Bovine growth hormone to revolutionize dairy economy

BY WENDY WEHR

BALTIMORE — An oppressive silence weighed heavily over the crowd. Little more could be said as the discussion about bovine growth hormone and new dairy technologies concluded at this week's Northeast Dairy Conference.

The dairy industry leaders knew that the time had come to face up to the radical production increases that will soon alter the very essence of world dairy production.

Bovine growth hormone, which can increase milk production up to 40 percent, will be commercially available in 1987 or 1988, said Dr. Robert Kalter, chairman of the Department of Agricultural Economics, Cornell University.

And within three years of its initial marketing, the growth hormone will be adopted by 95 percent of dairy farmers, predicts Kalter. Consequently, dairy farm numbers could plummet by a minimum of 25 percent.

Kalter was one of several dairy experts who reported on the revolutionary bovine growth hormone during the well-attended Northeast Dairy Conference, held April 1-2 in Baltimore.

While opinions differed on probable FDA approval of the hormone, the potential production gains that will result, and the degree of economic change that the industry will undergo, no one could argue with the emerging trends and their implications for world-wide dairying.

"I want to alert this group and others to the major public and private policy decisions to be made before this product comes on the market," Kalter emphasized.

Dairy leaders should be thinking about growth hormone and other technological advances now, while the 1985 Farm Bill is being formulated.

"Unprecedented magnitude of adjustment"

Of all the conference speakers, Kalter predicted the greatest upheaval in the industry with the advent of biosynthetic bovine growth hormone. He estimates that the size of the national dairy herd could drop from 11.2 million cows to as few as 8 million, a 30 percent decline.

At the same time, the number of dairy farms may dwindle by a minimum of 25 percent.

In recent research at Cornell, daily shots of the hormone boosted cows' milk yield up to 41 percent during a 118-day period covering the last two-thirds of lactation. Kalter reminded the conferees that the 40 percent increase during the time of injection translates into a 25 percent increase over a 300-day lactation.

Kalter made his projections based on a study he is heading, which focuses on a series of economic questions, including cost of commercial production of the growth hormone (methionyl bovine somatotropin or MBS), market prices of the product, impacts on farm profits, the farm management implications of its use, and the adoption rate of the technology by dairy farmers.

In Kalter's view, commercial use of growth hormone may be approved by FDA by 1987 or 1988. FDA must assess the long-term safety of the treated animals and of the animal products sold for human consumption.

Dr. Robert Collier, a University of Florida animal scientist who told the conference participants about the mode of action of the growth hormone, is also optimistic about FDA approval. "There's no reason this product can't come to market," said Collier.

Surveys of more than 1,000 New York dairy farmers also indicate the strong possibility of rapid adoption of the new technology.

"If 80 to 90 percent of the dairy farmers, as indicated by survey results, adopt the technology within the first three years following the commercial introduction of the hormone, unprecedented implications for farm management, milk markets, prices, and the structure of the dairy industry will follow," Kalter said.

"The magnitude of this adjustment and its timing will depend on cows' production response, the rate of adoption, and the level and scope of government price support program for milk," Kalter explained. "Many farmers, however, will profit from this new technology within three to five years after its introduction."

Changes in feed requirements will occur with use of growth hormone. Requirements for high-protein feed concentrates may increase from 30 to 110 percent. As a result, cropping patterns may change to accommodate the need for more nutrients.

Although the cost of the hormone to the farmers is still unknown and ration costs may go up, Kalter indicated that, assuming stable milk prices, farm returns over production costs would increase up to 26 percent, depending on farm characteristics and extra milk produced.

The early innovators, excellent managers, and farmers with good soil resources will be the winners in the dairy production game, said Kalter. Among the losers will be the highly leveraged farmers.

Impact of technology in Northeast

Dr. Lew Mix, director of farm management research and development for Agway, Inc., also addressed the implications of bovine growth hormone and new technologies. He was not as quick to assume the rapid adoption of growth hormone by dairymen, but he too warned that vast changes in the industry are imminent.

"In my projections, I assume that 65 percent of dairymen will be using it (bovine growth hormone) by 1995 and by 2000 about 90 percent of the cows will be injected with the hormone," said Mix.

He also stressed that an average increase in production is assumed to be 15 percent per cow per year due to the growth hormone.

"Average production per cow as a combined result of genetic improvement, improved feeding and management and use of the growth hormone will reach an estimated 13,804 pound average level by 1990, 15,639 by 1995, and 17,025 pounds by 2000 in the Northeastern states," reported Mix, adding that his was a "very, very conservative estimate."

"Even if bovine growth hormone were not approved, we would still reach an average of 17,000 pounds," declared Mix.

Bob Kalter, a Cornell University ag economist, had some startling observations for the Northeast Dairy Conference participants. The number of dairy farms will dwindle a minimum of 25 percent with the advent of bovine growth hormone.

Taking into account population and demographic changes in the Northeast, shifts in per capita consumption and production per cow, Mix estimated the approximate number of dairy cows and dairy farms required by the year 2000.

The number of dairy cows in the Northeast may drop from 2,226,000 in 1983 to 1,737,000 in 2000, a drop of 489,000 head or 22 percent. The number of commercial dairy farms in the Northeast may drop from 35,739 in 1983 to 21,716 in 2000, a drop of 14,023 farms or 39 percent.

"The potential impact of these reductions on Northeastern agriculture and agri-business and the regional economy are tremendous," added Mix. Among his other projections for the Northeast from 1983 to 2000 were:

- Average number of cows per farm up from 62 to 80.
- Capital investment per cow up from $5,500 to $16,240.
- Capital per dairy farm worker up from $148,500 to $568,400.
- Cows per worker up 27 to 35.
- Milk sales per worker up from 337,500 pounds to 588,000.
- On-farm microcomputer use up from three percent to 60 percent.

While Mix admitted the scenario he presented was rather pessimistic for the Northeast dairy industry, he also called for leaders of the industry to get together and "make some things happen instead of watch them happen."

He advocated improved product quality, innovative new products, intensive advertising and sales promotion and aggressive marketing to increase per capita consumption, and ultimately improve those projections for the year 2000.

"I submit to you that the dairy industry has a challenge to achieve these goals to help maintain a viable northeastern agriculture. It can be accomplished if we plan carefully, lay out a course of action, then act to make it happen," concluded Mix.

Who's pitching?

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said Jeffords, "the dominant factor in the next Farm Bill will be whether Reagan and the grain farmers of the Midwest can come to an agreement."

But Robinson cautioned that a ceiling on farm expenditures by the budget committees could pit commodity against commodity. The result would be more pressure on the dairy industry to find a program that doesn't cost too much. Strike two.

Furthermore, insisted Robinson, the Northeast dairy farmers will have little representation when the compromise Farm Bill is finally formulated.

"There is no clear front runner on bills that are being considered," said Robinson. "Before the Administration's bill used to have the inside track, but it's no secret that the bill submitted by the White House is mainly a bargaining chip that has no basis of support in either the House or the Senate. The Administration's bill is dead."

That means the Farm Bill will be written in Congress, outlined Robinson, and will ultimately be hashed out by a conference committee composed of the members of the Senate and House ag committees. Both committees are dominated by Southern and Midwest congressmen. Strike three.

But will it be three strikes and you're out for the Northeast dairymen? Maybe, but there's still the very real possibility that the game will be called on account of rain. All the dairy policy experts at the conference admitted that there's a real chance that no Farm Bill at all will emerge in 1985.

Both Jeffords and Robinson, as well as USDA's Floyd Gaibler, who gave the Administration's point of view during the conference, predicted a freeze on what's in place now, giving the dairy farmers an $11.60 price through next year.

While they'd like to give farmers $12.10, added Jeffords, they want a program that will come in below the $1.6 billion budget consideration. An $11.60 support price will meet that qualification.

Whether the dairy policy game is played in 1985 or 1986, the conference participants agreed that the Northeast dairy farmers are coming into the compromise game with a handicap. Maybe this week's spring training will help them face up to and overcome their difficulties.

Dr. Kenneth Robinson alerted the Northeast dairy farmers to the political realities of the Farm Bill game in Washington.

Delaware Valley slates 37th annual "A Day"

DOYLESTOWN — A-Day, a two-day annual open house at Delaware Valley College will be held rain or shine on Saturday and Sunday, April 27-28 from 9 a.m. to 5 p.m. both days. Admission is free.

A-Day is a popular event attracting thousands of visitors to the campus each year. One of the early springtime events in the Central Bucks County area, A-Day offers something for every member of the family.

The campus is turned into an exposition as students present exhibits relating to the various course offerings of the College.

Beef and dairy cattle as well as sheep and swine are on display and visitors will be treated to various animal judging contests throughout the weekend. A horse show and a small animal laboratory exhibit round out the features of the Animal Science Division.

An extensive Flower and Garden Show as well as greenhouse displays will be presented by the Ornamental Horticulture department. Many types of early spring plants and other items for the home garden will be on sale during the weekend.

The various classroom and laboratory buildings will be open for tours and will feature displays in Biology, Chemistry, Food Science, Business Administration, Agronomy and Horticulture.

Honey bees and honey products will be another popular exhibit and various other special features, including an art show, will be offered at this 37th annual A-Day event.

Food stands and a chicken barbeque will help satisfy the taste buds and the kids will enjoy the hay and pony rides.

Some of the special events will include Band and Chorale concerts and contests in log sawing, pie eating, canoe jousting and a milking competition.

A-Day is a fun time for the entire family and provides a special environment for an outdoor weekend.

All events will be held on the College's campus on Route 202, one mile west of Doylestown, Pennsylvania.