

these steps in order to commend it to the community. In other words, the people have a right to the best that science can do for them in respect of vaccination when it is made compulsory, as it practically is with us.

Tetanus germs are not uncommon in stables where hay fed animals are kept; they have been isolated from the faeces of calves to which hay had been fed (Huddleston, N. Y. Health Board); milk if sterilized can contain no tetanus germs; therefore calves fed upon milk and kept in stables from which hay and straw are excluded should afford a lymph in which tetanus germs are less likely to be found than that from hay fed cattle. The inference is plain and we should do everything in our power to cut the ground from under the anti-vaccinationists' feet.

Animals which are apparently healthy having been chosen, there are two ways in common use of deciding that they are free from tuberculosis, viz.: by the tuberculin test and by post mortem examination after taking lymph from them and before putting it out. Tuberculin is relied upon by most producers; some follow the test by post mortem. If one test only is to be trusted to, the post mortem is probably best. Lymph ought not to be supplied which comes from animals having *any* demonstrable defect, even though it cannot be shown that such defect would influence it.

(b) *Vaccination of Animals.*—The steps preliminary to vaccination look to a clean, if not aseptic operation. Some scarify on both sides of the spine behind the ilia, others upon the belly and inside of upper parts of thighs, either in a series of parallel lines one quarter to one half inch apart if in a solid patch form. After shaving and washing with appropriate solutions the scarifications are made, little or no blood being drawn; the "seed" is then rubbed in and the animals stabled till the incubation period of five or six days has passed.

(c) *Collecting the Vaccine.*—When the vesicular eruption has reached the proper stage of development it is washed with sterile water, and any crust which has formed removed. In the old process of dry point making, the vesicle and its contents were scraped clean away and the points dipped into or brushed with the serum exuding from the raw surface after it had been washed with clean water. Of course the proportion of any number of points so prepared that will be found active cannot be so great as if they were charged with the vesicle "pulp," that is to say the material scraped from the vesicle. In this the germ chiefly lies. The true lymph exuding from the base of the emptied vesicle carries just what virus it picks up in passing. Probably if dry points are to be allowed in use at all this is the better mode of preparation since they are less likely