

containing less than 3.0 per cent of fat; hence these cows do not give milk, or at least do not give legal milk, within the municipality of Toronto. Other cows give a product containing as much as 5 or 6 per cent. of fat. Of course, this is legal milk; but suppose I take this milk and deprive it of from 1.5 to 2.5 of fat, is the product milk? You have other constants than fat in your legal definition of milk, and if my dilution with water has reduced the non-fatty solids below the standard 9.0 per cent., the result will not be recognized as legal milk; but as long as I exercise proper judgment in the addition of water, the resultant liquid will be milk in the legal sense of that term, and even should I reduce the non-fat solids below 9.0 per cent., may I not add such quantity of these as shall bring them up to the legal minimum and thus produce legal milk? Finally, may I not effect dilution of a milk rich in fat by addition of fully skimmed milk, and thus produce a legal milk? So far as the standards for legal milk are based upon the chemical composition of milk, the supposed treatments yield an article which stands the test for legal milk, and we must recognize it as such. But, if the definition of milk involves the condition that milk is the unaltered and unchanged product of the cow's udder, these manufactured milks cannot be regarded as genuine milk. They may be as good as milk, but they are not milk.

I need not further discuss the case of milk, and have dwelt so far upon it in order to give us a sort of analogue of the case of honey. Just as the cow is essential to the production of milk, so is the bee essential to the production of honey, and I think we may decide at once that even should the chemist be able to manufacture something as good as honey (and this does not assume that he can do so), yet would the resultant, lacking the agency of the bee, not be entitled to be called honey?

But again, we have seen that not everything yielded by the udder of the cow is

entitled to be called milk in the legal acceptance of the term. Must we recognize everything that passes through the honey-stomach of the bee and filled by that insect into the comb as honey? Unfortunately, we have in Canada no legal definition of honey such as to enable us to describe the article inclusively and exclusively. Sec. 30 of the Adulteration Act, R.S., 1906, forbids the feeding of bees with sugar, glucose, or any sweet substance "other than such as bees gather from natural sources, with the intent that the same shall be used by the bees in making honey."

This is the only point upon which we have any legal statement in the matter of honey. Section 30 of the Act further forbids the manufacture or sale of any "imitation honey, or sugar honey so-called, or other substitutes for honey" in Canada. But I shall consider this point later. You will see that it is assumed throughout that we know what honey is, and we wish now to keep your attention upon the single point, "What is honey?"

The law goes no further than to say that honey must be made by bees, and must be made by them from "natural sources." You will note that it is forbidden to supply bees with any other raw material for the making of honey than "such as bees gather from natural sources." When a field of clover or of buckwheat is sown by a bee-keeper with intent to pasture his bees upon it, he is evidently supplying them with a legitimate material for honey production. No one will deny that from the nectar of clover blossoms the bee is capable of making typical honey. Now the nectar of clover flowers has been carefully analyzed and found to consist essentially of about 0.5 per cent. of mineral matters, 85 per cent. of water, minute traces of aromatic substances, and sugars. The sugars constitute about 14 to 15 per cent. of the whole, and consist of cane sugar and reducing sugars (dextrose and levulose), in the ratio of about 1 to 3; that is, nearly one-fourth of the sugar in clover nectar