### Facts Behind Folic Acid Mandate

#### KAREN BRACEY Wyoming Co. Extension Agent

TUNKHANNOCK (Wyoming Co.) - As of January 1998, U.S. food manufacturers must add the B vitamin folic acid to enriched bread, flour, cornmeal, pasta, rice, and other grain products as mandated by a 1996 U.S. Food and Drug Administration (FDA) regulation. The decision to adopt a level of required fortification between 0.43 and 1.4 milligrams folic acid per pound of product represents an attempt to balance the need to provide enough folic acid to prevent neural tube birth defects with the possibility of masking a deficiency of vitamin B-12. The reasoning behind this mandate as well as related benefits and disadvantages are discussed here.

The FDA regulation requiring the fortification of enriched grain products with folic acid is a result of evidence that the risk of neural tube birth defects, such as spina bifida, is decreased if pregnant women take more folic acid during pregnancy. The current Recommended Dietary Allowance (RDA) of the National Academy of Sciences is 180 micrograms for non-pregnant adult women, 400 micrograms for pregnant

women, and 200 micrograms for adult men. The Public Health Service recommended in 1992 that all women of childbearing age should consume 400 micrograms (0.4 milligrams) of folic acid in order to reduce the risk of neural tube defects (NTDs), the current recommendation is to take a supplement containing that mount of folic acid. However, many women do not achieve the recommended intake or take the supplement. And since the neural tube is formed very early in pregnancy, defects can occur before expectant mothers start taking supplements anyway. Fortifying the food supply then seemed to be the most efficient way of assuring that folic acid needs are met. The FDA has estimated that the benefits far outweigh the monetary costs of fortifica-

While successful prevention of birth defects is a valid reason for folic acid fortification of the food supply, there are the consequences to be considered. For one, folic acid supplementation has the potential of reducing cardiovascular disease and stroke among the elderly. Estimates are that folic acid supplementation at the recommended levels will decrease the risk of coronary artery disease

by 3 to 5 percent.

This good news does not come without a downside, however. Masking vitamin B-12 deficiency is the concern. Currently the only way to detect a vitamin B-12 deficiency is to test for pernicious anemia. Since this anemia can be caused by either a folate or a vitamin B-12 deficiency, folic acid can correct it, thus possibly masking a B-12 deficiency. However, a vitamin B-12 deficiency can lead also to severe and permanent nerve damage via mechanisms not related to folate. Therefore folic acid fortification involves a delicate balance between adding enough to food to reduce birth defects and cardiovascular disease risk and adding too much and thereby masking a vitamin B-12 deficiency. Fortification has been designed to keep daily intake of folic acid below one milligram to avoid this masking effect. Researchers have suggested that a higher priority needs to be given to a search for a better diagnostic procedure for vitamin B-12 deficiency. Meanwhile, people who take supplements are those most vulnerable to getting enough folic acid to mask any B-12 deficiency, which is usually due to inadequate B-12 absorption rather than dietary insufficiency. People unable to

absorb B-12 from foods because of low stomach acid (estimated at one in five people over age 60 and two in five over age 80), may be able to absorb the vitamin in the crystalline form found in vitamin supplements. Elderly people who take supplements should therefore make sure theirs contains an adequate amount of vitamin B-12, for which the current RDA is 2 micrograms.

A final concern is that federal regulations do not require enrichment. Regulations of the

Labeling Nutrition Education Act only stipulate the amounts of certain nutrients that must be added if a product is enriched. While most of the grain products available in grocery stores are enriched, certain locally baked goods and imported products might not be. Therefore consumers need to check the food label to make sure the product in which they expect to find folic acid is indeed enriched rather than simply assume that all grains are so fortified.

## **Dry Milk Products Head Overseas**

SOUTHAMPTON (Bucks Co.) - More than 12 million pounds of dry milk products manufactured at the Land O'Lakes Carlisle plant have been sent overseas, with more on the way.

The products, including nonfat dry milk, are being exported through the Dairy Export Incentive Program (DEIP). A federally-funded program, DEIP assists U.S. cooperatives in marketing their products overseas.

We are excited about this opportunity," said William L. Schreiber, Vice President of Carlisle Operations. "It enables us to access additional international market opportunities for Land O'Lakes dairy farmer owners in the process.

The DEIP sales also allow the cooperatives to take advantage of overseas demand for dry milk products. Such sales hlep strengthen the U.S. market price for powder by reducing domestic powder inventories, which were high in 1997. Higher prices in turn bolster U.S. milk producer prices.

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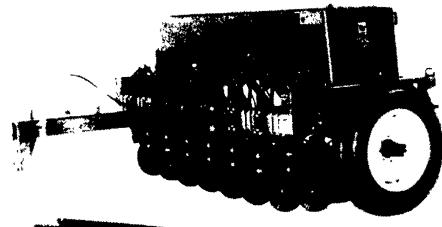
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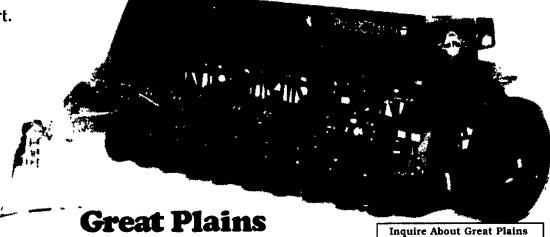
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