AGNET – A Management Tool for Agriculture

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Many universities have developed computerized systems to deliver their educational material. AGNET (an acronym for AGricultural NETwork) is one such system but is unique for many reasons. AGNET was developed with two major principles in mind. First, the system had to be user-friendly so anyone could use it, regardless of previous computer experience. Second, it had to be capable of rapidly disseminating perishable data, such as market prices and information.

AGNET is a time-sharing system. That means anyone with a computer terminal or microcomputer and a MODEM and phone can access the system. MODEMS allow microcomputer users to connect their system to the host system by telephone. The user then operates the mainframe computer from his microcomputer keyboard. AGNET currently has a library of about 200 programs that are available to the user on request.

The AGNET system was developed at the University of Nebraska in Lincoln, 10 years ago. Land Grant universities in North Dakota, South Dakota, Washington and Nebraska now operate the system. Each of these states contribute new and updated programs and enter marketing information into AGNET programs. AGNET is being accessed by users in 47 states and nine foreign countries. Although AGNET is called "a management tool for agriculture," its clientele are quite diverse and come from various walks of life around the world.

The microcomputer explosion in agriculture has resulted in an AGNET explosion. The AGNET system and microcomputers are complementary, not competitive. The microcomputer offers on-site computing power for accounting, word processing, data base management, etc. Mainframe computers can operate large management models, programs which need to be updated at regular intervals, and programs which use time-sensitive data. They also deliver perishable marketing information. It is not cost effective for a producer to spend $100 to $500 on a program used occasionally or one which will be outdated in a short time. AGNET offers services not possible or cost-efficient on a microcomputer.

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AGNET PROGRAMS

The AGNET system has three main program categories: management models, information delivery, and communication programs.

Management Models

Management model programs accept the user's input, compute their results, then report those results. An example may be a cash rent analysis. The user would be prompted to enter such information as the type of crops to be grown, the various costs of producing these crops, additional labor and machinery requirements, the expected yields and market prices. The program would then compute how much the producer could afford to pay for cash rent based on the producer's own input.

A complete analysis is provided, including overhead, management charges, and labor. It is based on previous cost of production studies that indicate the average number of hours it takes to raise a specific crop. The program gives a much more thorough analysis than what the producer could do by preparing a partial budget longhand. Several of the AGNET management models use previously stored data bases and default values based on research, which allows very accurate analysis.

Information Delivery

AGNET's information delivery programs provide up-to-date market information, and other such data for the producer's use. Major commodity futures prices are available from the Minneapolis Grain Exchange and the Chicago and Kansas City Board of Trade. Minneapolis cash grain, West Fargo livestock and several other cash prices are also available.

In addition to being able to get these prices on a daily basis, AGNET stores them in a data base which is accessible from MARKETCHART, AGNET's own charting program. MARKETCHART allows subscribers to chart the commodity and location of their choice. The user picks the type of chart, dates, market and commodity to be charted.

AGNET also offers several reports from the USDA, ERS and FAS. The AGNET information delivery programs have increased in use more than any other type of program on the system over the last few years.

Electronic Communications

AGNET's third type of program is electronic communications, which has proved to be one of the fastest and most efficient means of communication. The AGNET MAILBOX program allows an individual to send a message to another AGNET user or even a whole group of users. In just a matter of seconds, a university specialist can let thousands of users know about a dangerous product on the market which is being recalled. Or he can let a select group of users know what to do with crops affected by last night's early frost. AGNET users often ask program authors questions about the analysis of a program, or request additional information about a specific topic.

AGNET USERS

NDSU has served all our computing clientele by using the mainframe computer and specifically AGNET. All makes and models of microcomputers can access university developed programs and information put on the AGNET system. The multi-state AGNET project has enabled us to also utilize computer programs and the expertise of subject matter specialists from other states in addition to NDSU staff.

Teaching, Research and Extension Staff

The Cooperative Extension Service is the main AGNET user in North Dakota. CES staff heavily utilize AGNET's electronic mail program and use the mainframe computer to transfer news releases and marketing information. County and state Extension staff use AGNET's management models to assist producers with economic analysis of farm management decisions. NDSU staff ran nearly 48,000 AGNET programs in FY85 and were connected to the system for over 5,000 hours.

Private Subscribers

Half of North Dakota AGNET's private subscribers are farmers or ranchers. These producers have realized the benefits of having both the microcomputer and AGNET work for them. Using accurate information generated from a farm accounting program, for example, leads to accurate results from an AGNET analysis program.

A number of credit institutions also access AGNET regularly. Loan officers run various AGNET programs for their customers to help them analyze their business and make future projections. AGNET users also include veterinarians, high schools, implement dealers, computer stores, consulting firms, government offices, and various other agricultural and non-agricultural businesses. North Dakota private subscribers spent nearly 1,000 hours on the system and ran 12,755 AGNET programs in FY85.

EXTENSION COMPUTER SERVICES

Agricultural Communication has a staff of computer specialists which maintain the AGNET system. The Extension Computer Services staff are also heavily involved with microcomputer software development, software distribution and microcomputer training for staff and clientele. People interested in how to access the AGNET system or desire information on our microcomputer services should write to the following address: Extension Computer Services, P.O. Box 5655, North Dakota State University, Fargo, ND 58105.