DVD's can hold 8 times the storage capacity. DVDs are popular optical disc

storage, primarily used for movies, software, and data backup.

MONITOR

Monitor is a fancy term for computer screen. There are several classes of monitors. The monitor is usually a cathode ray tube or some form of flat panel, TFT LCD display. The image quality depends on the number of dots, or pixels, per square inch. The more dots per square inch the better the resolution and the higher the price.

Monitor size is also important. A 17 inch diagonal monitor is the minimum for eye comfort and has rapidly become the standard.

PRINTERS

How you use what you print will dictate the type of printer you buy. A dot matrix printer is the lowest price option. Dot matrix printers are necessary for printing on pressure sensitive, multiple copy forms. A step up in quality are the inkjet and deskjet printers. Inkjet printers will be your best bet for affordable color printing. Laser printers provide the best print quality. They are also the highest in price.

Visit Local Computer Stores to Find Out What They Have To Offer with Respect to Hardware, Software and Support

Compare prices between local dealers, and compare different systems from mail order companies. Remember price is not the only criterion on which to base your decision. Be sure to research warranties and technical support. Good support from a local vendor can be worth a lot of money. A 1-year limited warranty is the industry standard and many manufacturers offer a 30 or 60 day, no fault return policy. Be sure and ask if technical support is provided. Does it cost? Is an 800 number available?

Select the System and Software That Best Fits Both Your Needs and Your Budget

Do not buy several different computer programs all at once. Start with one or two. Learn them before you launch into another. If you have questions, don't hesitate to call someone for help.

GLOSSARY

Applications -

Software programs that perform a specific user-oriented task, such as word processing or payroll. Applications can be either purchased as a package, or custom designed by a programmer.

Archive -

To copy information that need not be instantly accessible to a storage device that holds such files (for backup or security reasons).

Backup -

An extra copy of a disk or file made in case the original disk is lost or ruined. Make backups of all master disks immediately upon receiving or purchasing a new piece of software. Also make backups of important work disks and files.

Baud -

A measure of the data transmission rate, or bits per second. Typically referred to as baud rate with data communications. Baud rate divided by 10 is approximately equal to characters per second (cps). Thus, 1200 baud is about 120 cps.

BIT - BInary digiT.

The basic element of a byte (eight bits constitute one byte). It is a type of electrical switch that is either on or off. One binary digit is usually represented by 1 or 0.

Booting Up -

The initial loading of information that occurs when a computer is turned on, enabling it to read in or respond to further instructions. See warm boot and cold boot.

Byte -

A unit of memory capacity; a standard length sequence of bits, usually eight, used to represent a single character.

Character -

A symbol, such as a letter or punctuation mark, used to represent data or operational

instructions.

CD-ROM -

Compact Disk - Read Only Memory, holds about 650 megabytes of data which is equivalent to about 700 floppy disks.

CD-ROM Drive -

A device that reads CD-ROM disks.

Cold Boot -

Starting the computer after turning it off completely (see warm boot).

Compatibility -

A computer's capability to work with other devices like printers, data storage units, and other computer models, either from the same or different manufacturers; could also refer to software and program languages.

Computer Program -

A series of instructions that guide computer activities.

Computer System -

The combination of hardware (equipment) and software (programs) used for performing certain tasks.

CPU -

Central processing unit. The brain of a micro-computer. It contains the address registers, arithmetic logic unit, and timing signal generator.

CRT -

see Screen.

Cursor -

An electronically generated symbol that appears on the screen to tell the operator where the next character will appear.

Database Management -

A system that stores, retrieves, organizes, searches, and presents a collection of data relating to a particular topic.

Dot Matrix -

A printer type using a number of pins, 9 or 24, striking a ribbon to form characters.

DVD -

Digital Video Disk, holds a minimum of 4.7 gigabytes of data which is about 5,000 floppy disks.

Electronic Mail -

Messages or mail that are sent and received electronically, i.e. no hardcopy exists.

Expanded Memory -

Memory in addition to conventional memory, which is available through an expansion board for applications. Expanded memory requires a special program called an expanded memory manager that comes with the expanded memory board or the operating system.

FAX - Facsimile terminal.

The transmission of images via telephone lines for reproduction on paper.

File -

A specified collection of information (data) or instructions (programs) located on a diskette or other storage medium.

File extension -

The three character second part of a filename identifying the type of file. For example, for "CONFIG.SYS," .SYS is the file extension.

Filename -

The first part of a file name, limited to 8 characters. Certain characters are excluded, including space, period, comma, etc. Example: for "CONFIG.SYS," CONFIG is the filename.

Floppy Disk (diskette) -

A flexible disk. Most common size is 3 1/2 inch.

Font -

A particular design, shape, and size of lettering, or of a printing typeface.

Gigabyte -

A unit for measuring storage: 1 gigabyte is approximately 1 billion bytes.

Hard disk -

A type of mass storage computer disk that cannot be removed from its housing, consisting of a rigid metal platter with a magnetic coating. Also called a fixed disk.

Hardware -

The physical components of a computer system.

Icon -

A graphical representation of various elements, such as applications, documents, and hardware.

Keyboard -

The typewriter-like input device used to enter character information into the computer.

Kilobyte -

1,000 bytes. Often referred to as K. A measure of computer information storage capacity or memory.

Laptop -

A small, self-contained computer designed for mobility. Usually smaller and more lightweight than a portable computer and larger and heavier than a notebook computer.

Megabyte -

1,000,000 bytes. Often referred to as MB or Meg. A measure of storage capacity.

Memory -

That portion of the computer used as a work area for programs and data while the machine is turned on. The size of memory is measured in kilobytes or megabytes. Also see RAM and ROM.

MHz - Megahertz.

A unit of analog frequency used to measure the speed of the computer microprocessor.

Microprocessor -

Silicon circuitry comprising the brain, or CPU, of the microcomputer.

Monitor -

The video screen connected to the computer that displays input/output information and messages from the computer.

Mouse -

A hand-held input device that controls movement of the pointer (cursor) on the monitor screen having one to three buttons that access various features.

Online -

Equipment directly under the CPU control.

Online Services -

Systems which offer access to the Internet as well as a variety of other easy to use features (i.e. markets, weather, travel, entertainment).

Operating System -

A software package that manipulates files and allocates system resources to various computing functions such as copying, printing, editing, and executing programs. Sometimes referred to as the Master Control Program. Examples include: Mac OS, UNIX, and Windows XP.

Path -

The combination of disk drive letter and directory(ies) directing the user to a file within the system.

Peripheral -

Any external piece of equipment that is an

accessory of a system that receives information from or sends it to a computer, i.e., backup drives, CRTs and printers.

Pixel -

The smallest graphic unit on the screen. Also known as picture elements.

Presentation Graphics -

A software program that assists in creating effective overheads, on-screen electronic presentations, 35-mm slides, speaker's notes and audience handouts.

RAM -

Random Access Memory. Memory that can be read from and written to while the computer is running. Information in RAM is lost when the computer is turned off. Also called volatile memory.

ROM -

Read Only Memory. This memory is permanently built into the computer and cannot be changed. It is associated with interpreting the computer languages and communication between the computer and its peripherals.

Save -

To transfer information from the computer's volatile memory to a disk or other type of permanent storage.

Screen -

The television-like display connected to, or part of, the computer. Also called a monitor or CRT.

Software -

The instructions contained in a program and/or the program itself.

Spreadsheet -

An applications program that allows data entry into a row and column configuration and data manipulation; includes many mathematical functions.

Surge protector -

An electronic device plugged into a computer that protects it from the harmful effects of sharp voltage surges.

Warm Boot -

Restarting the computer by holding down the Ctrl - Alt - Del keys simultaneously, or pressing the reset button.

Windows -

A program providing a graphical user interface.

The user communicates with the computer by pointing to and selecting icons, rather than by typing commands on the keyboard.

Word Processor -

An application program that formats and prints text that the user enters.

Notes... Network (For More Information) Contact: **Rod Sharp, Ag. & Business Management Economist, CSU Extension**
(970) 245-9149, Rod.Sharp1@colostate.edu
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