

observer, however, there is a defect. After leaving the machine on for some time after the milk ceases to flow, the careful milker notices in many cases that the udder is still somewhat tense and that the cow has not given her usual flow of milk. In some cases, and particularly with some cows, all the milk is removed in a very short time, and there is practically no "strippings." In many cases after removing the machine, the ordinary person would declare the cow to be milked out clean, but a little patience will often enable the milker to get from 3 to 10 pounds, or even more, of "strippings." This, of course, is very bad for the cows. If these "strippings" be not removed it tends to cause the cows to "dry up" much sooner than usual. To overcome this, the manufacturers recommend "manipulating the udder" in order to induce them to "let down" their milk. From close and careful observation on our own herd, we feel quite sure that "manipulation of the udder" does little or no good, and in most cases does harm, although we have followed this plan during most of the year because the makers of the machine seemed so confident that this was very essential.

Our reasons for thinking that "manipulation" is of little or no value are that close watching of the cows at the time when "manipulation" commences, enables us to see a contraction of the muscles of the abdomen, which muscles are connected with those closing the numerous milk ducts, and so far as we have noted, with very few exceptions, the milk flow is not increased by "manipulation." A gentle pulling downward on the cups tends to secure the last of the milk, but in most cases we have found hand stripping necessary. There was a time when it seemed as if hand stripping would not be necessary. Soon after July 1st, the cows began to fail so much in their milk, although the pastures were excellent, that we were obliged to resort to hand stripping, and in the case of some cows to milk them altogether by hand, in order to prevent them drying two or three months before they ought. How much these results were due to visitors it is difficult to say.

Before closing these general observations, we think the whole situation may be summed up in the words of our herdsman, Mr. Wood:—"The machine will milk the cows all right, *if the cows will give down their milk.*" Here we have the whole question in a nut-shell. If the cows in our herd represent the attitude of the majority of cows towards the milking machine, as we have it to-day, then we must conclude that it is not altogether satisfactory, as there is no known way of compelling to give down her milk if she will not voluntarily do so.

As previously stated, we began using the "B-L-K milkers" on January 1st, 1906. In order to see whether or not the milk flow and percentages of fat were affected to any extent by the change from hand to machine milking, we have made a table showing the comparative yields of milk, percentages of fat, and pounds of milk fat given by fifteen cows during the months of December, 1905, when the cows were milked by hand, and the month of January, 1906, when they were milked with the