

## HONEY IN BABY FOODS \*)

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A report delivered at the Apitherapy Symposium held in Madrid in 1974 (by B. PEREZ ANDUJAR, Spain: Honey in Infant Food — Editor's note) pointed out that adding honey to various formulas of artificial breast milk is recommended for its wholesome effect on infants, particularly in untimely born infants — because of its high-energy contents and its good effects in iron, copper, and manganese deficiencies, and jaundice.

Late in the 1950s, the use of honey in baby foods increased so steeply that the baby food producing factories ranked second in Spain in terms of demand for "industrial" honey.

Our economic survey focuses on the baby foods for the second age group — over three months.

According to official statistics, 112 baby foods with honey were registered in December 1975, produced by 18 factories.

On the basis of the data available, we classified the baby foods in 4 categories :

- (a) Artificial breast milk, for the age group over three months :  
    With honey — 4
- (b) Powder and purée foods, without milk :  
    With honey : of rice — 1  
                  of wheat — 2  
                  of various cereals — 3
- (c) Powder foods, with milk in them :  
    With honey : of various cereals — 3  
                  of cereals and cookies — 1  
                  of cereals and cocoa — 1
- (d) Mashed and finely strained fruits :  
    With honey : 1

It results that honey is used in 16 baby foods, accounting for 12.7% of such products in the market now. Most of them are meals of various cereals — with or without milk, accounting for 37.5% of all commercial baby foods with honey.

Seven factories produce baby foods with honey — 38.8% of all factories supplying baby foods in Spain.

Two groups of such factories are distinguished: of the food industry and of the pharmaceutical industry.

The production of the former accounts for 42.8% carrying an important weight in the food industry and dominating the baby food market. Three such factories are in Madrid, two in Barcelona, one in

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Bilbao, and one in Saragosa. Their economic importance mostly lies however in other commercial food products which provide for a much larger profit to them.

There is only one factory which exclusively commercially manufactures foods for infants.

### **Honey demand**

In an attempt to determine the total amount of honey used in the baby food industry, we applied to the 7 units producing food for infants for information in this respect; the amounts reported by four of them account for 57.10%.

From the data reported, it results that :

(1) A number of food factories use honey in their dietetic products, but only as a sweetener, and they will use honey only as long as its price will not be too high as compared to the synthetic sweeteners ; so that the amount of honey used by them will not be taken into account.

(2) The amount of honey purchased by each of these factories in the 1966—1975 period averaged 32,841.2 kgs.

(3) Of the four units which reported their honey consumption, two have used a larger amount of honey than the average, while the other two — only a very small amount.

(4) Honey demand is definitely increasing, at an annual rate of 73.65%. Considering this fact and that the average amount of honey consumed by the four factories is representative, it results that the annual honey consumption for 1965—1975 was of 229,895.4 kgs.

When considering the consumption per unit product (of the 4 factories inquired by us) it results that the 16 baby foods with honey now in commercial production demands an annual honey consumption of 259,625.6 kgs. It is obvious that the difference is small ; on this basis, and considering that also other foods for infants are registered as including honey too — although this might not be always true — we appreciate that the demand for honey of these food producing units would range between 230 and 260 tons annually.

### **Forecast of the demand for honey**

To forecast the honey demand by the baby food industry, if only to get an idea, is very difficult because of the complexity of the independent variables and of the difficulty of quantifying estimative figures.

Logically, the first factor to be considered is the birth rate, because at present the rate of survival of infants over the first three months is very high. After Ireland and Iceland, in Spain the birth rate is higher than in the other west European countries, being now 20‰; its reduction is envisaged by the 1980s, so that a birth rate of 1.90‰ at the most should be considered in relevant forecasts.

Now, with respect to the people's income — which is an explanatory variable, it must be pointed out that there is a positive correlation between the level of income and that of sales of baby foods (infants). All these foods — cereal (wheat and maize) purées, and powders with milk — have been produced for many years ; the constantly higher production is due to the high rate of increase in the per capita income,

especially since 1960 ; the ever greater demand for such baby foods is the result of their large range and of their being readily prepared for feeding infants with them.

The higher family income is largely due to wage-earning women ; use of such foods for feeding infants provides for an important facility.

On the other hand, the present trend of having a greater number of women involved in the production process is a characteristic feature of the process of economic development in Spain too. This economic development entails changes in the pattern of life : household duties are depreciating in favour of recreation.

Also, the factories are increasingly reluctant to have woman employees suckling their infants for more than three months, and this is also both a cause and effect of the ever greater demand for such foods.

Noteworthy is also the fact that in the present society, children carry a greater weight in the more or less consciously planned household expenses ; because of this special feature, we may assess that children are an increasingly rare social-economic asset.

As to the price — as a factor of demand, we point out that although valid price series were not available for us to determine their elasticity, on the basis of the information obtained from chemist's shops and the estimative figures supplied to us by the National Syndicate of chemical industries, we may assess that the demand does not depend on price elasticity.

The most important effect of price rise is a slight decrease in consumption of these products which are consequently replaced by potatoes, vegetables, fruits — which are also industrially processed, and meat and fish. But the latter food products are consumed by children of older age, and they do not include honey so that we shall not take them into account.

### **Reasons underlying consumption of baby foods with honey**

For determining these reasons, we made an inquiry among mothers with 3—6 months infants, and at chemist's stores.

Questions to mothers included the reason why they used a certain baby food, the birth order of the baby who was fed with the food concerned, and whether they were satisfied of the baby food used.

The inquiry covered 960 mothers, of 26—35 years of age (as stated by them), in various cities as follows : Madrid (680), Alcalá de Henares (120), Aranjuez (60), and Guadalajara (100).

The reasons stated in answering the inquiry fall into four categories :

- a. prescription by pediatricians (280 — 39.5%)
- b. personal experience (400 — 41.6%)
- c. recommendation by pharmaceutical chemists (80 — 8.8%)
- d. other reasons (100 — 10.4%).