

Milk Protein Testing Predicted For Future

Ability of dairy cows to produce protein can now be determined by a new process—the first practical method for large scale milk analysis since butterfat testing was introduced over 80 years ago. The process is known as amido black dye binding. For the first time in history, the process offers dairy farmers a combined analysis for protein and butterfat.

Such protein analysis of milk will gradually gain worldwide

acceptance, in the opinion of Dr. Manfred Kroger and Herbert C. Gilmore, College of Agriculture faculty members at Penn State.

Milk protein testing has already gained recognition in some parts of the world, notably the Netherlands and France, countries with a strong milk protein industry, especially in cheese. Combined protein and butterfat testing measures the production efficiency of a dairy herd.

Stimulus for a change to protein instead of fat analysis comes largely from public aversion to fats and from looming world protein shortages, Kroger and Gilmore point out in the Spring issue of "Science in Agriculture," the quarterly magazine of the Agricultural Experiment Station at Penn State.

Proposed nutrient labeling, and demand for high protein foods, are just two more factors making protein determinations a future necessity, the scientists claim.

They add that milk protein data will be useful by nutritionists, animal breeders, geneticists, and economists. There are already strong indications of impending protein labeling of milk and milk products. This would encourage farmers to breed dairy cows for improved protein production. With protein labeling, milk would be priced to include protein percentage.

As shown in several studies, the protein of cow's milk varies considerably. It may be anywhere between 2.8 and 4.6 percent, depending on a number of factors including breed of cow and inherited protein production of the animal.

Since protein content is so variable, a study is underway to determine the effects of inheritance, feeding, and management on a cow's milk protein level. Over 9,000 samples are being tested monthly at the Penn State Central Milk Testing Laboratory. Samples are examined for both protein and fat.

Many protein testing methods have been proposed in the past. Only two, alkali stream distillation and dye binding, are

National Commission Moves On Cholesterol

"The National Commission on Egg Nutrition, having spent nearly two years in searching the literature for the truth on Eggs-Cholesterol and the Heart Problem, now is taking steps to make use of the information," announced Chairman Blanton Smith.

Two new Commission members attended their first meeting. Ted Wasden, Indiana Farm Bureau, Indianapolis, succeeds Mal Cleland as the AEB representative. Jerry Bookey, Seattle, replaced Harry Trembath, representing the Pacific Egg and Poultry Association.

At its recent meeting, the Commission authorized the following actions:

1. The employment of Richard Weiner of Richard Weiner, Inc. Public Relations, of New York City.

Weiner will prepare and produce two booklets about the special nutritional merits of eggs, with special emphasis on cholesterol. One of these will be quite detailed for the medical-nutritional fraternity. The second will be a more condensed version for the general consumer.

Weiner will publicize and distribute the books through an initial advertisement in the Wall Street Journal, as well as to physicians, teachers and other key leaders.

Weiner will also cause to be prepared and published in con-

accurate and simple enough to be used routinely and on a large scale. Automated milk protein determination by amido black dye binding has become, and probably will continue to be, the best accepted of these methods.

There are now two commercial protein milk testers operating at Penn State, produced by a company in Denmark. One is a manual model in the Department of Dairy Science, used mainly for occasional research work. The other, an automated model, is combined with an automatic milk fat tester in the Central Milk Testing Laboratory at University Park.

The automated model is used in protein testing under a program of the Dairy Herd Improvement Association (DHIA). It is also used in research. With either instrument, manual or automatic, the protein content of a one-milliliter milk sample can be determined accurately in less than a minute.

It is the ambition of two graduate students to adapt the protein dye binding technique to a number of foods. The students are John C. Weaver of Spring Mills and Carl Goettel Jr., of Williamsport.

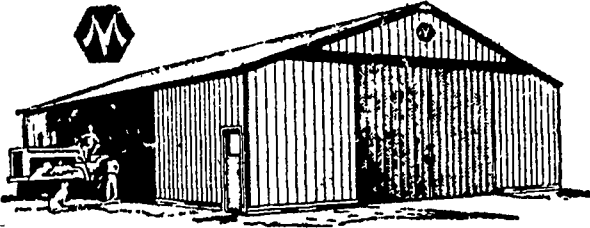
sumer magazines, stories presenting the truth about cholesterol and eggs prepared by some top level science writers.

2 The retaining of a medical adviser (physician) who may both write and speak for the Commission.

3 The creating of a special scientific seminar of researchers and teachers in nutrition to carefully evaluate the problem and suggest possible approaches and solutions.

While the Commission does not have cash-in-hand sufficient to cover all planned expenses, pledges of additional funds from several organizations have not been pushed since there has existed little immediate need for additional funds.

"The Executive Committee of the American Egg Board pledged up to \$50,000 additional funds, if the Commission needed the money in furthering this step of carrying the message to the consuming public," concluded Smith.



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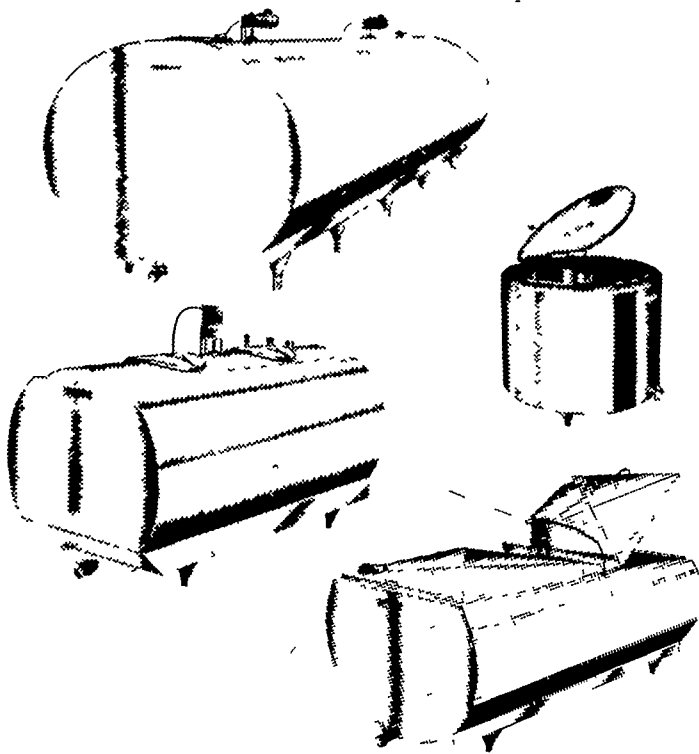
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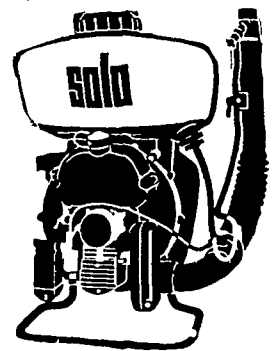
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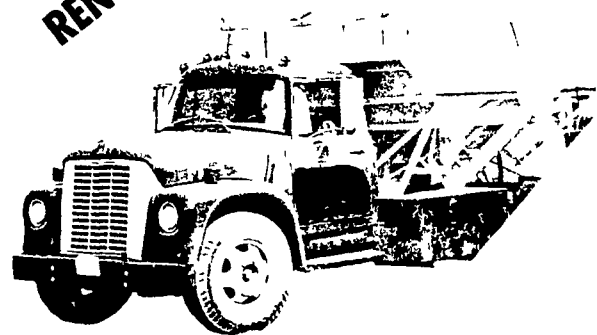
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