group, composed of representatives of all segments of the industry, expressed the belief that much could be done to expand the use of dairy products if all elements of the industry could support the current self-help program recently announced by the American Dairy Association and the National Dairy Council.

In addition to recommendations for increasing domestic consumption the committee also asked the USDA to examine methods for stimulating consumption of dairy products in undernourished areas of the world.

Secretary Benson spoke to the industry regarding the problem of declining consumption in Chicago this spring. In this speech Benson said:

"The dairy industry cannot afford to lose the market for 130 pounds of milk which they have in the last 13 years. If farmers and the dairy industry could team up to recapture the market for 130 pounds of milk which has been lost in the past 13 years, they will turn the milk surpluses into scarcities. They will turn the butter problem into opportunities."

## **Dried Milk Consumption Up**

An example of one area in which consumption of dairy products has been pushed upward is dried whole milk. Per-capita consumption of this product has increased 137% above the prewar level. This increase is largely the result of the increasing use of dried milk solids in the food processing and manufacturing industries.

New products are being sought by the industry through research and technical development. One of these developments which might boom consumption of dried milk solids still further is the new dairy spread (Ag & Food, April 29, pages 205 and 213).

According to some opinions, this dairy spread may eventually offer an answer to the challange of margarine. It can be made in the city milk plant and is usually composed of 40 to 50% butter fat. Other ingredients are dried milk solids, cultured butter milk, lactic acid, and salt. This product has been marketed on a small scale in Wisconsin and some other dairy states.

In a recent statement of the Administration's stand regarding the dairy problem Secretary Benson said: "Dairy farmers and the dairy industry have a major challenge. We believe they will put the dairy business on a more solid basis . . . with a minimum dependence on price supports. They have asked for time . . . we have agreed, now we will all pitch in and get the job done."

The industry task group will meet in Washington again this fall to review what they have accomplished and, perhaps, to make additional recommendations.

## Special Dietetic Foods, Low-Fat Milk Products Seen as Trends

Use of synthetic sweeteners on increase . . . Consider supplementing protein content of cereals

SKYTOP, PA.—Trends toward an increase of special dietetic foods, particularly those with low sodium content, increasing use of synthetic sweeteners, low-fat dairy products, and contemplation of supplementing protein content of cereals all are matters affecting or which may affect food processing. All were topics of high interest at the meeting of the food industries advisory committee of the Nutrition Foundation, held here May 5 to 7.

The pack of canned dietetic foods for 1953, including the low calorie products, may reach well over 10 million cases, it was reported by LaVerne Clifcorn, Continental Can Co. This is an increase of 100% over the 1951 pack. In 1949, there were 17 packers of these special dietetic foods marketing 33 products: in 1951, 85 canners prepared 53 products, said Dr. Clifcorn. For 1953, in the field of low-sodium foods alone, there are 57 products, he reported. The manufacturers of foods have been assured that there is a real market for these materials. Low-sodium bread, cereal, crackers, milk, and canned meats are on the market.

More than mere elimination of the addition of salt is involved in the production of low-sodium foods. Lye peeling, sodium content of water, brine separation—as with peas and lima beans, salt soaks, all must be minimized or avoided. A very important aspect to this development is the taking of dietetic foods out of the racket class. The

American food industry feels an obligation to avoid any exploitation, said Dr. Clifcorn, and conscientious producers are taking care that advertisements do not indicate that their food alone will remedy major dietary problems.

Synthetic Sweeteners. Products sweetened with materials other than sugar are the subject of a great deal of interest, it was pointed out. In the discussion which followed Dr. Clifcorn's talk, it was clear that there is some concern over the relationship of synthetic sweeteners to existing food laws. Special attention is being given to these dietetic foods by several organizations, including the American Medical Association, and the National Canners Association. Some canners are going ahead with synthetically sweetened foods with packs for the regular market even though there is some indication that the matter of the Food and Drug Administration regulation is not perfectly clear.

The most pertinent points brought out in Dr. Clifcorn's speech, were (1) some synthetic sweeteners are no longer considered to cheapen the product, (2) much is to be desired in careful labeling, and (3) there is a need for broader allowances than now defined by the pending standards of identity. There is a question as to who will police the use of these materials. Although a hearing is pending, such matters are usually a long process, and a decision might not be reached in the immediate future.

Sidney M. Cantor of American Sugar Refining (left) and H. E. O. Heineman of Pet Milk relax between sessions of the Nutrition Foundation meeting



Inaccurate Ideas About Sugar. The place of sugar in the diet deserves more objective consideration than it has been given of late, declared Sidney Cantor, American Sugar Refining Co. All too frequently the approach is emotional, he said, and not infrequently is based on ideas which are quite inaccurate. Food faddists recognize the fears which sometimes grow up and take advantage of them to line their own pockets.

Physiologically, said Dr. Cantor, the carbohydrate portion of the diet furnishes energy, accomplishes specific functions, spares protein, and enables the body to maintain metabolism of fats on a proper course. Economically it is possible that fat and protein consumption will fall to a minimum level with carbohydrates making up the remainder. Psychologically, sweets are a natural and satisfying part of the balanced diet. It is only when they are used as substitutes for other gratifications that the use becomes unhealthful.

Sugar has a proper place in the balanced diet, he declared, and the practice of pinning specific ills to it is not likely to be a fruitful approach. The important thing is to determine the mechanism by which diseases such as obesity and dental caries operate and treat them fundamentally rather than in the fashion which seems to be prevailing in some quarters today.

Cereal Fortification with Amino Acids. Combinations of available foods can give the needed or desired balance in a diet, where one of the foods alone may not furnish it completely, pointed out J. S. Andrews, General Mills. This can be done effectively in the case of cereals by supplementing with milk. One reason for the failure of good growth on a strictly cereal diet, he said, is the composition of cereal proteins, which have certain amino acid deficiencies that make them inadequate for human requirements. In cereals, he said, the most important deficiency is lysine. Such deficiencies may be furthered by methods employed in milling and baking, where striving for flavor and appearance, as in the browning of crust, involves practices not conserva-

The addition of 0.2% lysine can approximately double the quality of the protein, he related, but this is economically impractical today and even at prices announced for the future when lysine will become commercially available, such a step would be far more costly than is the addition of thiamine, riboflavin, niacin, and iron. He expressed the opinion that in view of the good quality protein in the American diet, addition of lysine to flour is not likely to add anything to the public health picture in this country.

Changes in Milk Industry. A change

is needed in the basic economics in the milk industry, according to H. E. O. Heineman, Pet Milk Co., who pointed out that while the industry is selling increasing amounts of nonfat solids and the state of mind of the public generally is decreasingly favorable to high-fat products, the industry is buying its milk on a butterfat content basis. Many of the actions of the industry in the past have been related to the emphasis on fat content; this is changing rapidly. There is a

great need to bring cattle breeding into line with nutritional trends, he declared.

For the first time in history, reported Dr. Heineman, the per-capita consumption of margarine is greater than that of butter; but the total fat content of the products is less per capita than it was 15 to 20 years ago. The rise in consumption of buttermilk, skim milk, cottage cheese, and low-fat ice cream indicates increased acceptance of low-fat or nonfat milk products. he observed.

## Relation of Nutrition to Disease In Farm Animals Analyzed

CHICAGO.—A record-breaking gathering of more than 1500 delegates to the 45th annual conference of the American Feed Manufacturers Association were told recently that there is much uncharted ground in the world of nutrition as related to disease in domestic animals. The technical program sponsored by the AFMA Nutrition Council was composed of three individual papers, each relating the prevalence of disease in a given species of farm animal to problems of nutrition.

Diseases in dairy animals, according to W. E. Petersen of the University of Minnesota, may result from deficiency of vitamins A and D or, more frequently, from certain mineral deficiencies. Milking cows in particular have large phosphorus requirements, said Petersen, and the shortage of phosphorus in the bovine diet is common in large sections throughout the country.

Phosphorus deficiencies must usually be acute before easily recognizable symptoms appear. A somewhat less common deficiency, but one that is more easily recognized, involves iodine. The most common symptom of iodine deficiency is the bearing of goitrous calves; the deficiency is easily and inexpensively corrected by furnishing the animals with iodized salt. Trace mineral deficiencies are less well understood, and are presently reconsized only when the deficiency becomes so acute as to render symptoms unn.ittakable, Petersen said.

**Swine Disease.** In swine, it has been shown experimentally that all amino acids must be present for protein synthesis, and they must be present in the right proportion, said Frank Thorp. Jr., of Michigan State College. In this respect swine differ from cattle, since the latter are able to synthesize

Some of the speakers at the AFMA meeting who discussed the relationship of nutrition to disease in farm animals. Frank Thorp, Jr. (left), Michigan State College; W. E. Peterson, University of Minnesota; John C. Hammond, O. A. Newton & Sons Co.; and J. P. Delaplane, Texas A&M College



tive to lysine.