

injurious, yet in my opinion commercial pasteurization of a dirty milk supply is to be condemned as is the dirty milk supply.

Mildly stating it, it is far from the ideal method, and I think it is positively harmful in the manner in which it is now commercially carried on.

With the amount of advertising that pasteurized milk has received, expended on demanding clean milk, we certainly would be closer to our goal, which is, Clean, Pure Milk.

Many times do I hear, when baby is taken ill with enteritis, and the milk is investigated, the mother reply, "O, it cannot be from the milk, because the label says Pasteurized." Such is the false sense of security which is now developed that the mother is often absolutely careless with her part of feeding pure milk to the babe. And it is only too late when she realizes the real import of commercially pasteurized milk. Why have we not taught her in the beginning to demand pure milk?

Having a desire to see what was the condition of this pasteurized milk when it reached the babe, I had my assistant, Dr. W. P. Curtis, collect samples. These samples were taken directly from the baby's bottle, with the exception of three taken from hospital, and taken during the last month, when the weather has been ideal to keep down germ growth; you can imagine what they might be during the warm summer months.

For a three low count we found 3,400, 7,140, 22,540.

For a three high count, 2,580,330, 426,520, 864,640.

Such a varying of counts certainly fails to impress us with the efficiency of commercial pasteurization.

In talking to the manager of one of our larger pasteurizing plants, he gave the following description of their method:

"Our milk is first run through the separator to remove any sediment." Imagine what the sediment of milk may be. Imagine our permitting any sediment of manure, dead flies, and hair in any other articles of food. Does this straining out of sediment and pasteurizing not tend to make the

dairyman careless?

Then when the milk enters the pasteurizer it has a temperature of about 60 degrees. Just the temperature that Frendenreich showed to produce 85,000,000. Then heated to a temperature of 165 degrees for one and one-half minutes or two minutes, then run through a water cooler at 50. Rogers has recently shown that a temperature of 185 is the lowest at which this flash pasteurizing can be effective, yet I know from talking to various dairymen that they consider 165 degrees sufficient. Of course they have to, for a higher temperature would destroy their cream line and make their milk a marked, disgraced, dirty milk and place it where it really belongs.

Does that sound like a method warranting us physicians in recommending pasteurized milk, or does it not sound more like a commercial way of keeping milk sweet till it can have a chance to kill some babe?

Dr. Freeman, of New York, after a careful study of milk from a medical standpoint, concludes that while milk is in no way changed by pasteurization for forty minutes at 140 degrees, yet commercial pasteurization is to be condemned.

Dr. Evans, of Chicago, in an examination of five large pasteurizing plants during the month of May, found two plants, using the flash method of pasteurizing, averaged about 750,000 and the three using the holding method averaged about 575,000 germs.

This certainly leaves a most dangerous milk when we consider how from various experiments it has been shown that the lactic acid germ is one of the easier killed, although a few hardy strains remain.

Dr. Koller's work at Rochester certainly speaks for itself, and if I have his figures right, they certainly show a reduction in infant mortality far in excess of any figures, yet shown by commercial pasteurization of a dirty milk, so that instead of contending and temporizing with improper pasteurization, or pasteurization of improperly procured milk, or improper care of pasteurized milk, let us demand and work for Pure, Clean Milk.