

## Honey.

By Clive Beech.

IF ASKED TO NAME THE oldest human food in the world, most people would say milk, or bread, but the correct answer would be honey. Man knew the rich sweetness to be had from wild bees long before he kept cattle or learnt the art of baking. To this day, honey is the golden wonder of nature, the sweetest mystery known to science and still our most perfect and easily assimilated food.

Although they now know a good deal about its dextrose and levulose content, chemists can no more make honey in their laboratories than they can make milk. Its purity is such that with its enormously high concentration of health-giving sugars, properly ripened honey, even when exposed to external contamination, destroys all harmful bacteria that may settle on it, dealing them death within an hour or two. Vital minerals like potassium, iron, copper, manganese and phosphorus, protein, vitamins, enzymes and natural sugars, these are the ingredients of pure honey, and together they make a food which is absorbed directly into the blood-stream at the highest possible speed, a feat achieved by no other article of human diet. Honey helps babies and young children to retain calcium and so build healthy teeth and sturdy limbs, it prevents fatigue and provides energy and can nourish many diabetics to whom ordinary sugar would be deadly. It is the finest carbohydrate food in existence, and its sweetening power is double that of cane sugar.

This like salt, has but one universally-recognised taste, but honey may have an enormous range of variations in flavour, dependent on each of the 10,000 or so species of plants and trees which rely upon bees for their pollination.

Allusions to bees and honey abound in the Bible, and all the very earliest civilisations were fully aware of the nutritional properties of this liquid gold. Democritus, the Greek philosopher, and Alexander the Great were so aware of the value of honey that they left instructions that they were to be buried in it, and this was done. An ancient royal Egyptian tomb opened in modern times was found to contain jars of honey at least 3,300 years old. It was darkened and clouded with age, but still pure, and edible.

There is no way of adulterating pure honey without any chance of detection. If it is skilfully diluted with warm water, it merely ferments. If it is contaminated by the addition of cane, maple or maize syrup, it just separates out. If it is blended with other sugars, it thickens and goes solid. The sure test for pure, unadulterated honey is to pierce the lid of its jar with a nail point, tilt the jar on its side and see what happens. Pure honey will trickle very slowly through the hole, making snaky coils on a saucer placed beneath, but diluted honey will not do this.

Led primarily by the fragrance, and then by the colour of the flowers, the bees (which are colour-blind to reds) set about their honey-making with an industry unsurpassed in nature or the civilised world. Each worker bee carries something like 500 times her own weight in nectar to take back to the hive before nightfall, each day, for three times as much nectar must be gathered than honey finally produced. To make about a tablespoon of honey a single bee has to visit around 2,000 flowers, while a pound of honey in the hive is the result of a minimum of 37,000 bee trips to flowers and back! These 37,000 bee loads per pound result in a total bee mileage of about 30,000—or twice round the globe—for a hiveful of bees making their average of about 100 pounds of honey in a season. Yet from an average flower a single bee extracts only about one eighth-grain of nectar.

Honey is most commonly produced from clover blossoms, but the 10,000 nectar-yielding species of plants include most of those known to man. The sweet-scented flowers, or those we think so, may make the most fragrant honey, but not necessarily the best. Among the finest sources are the unlikely flowers of dandelions, crocuses and sycamore trees. Pussy-

willows, buckwheat, acacia, milkweed, blueberries, golden-rod, wild raspberries, alfalfa and pinewoods are other excellent sources of honey not usually suspected of such virtue.

As is well known, heather makes a dark yellow honey, quite different from the pale amber of clover honey, but although bees are indiscriminate in their nectar-gathering, certain sources prevail in different localities, and all have marked effect upon both taste and colour. The ancient Athenians gathered their finest honey from their Mount Hymettus, where the wild thyme gave it a distinctive flavour. Maltese honey, famous throughout the Middle Ages as a trading product, and still excellent today, owes its characteristic fragrance to orange-blossoms. The luxurious granular, white, aromatic honey of Narbonne, in France, owes its special charm to sainfoin blossom, while the strange wood honey of Germany's Black Forest is made by the bees from the gummy drippings from the pine-needles. Wild raspberries make honey ruby in tint, sage gives it a roughy sweetness, and alfalfa a tang all its own. Barest of all honey is that culled from the white balls of ambrosia or wormwood, and, strangely, the most dangerous is that obtained in spring by the wild bees of East Nepal, in India, since it comes from certain rhododendron flowers in the hills and is consequently poisonous.

It is not generally known that there are two distinct grades of honey, the rough, coarse-flavoured industrial honey, and the fine, delicate table variety. Honey experts grade their product into these two categories unceasingly. Only a comparatively few flowers yield nectar making clear table honey, but many others enable the bees to produce dark, rank-tasting honey which is nevertheless put to good use by bakers, confectioners, and tobacco firms. Bakers cook such honey in cakes and malt bread, and it loses all its disadvantages in the process while adding necessary sweetness and keeping baked foods moist. Most of the remaining low-grade honey is used for curing, moistening, mellowing and flavouring tobacco, but some also finds its way into cough mixture and feminine hand lotions.

## Malnutrition in African Mothers, Infants and Young Children.

"MALNUTRITION IN AFRICAN MOTHERS, Infants and Young Children"—the Report of the Second Inter-African Conference on Nutrition, held under the auspices of the Commission for Technical Co-operation in Africa South of the Sahara (C.C.T.A.) at Fajara in the Gambia in November, 1952—was published on August 23rd, 1954 by H.M.S.O. (Price £1 5s. 0d.)

Many important aspects of the problem of malnutrition amongst Africans were discussed by specialists from Africa and outside, including those invited by F.A.O. and W.H.O. who took an active part in the Conference.

The importance of the subject is evident from the fact that it was the main subject of the third Joint FAO/WHO Expert Committee on Nutrition which was also held at Fajara immediately following the C.C.T.A. Nutrition Conference. Conferences on the same theme have since been held for South and East Asia at Bandung, Indonesia, in 1953 and for countries in both the Western Pacific Region and the Americas at Caracas, Venezuela, and by a symposium on protein malnutrition held in Jamaica.

Emphasis on the recommendations of the conference is placed on the need for recognition of the widespread nature of protein malnutrition, especially in the infant and its mother, on the value of remedial treatments and prevention, the means for which lie in the full utilisation of local protein resources, so as to enable the mother to feed her infant adequately. In the future great efforts to raise the levels of food production in communities in which protein malnutrition is a present problem will be needed.

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