

Session E Round Table Discussions

Vegetable Proteins in Dutch Meat Snacks

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There is a great variety of snack foods on the market today. As basic ingredients we usually think of milk, chocolate, sugars, starch, nuts, fruits, etc. Meat, however, is not immediately identified with the world of snack foods, but rather is considered as an important part of our daily meals. Imagination and new industrial technology, now has led us to more diversified and fancy applications of the basic meat cuts. A lot of these products are consumed today as quick snacks, and not as an integrated part of a meal. A good example is the Dutch meat snacks industry. We thought it interesting enough to give you some facts and figures about this industry and about the possibility of using vegetable proteins in these products.

Two general categories can be distinguished: first, products mainly consisting of meat such as frikandels, satés, hamburgers etc.; and second, snacks where meat as an ingredient contributes only a limited, but important part to the total composition, e.g., croquettes, bitterballs, bami-and nassiballs, loempia's, meat salads etc. Originally, most of above meat snacks were made by the housewife in the kitchen or sometimes by the butcher. The general trend toward convenience foods during the last decade, however, has changed the structure of this once small-scale business. In 1977 a total industrial production of 73,000 MT was realized. This is a 9% increase over that in 1974. The most popular meat snacks are unquestionably croquettes and frikandels; they represent 53% of the total business. Economically the meat snack industry shows a total sales figure of 310 million guilders. Most of this production is sold and consumed in Holland, although more than 75% is deep-frozen and could easily be exported. Actually, only 5% was exported in 1977.

With respect to composition of the meat snacks in 1977,

meat averaged 39% of all the ingredients. Approximately 43% of the meat was pork, 37% horsemeat, 12% poultry and only 6% beef. Compared to the 39% meat, nonmeat protein products contributed 0.5%. What does this mean in quantity? The 0.5% stands for 381 MT, of which 157 MT were soy protein products. This is an increase of 31% in comparison to 1974. Out of a total of 82 companies examined, 27 claim they use soy proteins as an ingredient. This can be in a textured form or as a functional ingredient for binding and emulsifying purposes.

Good examples are meat croquettes; they are made up by a dough consisting primarily of butter, wheat flour and water, with which some minced meat is mixed. This dough is covered by a crust of breadcrumbs sticking to the croquette with the help of a binding protein, usually egg white. The minced meat can be replaced partially or totally by textured soy proteins, and isolated soy proteins can do the same job as egg whites. With respect to quality and taste acceptability of these "meat and vegetable protein" croquettes, some very interesting results ensued from a product test carried out by a Dutch consumer organization in the beginning of 1978. Of the seven different producers of meat croquettes that were included in the test, three used textured soy proteins and four did not. The taste panel gave a relatively high score to two products; one contained soy proteins; the other did not. Results on the five other products were more or less reasonable.

All these facts and figures indicate that consumption of vegetable proteins as part of meat snacks in Holland is still limited (157 MT compared to 28,000 MT of processed meat in 1977), and obviously there is still a lot of room for future expansion.