

Summary of Discussions on Session I

Dairy Products

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The importance of phytic acid in the use of soy protein products to simulate dairy products was discussed at length. In infant formulas in the U.S., sufficient minerals are present so that no mineral deficiencies have been noted either clinically or in experiments where sufficiency was monitored by blood analysis in connection with feeding studies. Phytic acid may react with protein in simulation of foods and possibly reduce functionality. Heat sensitivity is very important and it can lead to insoluble gels and grainy products. Infant foods marketed in the U.S. have added minerals and vitamins that are available based on clinical and microbiological tests.

Because milk proteins are the most versatile of proteins and in large supply in Europe and the Oceanic countries, why should we need to imitate them with vegetable proteins, particularly in the developed countries? Shouldn't we concentrate on products for the developing countries? There are both short term and long term reasons for considering the use of vegetable protein products for various foods. First, they can fill a need by being a superior product. In the U.S., soy protein isolate is replacing part of the casein in imitation cheese because the final product has a better flavor. This product on cheese whey and isolate will be manufactured by the largest producer of dairy products in the U.S. only because it is better. Similarly, a confection in New Zealand uses a textured soy product to manufacture

a nut-like component that is not available from the dairy industry. Second, the price and availability of nonfat dry milk solids and casein has varied considerably. With a subsidy in certain European countries, these products are higher than on the free market. When they do become high priced, the products must be simulated from vegetable products in order to better compete for their share of the food dollar. An analog to margarine-butter conversion in the U.S. was suggested. Margarine was first prepared from vegetable oils by blending with animal fats, then from vegetable oil blended with a mixture of animal and vegetable fats, then with all of the fat as vegetable, and over the years the change has been gradual until all of the fatty part can now be vegetable and most of it can be vegetable oil. Gradual change can be one solution to the introduction of vegetable protein products.

One important factor in any change is to inform and not mislead the consumer. Labels should tell what the product is. Changes are going to come regardless of what we do because soy products are now generally cheaper than milk-derived products and are likely to become relatively cheaper. The use of isolate and concentrate, particularly in meat products in East Europe, is now increasing steadily because these products are higher in quality and the price is the same or lower.