

LILLEMOR ABRAHAMSSON

Institutionen för näringslära, Uppsala Universitet
FOODS FOR INFANTS AND CHILDREN IN DEVELOPING AND INDUSTRIALIZED COUNTRIES.
NUTRITIONAL, BIOCHEMICAL AND EDUCATIONAL ASPECTS.

Akademisk avhandling

som för avläggande av filosofie doktorsexamen vid universitetet i Uppsala kommer att offentligt försvaras i föreläsningssalen, institutionen för näringslära, Dag Hammarskjölds väg 19, onsdagen den 24 maj 1978 kl 09.15.

ABSTRACT

Different types of home prepared and industrially produced foods and menus were evaluated by means of biochemical analyses, bio-assays using rats and calculations of the nutritive values, respectively, in order to enable a comparison of the nutritional qualities of foods for infants and children in developing and industrialized countries.

The net protein utilization (NPU) of Swedish milk or *milk-cereal based gruels* was found to be high and not significantly affected by the spray or roller drying procedures. However, the NPU of roller-dried *milk-cereal porridge powder* varied remarkably and was shown to depend on the roller drying method used and the presence of reducing sugar.

Weaning foods adapted for a developing country were formulated based on the commonly used and available foods of vegetable origin. The nutrient density was shown to be sufficient compared to recommended daily allowances. However, the fat content was relatively low (18 energy %) resulting in a low energy density. When extra fat was added to 30 energy % the energy density was below recommendation. Daily menus, comprising these weaning foods supplemented with breast-milk, were found to be nutritionally adequate except for calcium.

A *food group system* for use in nutrition and health education was suggested. This system takes into account the importance of staple foods in the diet and how these can be supplemented with local resources in order to obtain an adequate diet. The practical application of the system in the formulation of weaning foods was illustrated.

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