Penn State prof receives \$27,000 Dairy Board grant

STATE COLLEGE - Paul S. Dimick, professor of food science at The Pennsylvania State University, was awarded a twoyear, \$27,000 research grant by the National Dairy Promotion and Research Board.

Dr. Dimick will use the funding

to study the nutrient and flavor quality of vitamin A-fortified skim and low-fat milks exposed to fluorescent light during commercial distribution and sales.

"Under regular pasteurization, there is little or no destruction to vitamin A in milk," Dr. Dimick explains. "But when fats are

removed for the production of low fat and skim milks, vitamin A is also removed. Therefore, processors may fortify these milks to bring vitamin A back to its normal levels.

Most vitamin A is added to milk through suplements in vegetable oil or butterfat, and some is also

added in a water form. But vitamin A supplements are less stable under fluorescent lights than vitamin A found naturally in milk, and may give milk a medicinal flavor. That's where Dimick's research comes in.

"Our objective is to evaluate the off-flavors created by the photo-

breakdown of vitamin A," he says. "We also want to determine the nature of vitamin A normally present in milk and attempt to understand the protective principles of this vitamin form as compared with supplemental forms of vitamin A."

Studies have found that a 60 percent loss of vitamin A can occur if fortified milk is exposed to fluorescent light for more than three hours, compared to only a 20 percent loss of vitamin A in whole milk in the same time period. Since the stability of vitamin A is related to milk flavor, the greater the breakdown in vitamin A, the more pronounced the medicinal flavor. Sales may be affected.

"We hope to find out how to protect vitamin A to make fortified milk more attractive to the consumer," Dimick says. "Con-sumers should include milk in their diets for the calcium, riboflavin and high quality protein."

Heather Losee and Rose Fellman, two graduate students in food science, will work with Dimick on the project.





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