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2/4/55

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### The Drying of Honey

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and

It is suggested that the Engineering/Development Section consider working on the preparation of a dry honey. The following statement covers briefly the present situation regarding such a product.

A dry honey is a product that should be of great value in increasing the industrial use of honey. If honey could be successfully dried it would find many uses <sup>for</sup> ~~to~~ which it is now denied. Probably the <sup>largest</sup> ~~largest~~ would be in baking, including prepared dry mixes and use in the commercial and retail bake shop. Such a product might also be used in confectionery and in peanut butter-honey spread products.

A practical process and product should have the following characteristics:

1. Low cost of manufacture.
2. Absence of cooked, burned, or caramelized flavor.
3. Characteristic honey aroma and flavor, possibly by return of honey essence.
4. Minimum discoloration.
5. Minimum addition <sup>of other</sup> ~~of the~~ materials.
6. Moisture content below 4-6% and a shelf-life of at least a year at room temperature.

Pillsbury Mills in seeking a source of a dry honey for use in a projected honey cake mix has examined the following processes:

- (1) A dry, solidified honey product consisting of a gelatinized starch product and honey solids, at least 45% of the latter. This is tunnel dried, or may be spray-dried. U.S. 2,693,420 "Solidified Honey Product and Process for Making Same" W. F. Straub, 11/2/54.
- (2) Food Concentrates, Inc., Rahway, New Jersey, has made a dried honey-sugar mixture. A sample of 35% honey has good handling

properties, is hygroscopic, but since it was dried on an atmospheric drum dryer has a cooked, caramelized, non-honey flavor.

- (3) Our dry honey-skim milk product cannot be made by the present spray drying process to contain over 40% honey solids. The fact that the other 60% is milk solids limits its utility and also its shelf-life. U.S. 2,621,128 ("Dried Honey-Milk Product" B. H. Webb and G. P. Walton, 12/9/52) describes a mixing and tray drying process which can produce a dry mixture of a maximum of 55-60% honey solids. Flavor is better than by the spray-drying process.