

DHIA Computer Program Begins Field Trial

BY JOYCE BUYP

York County Correspondent

YORK — Marty Grey claims that a couple of weeks ago, he was a total "computer illiterate."

"And most times I feel like I still am," he chuckles, punching keys on the IBM terminal in his office at Sinking Springs Farm.

Grey, who manages the 70-head registered Holstein herd and the farm just north of York, is one of 11 dairy producers across the state testing ARIS, a pilot computer records setup for the state's Dairy Herd Improvement Association.

ARIS, or Agriculture Records Information Service, will be on display this week at Penn State's Ag Progress Days at Rock Springs. Originally projected to be on line to interested members about November, the high-tech records system is currently still in the debugging stage, as far as trouble-free operation of the farm-to-mainframe linkup and workability of the program.

"We're anticipating having the program ready to offer now early in 1987," says Jay Wilson, manager of technical development and special service for Pennsylvania's DHIA program. Wilson, who with a staff of two programmers and a systems analyst, is developing ARIS and will be on hand all three days at the Ag Progress DHIA computer display. If all the "kinks" are worked out, Wilson will demonstrate the system for interested DHIA members by accessing their records already stored on the University's mainframe data base.

Sinking Springs Farm's linkup to the ARIS program at Penn State's new IBM mainframe computer first goes by phone modem hookup through the York Extension office, which in turn is linked to Penn State's statewide extension computer mailing and message service. Running the ARIS system through the extension computer network will save users on telephone time charges.

Initially, Grey experienced difficulties making those phone connections. But Wilson and his computer team then developed a special program disk, which enables the computer to do its own dialing and has eliminated some of the linkup difficulties.

Once logged into the mainframe at the University, Grey — and only Grey — will be able to access Sinking Springs herd records. Both the herd number, and a confidential password, known only to the farm user and never even appearing on the computer's video display or screen, protects a user's records privacy. And, even if a "snooper" punched in another user's herd number and the password, a herd record cannot be altered from an outside terminal.

"At this point, it's strictly a retrieval system," says Grey, a member of the DHIA state board. "No records can be added in from the farm; records can only be called up."

When fully on-line, DHIA computer users can look forward to daily access to their cow records.

"And, from that, a dairyman could sort the herd for all types of listings, like production, breeding dates, dry-off times. Other programs will eventually offer such options as heifer management, least cost rations, herd health, and reproductive records," Grey projects. "Ultimately, a user will have his own data base stored right on his own disks, and only log into the mainframe for help with a program."

An ARIS user will probably download records from the mainframe about twice a month, speculates Wilson, and then calculate and sort using the on-farm PC. Currently, pilot users are hooked to the mainframe every second of computer time.

In addition to the standard DHIA records, dairymen are expressing the greatest interest, according to Wilson, in a heifer management package. He also hears considerable interest in graphics capability for the program, so users can have the visual, pictorial comparison of charts to pinpoint management problems.

A second function of the program, PROFS, serves as a mail and message sending system. When the system is fully on-line and functional, PROFS, or Professional Office System, is expected to offer the DHIA farm user word processing and accounting capabilities.

Pilot users soon learn to check the message center. They may get a message from the mainframe, as Grey recently did, that the system would close down an hour earlier than usual on a particular day. Or Grey and other pilot program testers, including Mason-Dixon Farms in Adams County, Dave Slusser in Crawford County, and past DHIA state president Oliver Butler in Tioga County, occasionally send each other encouragement as they help iron the wrinkles from the system.

And there have been wrinkles, Grey will admit. One of the biggest for him was his lack of computer experience. Until the DHIA computer training session a few weeks ago, Marty Grey, like many of his fellow farmers, had never touched a computer. The one day seminar at Penn State, and cursory hands-on instructions when the unit was installed, isn't really enough training, in his opinion.

Fortunately, the system comes with a "user friendly" program that first teaches a novice how to operate the PC unit itself. The "Instructor," developed by Yale University, teaches with a disk, tape cassette and problems the user can work through at his own speed.

With a dairy herd and the normal outside related chores, Grey estimates that a new DHIA user should probably figure on a month of spare time keyboard doodling to feel comfortable just using a PC.

"And to really feel creative and confident about a farm's record keeping and program needs, I'd guess it might take a year of use," he speculates.

In spite of his personal lack of computer literacy, Grey saw the opportunity to participate in the pilot ARIS testing as a "tremendous, mind-expanding, free opportunity to learn the computer."

As to the long-range merit of the computer system to a particular farm situation, each producer will have to decide.

Projected cost for a suitable IBM or compatible PC with a dual disk drive, electrical surge protector and printer would perhaps start at about \$2,000. While ARIS has been designed for use with IBM and compatibles, it should be adaptable to other systems.

"Any computer that can emulate the VT 100 terminal, an industry standard, should be able to adapt to the program," is Wilson's opinion. "Even Apple computer systems. There are more problems getting into other systems, and knowing which keys will operate the various functions."

There's also the possibility of rental or lease agreements, especially for novice users who might want to experiment before making a large financial investment in computer hardware.

No pricing structure has been considered yet for the actual use charges, but Wilson estimates that ARIS records might cost a dairyman from 15 to 50 cents per cow, per month, beyond current DHIA fees, in addition to the PC hardware investment. And, while he's heard a lot of grassroots interest in the program, "Interest and participation are two different things."



Martin Grey is one of 11 dairymen participating in the DHIA computer field trial.

"Sometimes it's hard to show a payback, or how it will make the dairyman money," acknowledges the DHIA computer specialist.

Another consideration of Grey's after his few weeks with the ARIS pilot is the potential for system overload. He has periodically experienced problems with logging into the University's mainframe computer. If several users are trying to access the mainframe, all phone hookups are busy, and access is denied.

No doubt frustration would set in fast to any dairyman, denied access to his computerized records, when he needs mainframe assistance to refigure a least cost ration before ordering feed, or retrieve new production calculations to determine herd feeding weights.

However, the installation of a new mainframe at Penn State may have attributed to access problems being encountered with the pilot program. Such "bugs" will undoubtedly be smoothed out as the system is developed and perfected, and Wilson's team determines how much mainframe space the ARIS users must be allotted.

"It's like any other farm tool, a management technique," says Grey. "If a farmer expects to manage the farm sitting at the computer keyboard, he'll soon run out of money. It is just another tool."

Based on his own experience, Grey warns that beginning users might have to budget how much time they allow themselves at the keyboard.

"I was — and still am — fascinated with the whole thing," he admits, while muffled noises hum in the PC and data stored more than a hundred miles away flashes onto the eight-inch, amber-lighted screen in just moments.

He envisions a dairyman saving "legwork" with ARIS, daily pulling out such information as breeding and heat detection dates, heifer vaccination reminders, sterility and reproductive reports. Trends or problems might also be spotted more quickly, such as high somatic cell counts and mastitis incidence at certain periods of the year, or a downturn in heat detection.

"I think," speculates Grey, "that the only limit some day may be a user's imagination."

Also on deck for the high-tech dairy future are cow-side computers, with DHIA supervisors transmitting data direct from the barn to the mainframe on milk weights, somatic cell counts, butterfat test and related pertinent information for almost instant records calculations.

And, such technological developments are likely to lead to increased "centralization" of the DHIA program, for uniformity across the state of equipment, supervisor hiring, and training, and program fee structures.

A task force of DHIA state directors, members, dairy breed and related industry representatives is already studying the current program's organizational structure, and is expected to make recommendations in about a year.

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