

PRESERVATIVES.

The chief preservatives used are boracic and salicylic acids and formalin; the former being infinitely the most popular. We often hear that Mr. X's milk keeps very well: we then know that such milk has been "doctored." (Dr. Makgill kept some specimens of milk for two days at blood-heat before curdling began.)

It is urged by some that the amount of boracic acid added to milk can do little harm to an infant it must be admitted that at the very least the argument is debatable. Preservatives undoubtedly delay the coagulation of milk. Is it good for a child for such coagulation to be delayed in its stomach? Of necessity delay in the coagulability of milk must render it less digestible. Milk collected under filthy conditions will soon undergo coagulation and fermentation, and in such a condition will be recognised by the most ignorant mother as unfit for her child, but preservatives delay the natural processes in filthy milk, and hence disguise its dangers. This is the real danger of preservatives.

In connection with adulteration, the following extract from Dr. Finch's report is of interest: "At present adulteration is very prevalent in Christchurch. If after a lot of trouble a conviction is obtained, the offender is fined about £5; he makes up the amount of this fine by the amount of water he puts in the milk next morning." Again, "It is significant that, when a milk-supplier has been fined for adulteration, it apparently makes no difference in his custom."

It now remains to be considered what can be done to bring about reform in the "trade." Truly the problem presents many complexities. But first and foremost the inspection of milk should be placed under the control of one Department. As the law now stands the responsibility of milk-inspection now rests with the Stock and Veterinary Branches of the Agricultural Department, chiefly with the former. To some extent the Health Department is concerned, as are also the municipal authorities. What wonder then that the traffic is not under a comprehensive system of control? And yet a systematic inspection of milk is the corner-stone of food-inspection.

Milk-inspection must be conducted by skilled men, not only well versed in all its scientific branches, but also in all the tricks of the trade.

Professor Park, of the New York Health Department, states that the prevention of the bacterial contamination of the milk of cities can be brought about without putting an undue strain on the trade. To some extent I concur with the Professor's statement. Nevertheless in some instances the enforcement of rigid regulations will undoubtedly inflict hardship, notably about Wellington, where the majority of farmers are leaseholders, sometimes at very high rentals. A Hutt dairyman told me that owing to the unprecedented rise in the price of land, some of the farmers in the Hutt district are paying as much as £3-£4 per acre rental, and only holding the land on very short leases. Farmers holding land under such conditions can hardly be expected to erect model buildings, or embark in the expense of up-to-date machinery and utensils, which are considered essential in a modern dairy. I can quite bear out Dr. Finch's statement that the best-conducted dairies are those where the farmer owns the land. The uncertainty of labour is another drawback, and, to some extent the varying demands made by the retailers as to the amount of milk required. In summer it is not unusual for a farmer to receive short notice from the retailer that only one-third of the quantity of milk he has hitherto been supplying will be required, and under the terms of contract the farmer appears to have no means of redress. At a short notice, therefore, he has either to spill his milk or make it into butter. At the same time, I know of no farmer who conducts his dairy properly who has been so treated. Nevertheless, despite these drawbacks, farmers can reasonably be expected to be cleanly in their methods. An expensive shed is not necessary, especially in those climates where the cows have not to be housed. But what shed and yard there is should be clean. The water-supply should be above suspicion; the cows should be groomed; the hands of the milkers, and the cows' teats, should be washed before milking; cows should not be fed in the shed where they are milked; milk should be cooled below 60°; the dairy and utensils should be kept scrupulously clean. Surely the farmer may be expected to do all this, and he undoubtedly will if the public insist on it.

It is often argued by some dairymen, "Oh, we would be only too willing to do all you require, but the public don't care, they won't pay a halfpenny more per quart for clean milk. Mr. X over there who takes no trouble with his sheds or cows gets just the same price as I do." The same remark is often made by the middleman who has adopted up-to-date plant. He complains because he cannot get any more for his milk than his less scrupulous rival. These arguments cannot be denied. Regulations may be made, but after all the remedy rests with the public. What the public demand the trade will supply, and if householders would only insist on receiving none but the best of milk from the best-conducted dairies regulations would be practically needless. In effect, in place of stringent regulations setting forth a prescribed shed and yards and a hundred-and-one other things that may appear to be needed, the experiments of education and competition, should first be tried. When the public once realises that it is not getting what it is paying for—namely, pure milk, and that the dirty milk supplied is particularly dangerous to infant-life—a step will have been made in the right direction. All this can be accomplished without great hardship to the farmer. Consider the number of milk-carts running into our cities every morning, many coming from the same districts. What is to prevent farmers living in the same localities from combining and sending their milk to town by special carts, and thus saving to a large extent the cost of transport. The cost of such transport must be enormous, and the money saved by such combination would soon pay for model buildings and machinery. I am told farmers will not combine. Nevertheless, this disinclination on their part must not prevent the public from being able to obtain clean milk.

A Mungaroa farmer informed me that a dairyman could afford to erect up-to-date sheds and follow out all the recommendations of the Department if he could obtain 5d. per gallon for his summer and 8d. for the winter supply. Some farmers already obtain 5d. and 7d. respectively. Surely a penny a gallon might be saved farmers if they combined for transport.