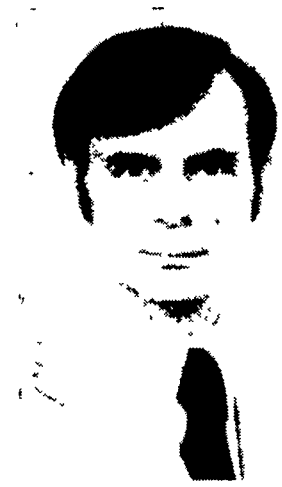

Dairy Pipeline

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A FLOPPY DISK MIND

After attending the recent Penn State Dairy Computer Conference, my mind feels like a floppy disk, spinning around in the dark confines of a computer.

The countless opportunities for the application of computer technology to agriculture, the maze of hardware and software that exists in the market place—and the uncertainty as to what is or isn't good and what is or isn't useful, the incompatibilities between hardware and software, and the many new developments that are on the horizon just boggle my mind!

This is not meant to be negative; in fact, it depicts the exciting time that we live in. The explosion of computer technology for home and family business use has been so rapid that we've experienced a general lack of direction to the overall confusion. But, that is changing.

We are starting to see some standards emerging in the industry. Many farm organizations and industries are announcing the direction they are heading, and as such, are pulling many followers with them. They have had some time now to develop some really good software to make-up for what was lacking in the market place; in so doing, they may help rid the market place of some of its chaff. But, we've only begun!

Benefactors

The entire dairy industry has benefitted from computer technology already. Just think where we'd be today had it not been for DHIA and sire summaries. We've made great genetic advancement, thanks to computers, DHIA, AI and all the dedicated people that make the system work.

But, that's in for some changes, too. We live in a fast world, and in today's tight and changing economy we want instant answers to questions about management decisions. The technology for providing some of these answers exists now and more is on the horizon.

Imagine your barn sheet data being transmitted from a supervisor's hand-held computer to the main computer at a processing center, the data immediately processed (except for SCC, fat test and protein test), and the computed records immediately sent down to your computer where you can review it and call up the various herd reports you need for quick management decisions.

With automatic cow identification and milk recording devices you can record cows' actual production, and from this computer actual or projected lactation records—if the recorder can talk directly to your farm computer, and if cows can be identified accurately. Some of these recorders will be able to measure electrical conductivity of milk as a way of signaling udder infection. So, at each milking you can flag out cows that are off milk or in the early stages of infection.

By monitoring cows' activity, or temperature, you may also be able to flag out cows coming in heat or cows that are becoming ill.

We already see a lot of computer feeders being used. Wouldn't it be nice if you could get a computer to balance a cow's ration daily on the basis of her daily production, her stage of lactation, and perhaps her fat test and body weight too? It may soon come to be.

Computerized Feeders

Properly managed, computerized feeders have been cost effective on many farms. Computers can be programmed to dispense precise amounts of feed to individual cows at various increments throughout the day. Some can also record the amount of feed dispensed and flag cows that are off fed. But, for good results, the computer has to be programmed properly for each cow and adjusted when necessary. The cow has to consume the feed, and the equipment has to be functional.

Workers at Illinois have found that for best results, the maximum number of cows per stall should be about 25. Above this, cows have more of a tendency to eat less than what has been programmed for them. Leaving 1 to 2 empty stalls between each feeding stall also enhanced intake.

Cows tended to visit the feeders 24 hours of the day, but the use of a night light over the feeding stalls may encourage more even usage of the feeders. They also observed that first lactation heifers made 2 to 3 times more trips to the feeder in a day's time than did fourth lactation cows. As you might expect from the above figures, heifers spent more time loitering in the feeders than did the older cows.

I mentioned before that proper ration balancing and programming is essential. The Illinois workers found that balancing the ration once a month generally was satisfactory for most cows in a herd. However, cows n the first eight weeks of lactation did respond to having their ration balanced twice monthly.

So often, we program our rations with the assumption that all cows receive the same amount of forage—which is not the case. Forage intake will vary considerably with body size and level of grain feeding.

When the Illinois group compensated for variations in forage intake, they got an even greater response from individualized feeding, using a computer feeder. We would do well to keep this concept in mind as we feed our herds, whether we use computer feeders or now!

Grouping cows will give you some flexibility in varying the forage portion of the ration as needed. Another group that could also benefit from a computer feeder is the dry cow group.

Linking Computers

Many of these computers, such as ones dedicated to feeding cows, recording milk, monitoring activity, or used by supervisors to gather DHIA data, can function as stand-alone units—or they can be hooked up to talk to the farm computer.

Information fed to the farm computers by these stand-along units, plus information keyed in by the farmer, or downloaded from another computer (perhaps DHIA's or some other computer on a network system), can be used by the farmer to generate a variety of reports he needs such as: cows to be checked, treated, vaccinated, bred, dried off, etc. He can get a list of cows or heifers meeting specs for various buyers or print out a pedigree. He can analyze how daughters of certain bulls do in his herd or when to cull cows. He can generate tax reports, cash flow projections, profit and loss or net worth statements, etc. A good crop and machinery program can help him stay on top of machinery costs and maintenance schedules, or help him evaluate crop varieties, herbicides, fertility practices, individual fields, etc.

Networking

Various networking services are being offered. By use of telephone lines, and in the future direct lines or satellites, you can link up to data banks and programs on other computers to get such things as: access to your own DHIA records, sire summaries, market reports, etc.

These usually offer ease of use, and they help reduce the need for you to buy your own software and to keep your data base up-to-date. But, many of them do have subscription and user fees.

The list of possibilities, like a Christmas shopping list, is almost endless. We can dream of all these possibilities, but the reality of time, our abilities, our needs and our dollars will dictate what we should do and can do.