

VETERINARY MEDICINE

# Debate Value of Vaccine For Tuberculosis in Cattle

**Guérin, Supported by Briton, Claims High Value; Americans and Germans Pin Faith to Eradication**

**W**HAT TO DO with the tuberculous cow?

Kill her?

Or give her "shots" of vaccine, in an endeavor to make her immune?

This question, which stirred up actual armed insurrection against State and Federal authorities in the Midwest not so long ago, agitated the recent meeting of the Twelfth International Veterinary Congress in New York. Eradicationists and vaccinationists lined up and discharged scientific broadsides in the briskest exchange of conflicting views that enlivened the session.

Dr. A. E. Wight of the U. S. Department of Agriculture, who has charge of the eradication work under the bureau of animal industry, stoutly defended the American method of eradication, claiming statistically demonstrable practical results.

"There has been a considerable reduction in the number of cattle and hogs found to be affected with tuberculosis, at packing centers operating under Federal supervision," he declared. "Since 1916 tuberculosis in cattle slaughtered, exclusive of known reactors, decreased from 2.35 per cent. to 0.4 per cent. Since 1924 the percentage of tuberculosis in hogs slaughtered under Federal supervision decreased from 15.2 per cent. to 10.5 per cent."

## B. C. G. Originator Defends

Equally stout defense of the vaccination method was presented by Dr. C. Guérin, chief veterinarian at the Pasteur Institute of Paris. Dr. Guérin is one of the originators of the widely known B.C.G. vaccine.

He declared the eradication method to be "inoperable and antiquated," and claimed for his own method that "The oral or subcutaneous introduction of living but non-disease-producing tuberculosis bacilli, such as B.C.G., into the body, is capable of producing an allergic state in man as well as in animals. It affords them, also, the benefit of a resistance against tuberculosis infection comparable to that which tuberculous

animals possess naturally. The harmlessness of the B.C.G. vaccine for cattle is not questioned by anyone. The benefit which has resulted from its application in a number of European countries justifies the popularity which it enjoys."

Dr. E. A. Watson, of the Canadian Department of Agriculture, reported no benefits to large numbers of cattle treated with vaccine under his supervision.

He stated: "The incidence of tuberculosis in the aggregate was exactly the same in the vaccinated and unvaccinated cattle. . . . The average degree of tuberculosis was less in the young, immature animals but greater in the maturing animals in the vaccinated class than in the unvaccinated, and in the aggregate was nearly the same for each class with a slight but insignificant difference in favor of the vaccinated. The anatomic distribution of the disease shows a lo-

cation of glandular and pulmonary tuberculosis in the vaccinated cattle very similar to that in the unvaccinated, or without any significant differences."

Prof. J. Basil Buxton, director of the Institute of Animal Pathology, University of Cambridge, England, reported apparently contrary results following experiments on calves.

"Whether given by mouth or intratracheally, or by subcutaneous or intravenous injection," he said, "B.C.G. can raise the resistance of a calf to a virulent experimental infection. . . . Double intravenous inoculation gave complete immunity, three months after vaccination, to the oral administration of virulent bovine cultures."

Admiration for American methods and results was expressed by Prof. Wilhelm Zwick of the University of Gies-sen, Germany. But a different method of eradication of susceptible animals is necessary under German conditions. He expressed skepticism of the value of vaccination, saying:

"All the protective vaccination methods used so far have failed. The accounts of the B.C.G. vaccine of Calmette-Guérin are not yet sufficient on which to pass judgment. From past experience there is a tendency in Germany to be cautious."

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## STRANGE FRUITS ON A WILLOW TREE

*Willows apparently trying to be pines or spruces, at least to the extent of producing cones, are likely to bring a mild note of wonder to cross-country rambles. But the queer cones are not the result of misguided botanical ambition on the part of the willows; they are only the poor trees' response to an act of aggression by an insect. The stimulus that provoked them came from the sting of one species of gall-fly, a tiny insect that lays its eggs in tender plant tissue—in this case the growing tip of the willow shoot—and then irritates it into a pseudo-tumorous overgrowth, within which the growing larva will find an abundance of tasty food. The photograph was taken by Cornelia Clarke.*