

The above tables summarize as briefly as possible the results of personal visits to the patrons of the factory, and the bacteriological analyses of fore-milk, stable air, can washings, and the mixed milk of each herd.

I regret to say that the stables were very generally dirty, the beams and ceilings being covered with dust and cobwebs; and in a number of cases, the floors, stanchions, etc. were fouled with the droppings of cattle or poultry. In such cases, the stable air gave large numbers of *B. coli* and *B. lactis aerogenes*. In such stables, moulds were usually present in large numbers; and the Red Mould, of which mention has already been made, was found in 19 stables. All the micro-organisms isolated from these dirty stable airs were unfavorable to cheese and butter making. In cases where milking was done in the barn-yard, there usually was a large infection from the Colon bacillus and other undesirable species.

Only a limited number of analyses of the fore-milk were made, as the bacterial content did not seem to warrant this line of investigation. The *B. acidi lactici* (Ester) and some slow growing harmless bacteria were isolated from the fore-milk or first milkings of about a 100 cows. In no case was the Bitter Torula present nor any representatives of the Colon group.

In view of the large sums of money which patrons receive from the factory, it is astonishing that little or no effect has been made to provide proper places for keeping the milk. The only general precaution taken is to cover the can with a wire screen to keep out the cats; and in many cases the place selected for the can is most unsuitable. The patrons, as a rule, seem quite unaware of the possibilities of infection from road-dust and barnyard air; and they do not understand the importance of controlling the temperature.

The huge numbers bacteria and the great diversity of species found in the can washings were very noticeable throughout our investigations. The Bitter Torula was present in all samples but two; and in one of these, the farmer did not draw the whey home in his milk can but used another vessel. I have elsewhere dwelt on the difficulty of washing the cans properly on the farm; and from the bacteriological evidence here presented, we are quite safe in saying that when the milk cans are once thoroughly infected with micro-organisms, it is almost impossible to kill these organisms by the methods of can washing generally practised on the farms of this Province. We should not, however, lose sight of the fact that the more thorough the washing, the less the liability of infection from undesirable bacteria.

The mixed milk of the different patrons contained the bitter organisms in varying numbers. In some, very few torulae were present; in others, they existed in enormous numbers. In samples of whey taken from the vats, there were large numbers; and it is evident that these organisms carried back in the whey became a permanent source of infection. They may in fact be described as endemic (produced by or depending