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Answering Farm Questions with the SDSU Computer

Phillip E. Plumart<sup>1</sup>

Few farmers can afford to buy a computer, but there are thousands who are renting computer services today. The indications are that more will be doing so as farm management questions become more complex and move rapidly beyond easy pencil-and-paper calculations.

The computer is one of the new tools now being utilized to help bring agricultural technology under control. It can focus on the problems of a single farm--your farm.

The computer can bring specialized consulting help on various management decisions as close to your door as the local county extension agent's office, or in some cases, as close as your personal telephone.

Agriculture has become so complex that no one man can carry all the management answers and alternatives in his head. Nor could any one county extension agent act as a go-between for state university specialists located many miles away from local farmers on intricate individual farm problems that would take many hours or days to solve before the computer came along.

You, as an individual farmer, can now consolidate the necessary information pertinent to your problems and put it into simplified computer language. The information can be communicated to the computer via local touch-tone telephone or typewriter computer terminal systems. You can now go to such a terminal, feed in the problem and your own personal data, wait a moment or so, and get long distance answers. The cost is the computer fee, usually \$3 to \$5, plus long distance telephone charges.

South Dakota State University is now connected with a computer named Synthia located at the University of Michigan, Ann Arbor, that is performing this service successfully for farmers in Michigan and 11 other states.

There are about 20 problem-solving programs that can currently be used, including buying versus custom hiring of machinery, livestock feeding planning guide, income tax management, general least-cost rations, least-cost swine rations, least-cost dairy rations and others. A least-cost poultry ration program is under development and will soon be available on the system.

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When Synthia learns what program you want, she clicks and beeps a bit to get set, then in her feminine mechanical voice asks for your farm data. The local extension agent or specialist enters your figures, using the touch-tone, push-button telephone, and Synthia replies back over the telephone. If you are not satisfied with the answer, you can have the agent or specialist touch-phone in alternative data for alternative answers. The touch-tone system of computer communication is available in the Davison County Extension Office in Mitchell. SDSU Extension Specialists also have been using portable units throughout the state.

South Dakota State University is also embarking on a new program called SWIDS (Statewide Information Dissemination System). SWIDS uses the computer located on the SDSU campus. This program utilizes a special typewriter as the computer terminal. Here again, the facilities of the computer on the SDSU campus can be as close to you as the nearest county extension agent who may have one of these terminals located in his office. For the present, typewriter computer terminals are tentatively scheduled to be located in Watertown, Rapid City and Huron.

The county extension agent simply calls the computer with a regular dial or push-button telephone and, upon receiving a certain shrill dial tone response, connects the telephone to the typewriter terminal with a special device called an acoustic coupler. The agent can then "talk" to the computer via the typewriter. He can request a specific program, enter in your farm data and receive a typewritten response from the computer. You can carry home with you the typed copy showing your own data and the computer's answers.

Programs which have been or are under development at South Dakota State University for terminal use include economic analysis of grassland systems for beef production, ownership and operating costs for various machine operations, least-cost ration formulation for feedlot cattle, estimated gain and cost projections for growing and finishing cattle, feed mix sheet for feedlot cattle, layer flock production summary, layer flock business analysis, beef cattle cross-breeding systems, and beef cattle futures contract evaluation.

The first programs tentatively scheduled to be available at the county level include ownership and operating costs for various machine operations, least-cost ration formulation for feedlot cattle, estimated gain and cost projections for growing and finishing cattle, feed mix sheet for feedlot cattle, layer flock production summary and layer flock business analysis.

Computers aren't the whole story by any means, but they are another tool that South Dakota State University is using to continually increase its service to you.