

Making Sense of California Milk Standards and Prices

Reader Questions and Author Responses

Editors Note: "Making Sense of California Milk Standards" by L.J. (Bees) Butler, appeared in the Winter, 2000 issue of the ARE Update (Vol. 3 No.2). The article generated a substantial response from our readers, including several additional questions on the topic. In this follow-up, Dr. Butler responds to a few of the more frequently asked questions.

Q: You mention in your article that the fortification of milk involves the addition of extra solids to fluid milk to bring it up to California standards, and that this adds about 16 – 20 cents per gallon to the retail price of milk. Is it not true that part of that extra cost is borne by California milk producers?

A: Yes, it is true that California milk producers pay a fortification allowance on all milk used for fluid milk purposes. Fluid milk processors receive this allowance by deducting the cost of the additional solids added to fluid milks from their pooling obligations. The implications are two-fold. First, if the California standards were replaced by the lower federal standards, producer's income would increase by a small amount. Second, the price at retail would not fall by the full amount of the cost of the fortification.

Q: You mention in your article that sources of calcium in the food chain can be found in milk and in only 3 other vegetables. I thought calcium could be found in spinach and in many other foods. Is it not also true that many foods are now calcium fortified?

A: While it is true that many foods, other than dairy products, do provide some calcium, most foods are not "calcium-rich" in the sense that they provide calcium sufficient to meet the minimum daily requirements recommended by the U.S. Public Health Service. And many of the foods that are relatively calcium-rich are not frequently eaten, or are not eaten in substantial amounts by most Americans. Spinach does have a high calcium content, but the bioavailability of calcium is low due to spinach's high oxalate content. In addition, some foods such as orange juice, bread and some cereals are now being fortified with calcium in an effort to increase the calcium intake of Americans. The average American aged 19 – 50 years old requires a minimum of 1000 mg of calcium per day. Children from 0 – 8 years require less, while those from 9 – 18 years, those over 50 years old, and pregnant and lactating woman, require more. Table 1 contains more information on calcium sources and contents of selected foods.

Q: In your article, you imply that the California milk standards impose an unfair state trade barrier to outside milk, and that milk from other states may not enter California under any circumstances. Is this true?

A: No, it is not true. First, milk in its raw state may enter California from any of the areas surrounding California.

While it is subject to some pooling provisions, California plants regularly receive milk from Oregon, Nevada and Arizona, or from further afield if necessary. Second, any processed fluid milk from out-of-state can enter California, provided it meets the California standards. In fact, the only milk that may not enter California is fluid milk for sale at retail outlets that does not meet California standards.

Table 1. Calcium Sources, Content and RDA Requirements

Food Group/ Item	Calcium (mg)	RDA Req't of Calcium
Bread, Cereal, Rice, Pasta	<25	40.0 cups/slice
Vegetables		
Broccoli (1 cup)	178	5.6 cups
Collards (1 cup)	148	6.8 cups
Kale (1 cup)	94	10.6 cups
Spinach (1 cup)	245	4.1 cups
Other Vegetables (1 cup)	50	20.0 cups
Fruits		
Dates (1 cup)	105	9.5 cups
Figs (10 dried)	269	37.0 dried
Orange Juice (1 cup)	25	40.0 cups
Orange Juice (Ca fort.)	300	3.3 cups
Milk, Yogurt & Cheese		
Whole Milk (1 cup)	288	3.5 cups
Milk, 2% fort. (1 cup)	352	2.8 cups
Milk, skim (1 cup)	296	3.4 cups
Cheese, cheddar (1 oz)	213	4.7 oz
Cheese, swiss (1 oz)	262	3.8 oz
Cheese, cottage (0.5 cup)	115	4.3 cups
Yogurt, lowfat (1 cup)	294	3.4 cups
Meats, Poultry, etc.		
Salmon (3 oz)	16	18.0 oz
Sardines (3 oz)	372	8.1 oz
Navy Beans (1 cup)	128	7.8 cups
Soybeans (1 cup)	175	5.7 cups
Tofu (Ca fort.) (0.5 cup)	258	2.0 cups
Egg (1 large)	27	37.0 eggs
Other Meats (3 oz)	<10	300.0 oz

Source: American Council on Science & Health "Much Ado about Milk," 2nd Edition, New York, NY, February 2000.
Ca Fort. = Calcium fortified