

Penn State Seeks Ways to Use Milk Whey

Dairy scientists at Pennsylvania State University are working to develop methods of utilizing the 10 billion pounds of whey thrown away nationally each year in making cottage cheese and cream cheese. They describe whey as that part of milk left over when cheese is made. While dried sweet whey is already used widely in ice cream and other dairy products, sour whey is difficult and costly to process, says Dr. George H. Watrous Jr., professor of food science and industry at Penn State.

He reports that about 170 million pounds of whey solids are available annually in the United States from cottage cheese production. The making of American cheese produces

an even greater 754 million pounds. Presently, about half of all this goes to waste for lack of economical ways to process it into useable food.

Obviously, very large quantities of nutritious food are lost while an imposing cost is created for sewage disposal systems to digest, Dr. Watrous states.

Whey solids offer an economical source of proteins and milk sugar, and a substantial level of vitamins, especially the B group.

With food value in mind, Dr. Watrous and associates are studying the possibility of substituting cottage cheese whey solids for milk solids not fat — items usually added to fortified skim milk, low fat milk, and ice cream.

Two taste panels are measuring the flavor acceptability of dried whey as a substitute for milk solids not fat. One panel is composed of trained dairy specialists. The other panel includes women with extensive training in food evaluation.

"If our research indicates that cottage cheese whey solids can be substituted for nonfat milk solids from a flavor standpoint, standards of identity for such products will probably have to be announced before the products can be sold," Dr. Watrous affirms.

Presently, up to 25 per cent of the milk solids not fat in ice cream may come legally from whey solids. No standards exist for substitutions in fortified low fat or cream products.

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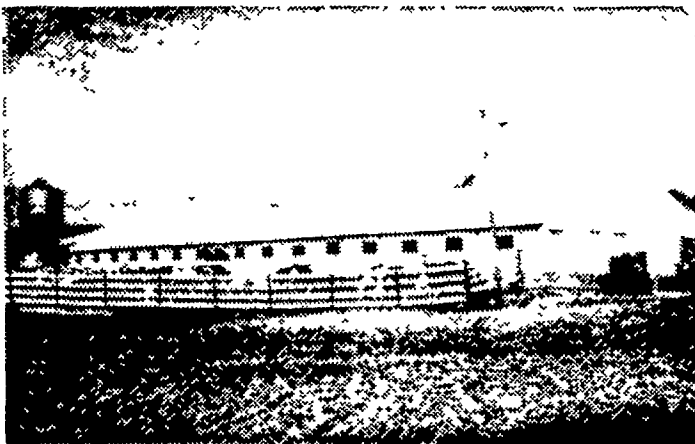
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