

# White Revolution coming to dairying

ITHACA, N.Y. — George Orwell made many predictions for 1984, but one profound change that he did not anticipate was the White Revolution — an unprecedented transformation of the dairy industry.

As in any revolution, though, there are the victors and the vanquished. The winners in this case are expected to be consumers and the dairy farmers who survive.

The defeated will be some hardworking dairy farmers who will be squeezed out of business, says Andrew Novakovic, assistant professor of agricultural economics at Cornell University.

Changing U.S. demographics, new products, expanding dairy markets, and modern on-farm technology, particularly the application of biotechnology, are expected to alter the somewhat staid dairy industry into an innovative and consumer-oriented business.

"Consumers, farmers, and processors should be prepared for the dramatic changes that are bound to occur in the dairy industry during the next several years," says Novakovic, a dairy specialist in the New York State College of Agriculture and Life Sciences at Cornell.

Production and use of bovine growth hormone (bGH) is one example of the potential of the new biotechnology. "Of all the factors that will change the dairy sector, bovine growth hormone by far is expected to have the greatest impact," Novakovic predicts.

Work by Dale Bauman, a nutritional biochemist at Cornell, has shown that growth hormone increases milk production in cows 15 to 40 percent. This hormone now is being produced through the application of genetic engineering techniques. Even without the commercial use of bGH, though, the dairy sector is producing about 10 percent more milk than con-

sumers are using. The result: costly government purchases of surplus milk and cheese.

"Eventually, as the price cuts and assessments imposed by the federal government begin to take their toll, more farmers will go out of business, and supply and demand should begin to look reasonably well balanced by 1986," Novakovic says.

To balance the milk supply and demand, consumers either must significantly increase their consumption of dairy products, or production must be reduced by about 10 percent, Novakovic calculates. If all the adjustment comes from a cut in production, the number of cows would be reduced 10 to 15 percent.

Bovine growth hormone, however, which could be on the market within three to five years, would necessitate a greater reduction in cow numbers to balance supply and demand, perhaps an additional 20 percent.

Currently, dairy farmers and producers are confronted with an aging population and an increase in minorities; both groups drink little milk. Furthermore, Americans are eating out more often which adversely affects milk consumption.

Farm efficiency also is resulting in yet more inexpensive milk. The use of computers, continually improving management techniques, and prospects for other innovations, such as on-farm blanching and concentration, for example, are resulting in highly productive operations and increased marketing efficiency.

The use of growth hormone, however, may result in tremendous increases in efficiency, Bauman points out, perhaps equivalent to gains typically made over a 10 to 20 year period.

In response to the demographic changes, the current dairy surplus, increased farm efficiency, and

predicted increases in production, the dairy industry is embarking on an aggressive advertising campaign to highlight the nutritional value of dairy products, and also is developing new products and expanding markets.

Novelty cheeses, flavored cheese curds, more low-fat choices, flavored and ultrapasteurized milk, and blended products comprised of both dairy and nondairy components are some of the new products being marketed.

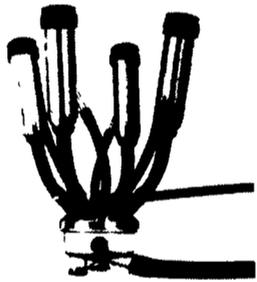
To increase consumption, the dairy industry also will need to cater more to new or under-exploited markets, such as the fast food industry, a booming business.

"In the final analysis, the biggest beneficiary of the White Revolution will be the consumer who will be buying more dairy products at a lower price than otherwise would have been possible," Novakovic concludes.

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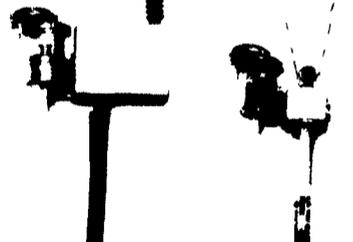
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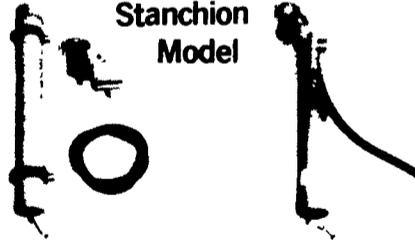


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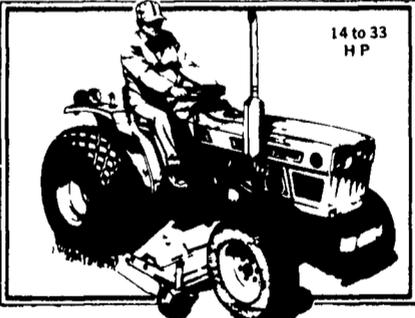
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