

Penn State Dairy Scientists Trying to Develop Dry Milk Flavor

Research by dairy scientists at the Pennsylvania Agricultural Experiment Station is helping the United States armed forces find a dried whole milk that will taste like fresh fluid milk.

Members of the dairy science department at the Pennsylvania State University have conducted extensive research on this problem in recent years. While progress has been made, experiments have not yet found a way to overcome the flavor problem, reports Stuart Patton, associate professor of dairy science.

"During the manufacture and storage of dried whole milk, flavor deteriorates so that when the milk is reliquified, the taste is different from fresh fluid milk," Dr. Patton says.

One of the defects which develops is a chalky taste, not unlike that of milk of magnesia. This is caused by insoluble mineral-protein particles and can be remedied if calcium is removed

from the milk. Removing the calcium does affect the nutritive value of milk, but Patton points out that in the case of the armed forces calcium requirements can be met in other ways.

Deterioration of the milk fat also causes flavor changes and a partial solution to this problem can be found in substituting vegetable fats for milk fat in the making of dried whole milk.

A problem now under study is how to eliminate a potent flavor compound known as delta decalactone which develops in the drying process and during storage. This flavor is not desirable in beverage milk.

Development of a suitable dried whole milk that can be used as a beverage is important to the armed forces not only because of the food value but also as a morale builder. Shipping liquid milk to the armed forces in wartime is almost an impossible task. Dried whole milk also could be readily shipped to foreign countries for civilian use and commercial dairies in this country are eager to develop it.

The Quartermaster Food and Container Institute of the Armed Forces during the past eight years has provided more than \$50,000 to support this research program.



THESE THREE 4-H members were introduced to the Inter-State Milk Producers Co-operative meeting at Leola Tuesday as members of Lancaster County's winning

dairy team. They are, l. to r., Paul Trimble, Florence Mae Flory and Paul Herr. (LF Photo)

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Nine Per Cent Drop In Horses and Mules

The number of horses and mules in this country on Jan. 1 is estimated by the Crop Reporting Board at 3,558,000 head, a drop of 370,000 or about nine per cent from Jan. 1, 1956, and about half the 1946-55 average.

The largest decrease, 12 per cent, occurred in the North Central States; the smallest, six per cent in the Western States. The average value of horses and mules on Jan. 1 is estimated at \$71.60 per head, compared with \$62.60 for the same date a year earlier.

Hereford Steer Takes Championship Of Houston Fat Stock Show

Houston, Tex., March 1—(Special) — A sleek, 825-pound Hereford steer captured the grand championship of the Houston Fat Stock Show to maintain the string of Hereford victories at all major livestock shows in 1957.

Herefords have reigned supreme at the Arizona National Livestock Show in Phoenix; National Western Stock Show in Denver; Amarillo Fat Stock Show, Amarillo, Tex.; San Antonio Livestock Exposition and Fat Stock Show.

James Everett, Valentine, Tex., 13, guided his steer to the grand championship of the junior show and on to become grand champion over all breeds in the open show. Of the 600 steers competing, more than 300 were Herefords.

James is the son of Mr. & Mrs. Robert Everett, and has had five years 4-H experience in the Jeff Davis County Club under the guidance of county agent Frank Newsum.

The Hereford steer, named Pug, was bred by J. E. Garren, Van Horn, Tex., who runs a herd of 400 grade Hereford cows.

James' steer sold to the Bill Williams Restaurants in Houston for \$10,000 and was donated by Mr. Williams to the Texas Chil-

dren's Hospital in Houston.

The reserve champion of the Hereford steer show was a 960-pound entry from Nebraska owned by Leo Gentry, Beemer, Nebr. Leo, 19, went in the Army February 1st, and the Hereford was shown by his neighbor, Robert Vahle, Lew Hall of Bassett, Nebr., was the breeder of the steer and the county agent in Cumming County who helped Leo in his 4-H work is Joe Watson of West Point, Nebr.

The Hereford, named Bunny, was champion Hereford steer of the open class prior to his selection as reserve champion of the Hereford show. He sold for \$1 per pound to Claude Hamil, Houston oil man.

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Index of Prices Through Feb. 15 Drop 2 Per Cent

For the month ended Feb. 15, the index of prices received by farmers dropped nearly two per cent, mostly due to lower prices for hogs, tomatoes, lettuce, milk, and potatoes.

Higher prices were received, however, for chickens, oranges, and some commercial vegetables. The parity index, on the other hand, increased nearly one per cent during the month, setting a new all-time high for the parity index.

Higher prices of food, feeder livestock, and motor supplies contributed most to the parity index increase, according to the Agriculture's Prices report released Feb. 28 by the Crop Reporting Board.

Thus, with farm product prices off nearly two per cent and the parity index up about one per cent, the parity ratio dropped back to 80.



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