

# Lancaster Farming

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## Water, Water Everywhere...

### But Dairymen Who Equate Quantity with Quality May Be Up The Creek

BY JACK HUBLEY

LITITZ — Water. As ubiquitous as cable TV and K-Mart. But, like much of what emanates from the picture tube, a lot of nature's perfect drink isn't fit for consumption.

Unfortunately, technology creates the illusion that an inexhaustible supply exists. A twist of the wrist and there it is, tumbling into the kitchen sink at a few gallons a minute.

And even when our tap water has been rendered unpalatable by chemical purifying agents, the illusion persists. For less than a dollar a gallon we can have the really good stuff delivered to our door.

Just how much longer the bottled water generation will have it so good is anybody's guess, as America flows ever closer to the brink of a water crisis. According to historian Charles Bowden, interviewed in a recent issue of *People* magazine, the Ogallala aquifer "will be commercially

useless in a few decades" if current consumption rates continue. A huge natural reservoir underlying six western states from Texas to South Dakota, the aquifer is being depleted at the rate of 21 million acre feet per year. Its natural regeneration rate is only about one million acre feet annually.

Unless we somehow learn to manage our liquid assets in a more intelligent manner, 25 percent of the planet's usable water will be unsafe by the turn of the century, according to the National Wildlife Federation.

While this may bode ill for humanity, it's even worse news for our dairy cows. Lending new meaning to the label "heavy drinker," a mature Holstein, Brown Swiss or Ayrshire will consume about four pounds of water for every pound of milk produced, depending on a number of variables such as forage

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Since installing a water treatment system the Good farm has noted an increase in milk production, as well as a decrease in problems such as foot rot and twisted stomachs.

## Somatotropin In Second Lactation Of Testing Program

BY EVERETT NEWSWANGER  
Managing Editor

KENNETT SQUARE — To publicize the research to date on bovine somatotropin the University of Pennsylvania, School of Veterinary Medicine invited members of the national press and television to an in-barn conference here Monday.

The research trials conducted at the Pennsylvania veterinary school as well as in Kentucky, Minnesota and Ohio are under the direction of Dr. William Chalupa and funded by the universities and American Cyanamid Company. These research trials are now into the second lactation of the test cows to determine the response of

the product. Dr. Chalupa pointed out that the name bovine growth hormone that has somehow emerged as the common name for the product is a misnomer. "Somatotropin is not really a growth hormone at all, but a protein from a strain of amino acids," Dr. Chalupa said. "To obtain the product requires a fermentation process where you put the gene from a cow into a bacteria. The bacteria grows and the gene expresses the somatotropin."

Administering the somatotropin is not technically difficult," Chalupa said. "When I look at the responses of production and increased feed efficiency. I think it

will be a very cost effective product."

"I have absolutely no reservation about the safety and usefulness of this product," he said. "If I would have had any doubts at all, you (the press) would not have been invited here. I think the small dairyman will be the most able to use the product. The small dairyman with a tie-stall operation of 40 to 50 cows being handled by the farmer and his family can go down the line of cows and administer the somatotropin in a matter of 15 or 20 minutes."

"The final production cost of the product has not yet been determined. But my own estimate is

that the cost will be between 10 and 20 cents per cow per day. It is an ideal cash flow input into the farming operation. The product shows an increase in milk production within a few days after the first somatotropin has been used. The farmer is going to get an immediate two to one return on his investment."

"The galactopoietic (increased milk secretion) action of somatotropin has been known since 1937," Chalupa said. "Until recently, somatotropin was ex-

tracted from pituitary glands of slaughtered cattle. Little material was available and it was expensive. With the development of recombinant technology, substantial amounts of somatotropin now are available for experimentation.

"We began investigating lactational responses to somatotropin in 1983. Initial studies with pituitary somatotropin were for periods of three weeks at different

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## Dairy Industry Leaders Hear Penn State Proposal

BY EVERETT NEWSWANGER  
Managing Editor

HARRISBURG — Because the National Dairy Promotion and Research Board has invited academic institutions to submit applications for support for the operation of a dairy food research center, a meeting of Penn State faculty with dairy industry leaders was held here Thursday in the Agricultural Building. The meeting was called to give Penn State personnel the opportunity to present their preliminary work on a proposal and receive support and input from the dairy industry into the development of the proposal.

Dr. Manfred Kroger, professor Department of Food Science, made the presentation for Penn State showing the many undergraduate, graduate and research programs that give Penn State excellent facilities and programs already in place as a basis to compete for the new center. "We need to pull out our

uniqueness," Kroger said. "We want to present a strong proposal. And the main resource we have is our people. As we look to the future, we want to expand and stabilize the base of the dairy industry. This will give us a shot in the arm at Penn State and will give us a tremendous opportunity to show our commitment to the future of agriculture."

Kroger listed the Creamery as one of the unique features at Penn State. The ice cream and frozen desserts program will highlight the presentation according to Dr. Kroger. "We have done great work in this area and want to be recognized for it," he said. "We want to receive some funds to maintain and expand these areas. This can be instrumental in making milk more palatable to the public in a psychological sense and will eventually sell more milk."

Dr. Joseph A. O'Donnell, vice president Dairy Research

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National Press conference in the cow barn at New Bolton Center.