

SANITARY NOTES.

The following is a summary of Dr. Bryce's report on tuberculosis in man and cattle, which was mentioned in our last issue under the report of the proceedings of the Provincial Board of Health. Referring to the work which the Board had already done with regard to tuberculosis in cattle, Dr. Bryce pointed out that, in the diagnostic uses of tuberculin, an impetus had been given to the investigation of the disease in cattle which promised the most important results.

The statistical study of the prevalence of tuberculosis was first taken up. While in Ontario for years tuberculosis has been shown to cause from 1.0 to 2.5 deaths per 1,000 population in different municipalities, relatively as high as in older and more populous countries, post-mortem examinations have shown that the tuberculized at all ages greatly exceed the number returned as dying from tubercular disease. In cattle the percentage of the tuberculized, until recently believed to be small, is now by post mortem and the tuberculin test found to run from 2 per cent. to as high as 75 per cent. in some herds, whether in Europe, the United States or in Canada. The way in which the microbe of the disease obtains entrance to the body was studied from the anatomical and physiological standpoints; while its localization in different organs, as seen in inoculation experiments and post-mortem examinations, was entered into very fully. While the two avenues, *i.e.*, the respiratory and the digestive tracts, were found to be ways of entrance, yet the rarity of the disease in the man or animal at birth, the continued relative freedom up to the sixth month, the steady increase thereafter in both man and cattle, and the high proportion of cases even in children in which the lungs and bronchial glands are found affected as compared with abdominal

organs, and the steady increase of tuberculosis in housed cattle, as milch cattle, with increasing age, were all set forth statistically as proofs that aerial infection is by far the commoner source of tuberculosis. For instance, from statistics by eight observers of post mortems on men and cattle, including over 12,000 individuals the lungs were affected in over 80 per cent. of the whole, the bronchial and mediastinal glands in 70 per cent., and the mesentery in only 28 per cent. of cases.

While it is quite certain that where the bacilli (when obtaining an entrance to the system) have entered directly into the blood current, they naturally create foci in lung tissue; yet, when the almost equally high percentage of cases of tubercular bronchial glands is remembered, and the fact that abdominal organs, as liver, spleen, mesentery, etc., are notably less frequently affected than those of the thorax, the conclusion seems inevitable that by far the greatest proportion of tubercular infection takes place by way of the respiratory tract.

When, therefore, we learn that over 5 per cent. of the 12,000 patients in the hospitals of this province are tubercular, that 7 per cent. of all who die in our asylums in the first year, and more than 50 per cent of all who die between five and ten years are tuberculous; and that, as Lehmann, of Copenhagen, has remarked, one woman of every three dies of tuberculosis, it is manifest that—the contagiousness of the disease being granted—more efficient preventive measures are urgently required.

A number of deductions based upon the statistics were made, after which a series of recommendations, as measures likely in some degree, to limit the spread of the disease, were offered. Amongst these, referring to cattle, were the following: (1) abattoirs to be built in all towns of 3,000 or over, and no