

# During Multi-County Dairy Day

that they can't raise their herd average, it is possible that the cow has peaked too early, or, she has been estimated to have peaked when she actually has not. That could be at possible day 40 or after the ideal day 60.

An example peak spread is if a cow's peak is maintained to day 100. That is considered excellent. Five pounds less is good, 6 to 10 pounds is fair and something isn't being done properly if it exceeds 10 pounds.

Typical heifers drop 6% after peak and older cows 9%. If drop is more severe, nutrition should be looked at. Is it grain, energy feed or mastitis? Heifers fed the best fancy silage cannot eat enough ration (or bulk) to hold the high production as opposed to older cows that can handle extra bulk.

Therefore, potential "spot" problems must be defined and altered for peak production.

Hutjens gave T M R feeding in stanchion barns high ratings. He explained that this method of feeding gives closer control of

ration. One extra pound of balanced dry matter translates into 2 to 2½ pounds of milk.

General conclusions for highest production: wise nutrition. The exacting science of dairy farming has become the weapon to fight competition and raise profits. Like any weapon, it must be respected for the power it holds.

About 20 exhibitors displayed products and services from silos to

the money credit for their purchase. There was lively interest in items to improve milk collection, marketing for the product, miracle feeds, forage management, an A R I S system set-up and much more.

Philip Durst, Snyder County Agent, hosted the Dairy Day event and spoke on the value of manure in an afternoon session. Hutjens returned to the podium in the latter session with hints on making money from forages.

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In 1926, a hormone that was necessary for normal growth in mammals was identified. Named "growth hormone" at that time, it was later noted that the compound reduced fat in animals, increased protein synthesis, and influenced general body metabolism in addition to its effects on growth. These

additional qualities led to the more general term for the compound, somatotropin (ST), coming from the Greek terms for body and food.

Somatotropin is a relatively small protein that differs slightly in structure and size between species. It is important to note that somatotropin from one species will be inactive if it is administered to another species. It is known that Bovine Somatotropin (BST) is active in cattle and has

## Creamery Worker Retires

**UNIVERSITY PARK (Centre)**  
— In 1959 Eugene Long started working for Penn State's College of Agriculture as a general helper in the Creamery's milk room. He retired last October after twenty-nine years as a milkroom equipment operator.

He began work at 6 every morning, pumping milk into a holding tank, preparing bottles and six-gallon cans for filling and occa-

sionally pasteurizing and homogenizing milk for the milk processor. But his favorite part of the job was bottling the milk. He sometimes bottled more than 3,000 gallons in a day.

Eugene and his wife Ruby live in Centre Hall with their two children. His retirement gives him more time to enjoy hunting and fishing in Centre County.

## Effects of Bovine Somatotropin

about 22,000.

### Effect of BST on Milk Production

For fifty years, scientists have suspected that BST would increase milk production in dairy cows, but the scarcity and expense of the natural BST prevented definitive experiments. Natural BST had to be extracted from the pituitary gland of slaughtered animals. In 1980, the availability of synthetically produced BST allowed dairy scientists at Cornell University to begin extensive studies to address the relationship between BST and milk production. Work at Cornell and other institutions established that injected BST will increase average milk production per cow by 15 to 40 percent.

### Influence of BST on the family farm

Unlike most recent advances in technology, BST is proportionally as effective for small farms as for large. No additional capital is needed for its use and the benefits of efficiency will accrue to those dairy producers who are the best managers, whether they manage large or small units. If BST is used to produce milk more efficiently, and not just to produce more milk, small farm operations could stay in business without the need to expand. If BST is used to overproduce milk, the entire industry would suffer.

### Effect of BST on stress and health problems for cows

The most recent studies have summarized health data for cattle during the lactation of treatment and for a full year after cessation of treatment. Treated cows were as healthy by all measure for the total period as untreated cows. Animals were routinely and frequently evaluated for mastitis, reproductive efficiency, blood chemistry, cardiovascular health and animal disease. No deleterious effects of BST were found. Longer-term studies will need to be completed to confirm the benefits of BST with no adverse effects. Also, long-term data will be necessary before the Food and Drug Administration (FDA) will approve BST for commercial use.

### BST Has No Effect On Humans

BST has no effect on humans who consume milk because it is inactive in humans. Although more milk is produced per cow, the amounts of fat, protein, minerals, sugar, and BST in the milk are not changed. BST activity is destroyed by pasteurization. After heat treatment, BST is also inactive in cattle.

BST and other ST hormones are inactive if taken orally. As a protein, it is digested before absorption, and has no activity regardless of species. The FDA approves and monitors all experiments using BST. Before issuing final approval of the compound, overwhelming evidence of efficacy and freedom from deleterious effects on cattle must be proven.

## From atrazine carryover danger.



**1** Start with a field full of weeds.

**2** Then cut back to the minimum rates of atrazine needed for this season's annual weeds.

**3** The result: next season, rotate to alfalfa with less chance of carryover.

**fastest growing**

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