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FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE. *

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Prof. Koch, of Berlin, Creates a Profound Sensation.

"The alarmist crusade against cattle is not needed for the benefit of the animals themselves, and has no justification in so far as human beings are concerned."—FARMER'S ADVOCATE, March 5th, 1901.

From the standpoint of humanity, the most important gathering of the year was the British Congress last week for the Prevention of Tuberculosis, in St. James' Hall, London, England, at which were convened many of the world's most eminent pathologists and physicians. The hall was thronged with scientists and medical experts, Lord Lister presiding. Interest naturally centered in the address of Prof. Robt. Koch, of Berlin, the great German bacteriologist, who was introduced by Lord Lister with a simplicity becoming to each as a man of science, and welcomed with British heartiness. His address occupied about eighty minutes, and was followed with intense attention. It was delivered in English, with marked German accent and grave deliberation. Tall, full habited, with high forehead, large spectacles and stooping shoulders, he was the embodiment of German scholarship and thoroughness in investigation. Prof. Koch's main theme was the best method of fighting tuberculosis in the light of experience gained in combating bubonic plague, cholera, hydrophobia, and especially leprosy, which he described as caused by a parasite closely resembling the tubercle bacillus. He pronounced hereditary consumption to be extremely rare, and considered the sputum of a consumptive patient the chief source of infection. The natural preventive measures were the removal of the patients from small, overcrowded dwellings, to established special hospitals for them, compulsory notification to health authorities of cases of tubercular disease, systematic disinfection of sick rooms, and the founding of sanitariums where cures could be effected. He gave an account of recent experiments in Berlin, which served to prove the

TREMENDOUSLY SIGNIFICANT ANNOUNCEMENT which he then made, and which has been received with a feeling of relief throughout the civilized world. He stated that his experiments had satisfied him that human tuberculosis and bovine tuberculosis were radically different diseases, and that he had amply demonstrated that *cattle could not be infected with human tuberculosis*. The counter proposition, that *human beings were not liable to infection from bovine tuberculosis*, was harder to prove, the Doctor said, owing to the difficulty of experimenting upon human subjects, but he was satisfied such was the case.

In a subsequent interview with a correspondent of the New York Herald, Dr. Koch also said: "I have reached the conclusion that the very general fear of contact with tuberculous flesh or fluids is an unnecessary and unfounded fear. I have arrived at my discovery through what I consider practical and indisputable tests. They lead me to believe that human and bovine tuberculosis are of a totally different species. Proceeding on that premise, I am now prepared to show that the far-reaching precautions as to infected cattle may once for all be abandoned."

The experiments upon which the conclusions were reached covered two years, and were conducted along with Prof. Schultz, of the Berlin Veterinary College. During these experiments, he told the Congress, a number of young cattle which had stood the tuberculin test, and might, therefore, be regarded as free from tuberculosis, were infected in various ways with pure cultures of tubercle bacilli taken from cases of human tuberculosis. Some of them got tubercular sputum of consumptive patients direct. In some cases tubercle bacilli or sputum were injected under the skin, in others into the peritoneal cavity, in others in the jugular vein. Six animals were fed with tubercular sputum almost

daily for seven or eight months. Four repeatedly inhaled great quantities of bacilli which were distributed in water and spattered with it in the form of spray. None of these cattle, and there were nineteen of them, showed any symptoms of the disease, and they gained considerable in weight.

From six to eight months after the beginning of the experiments they were killed, and in their internal organs not a trace of tuberculosis was found.

The result was utterly different, however, when the same experiment was made on cattle free from tuberculosis with tubercle bacilli that came from the lungs of animals suffering from bovine tuberculosis. After the incubation period of about a week, the severest tubercular disorders of the internal organs broke out in all the infected animals. After death, extensive tubercular infiltrations were found at the place where injections had been made, and in neighboring lymphatic glands, and also far advanced alterations of the internal organs, especially the lungs and spleen. The difference between human and bovine tuberculosis appeared not less strikingly in similar experiments with asses, sheep and goats, into whose vascular systems the two kinds of tubercle bacilli were injected. These experiments were not the only ones that have led to this result.

Incidentally he pointed out that cases of primary tuberculosis of the intestines were extremely rare, though it was well known that milk and butter consumed in great cities contained large quantities of the bacilli of bovine tuberculosis in living conditions. He also quoted the old experiments of Chauveau, Gunther, Harms, Ballinger and others, showing that human tuberculosis differed from bovine.

DAYLIGHT AT LAST!

It is fitting that the opening year of the 20th century should be signalized by the vindication of the cow from the dark and sinister imputation that, through ignorance or by design, has rested upon her. Directly or indirectly, it has been insinuated that human consumption, which in Canada alone is credited with one-fifth the deaths, or 8,000 annually, was largely due to germs conveyed through milk or meat. This view was directly disputed by Prof. Wm. Osler in his celebrated review of the medical progress of the 19th century, who singularly and significantly foreshadowed the present Koch deliverance. It is also in accordance with the eternal fitness of things that the discovery above stated and its announcement should be made by Dr. Koch, the discoverer of the tubercle bacilli in 1882. In the course of his investigations in 1890-91, he prepared, from gradually-attenuated cultures of the tubercle bacilli, a fluid called tuberculin, designed to be administered as a hypodermic injection as a cure for consumption, but which by 1894 had been discredited as a remedy. It was subsequently found that when hypodermically injected under certain conditions into animals having tubercles, however minute and innocuous, a reaction was set up, causing the animals' temperature to rise. Designing pseudo-scientists were not long in seeing rich possibilities of exploiting tuberculin as a test for cattle, though now known to be a failure. In several European countries, Canada and the United States it was officially inaugurated, in the latter reaching the climax of a crusade of slaughter in several States. Against this senseless folly cattle-owners rebelled, but once the system secured a foothold faddists were enabled to hamper with intolerably vexatious restrictions the movements of breeding cattle, doing immense damage to the industry. We put it mildly in saying that a more useless, injurious, costly and gigantic humbug than the tuberculin-test crusade, was never imposed upon a deserving industry and a long-suffering community. Mr. Henry Chaplin, a former chairman of the British Government Board of Agriculture, presiding at another session of the Tuberculosis Congress, said,

had the theories of officials been correct regarding tuberculous cattle it was a wonder that anybody was left alive in England. He blurted out the truth, however, that while the Government had been zealous in enforcing regulations against foreign cattle and meat, it had not been equally vigorous at home.

Many thoughtful physicians have long doubted the theory which Dr. Koch has now shattered. No one in his senses could believe that the 8,000 persons dying yearly from consumption in Canada contracted the disease from meat or milk of our cattle. And yet, upon this fiction the tuberculin-test system had its strength, leading the Dominion Minister of Agriculture to fear that its non-enforcement would lead an indignant people to sweep the Government from power. For its perpetuation there is now no excuse. The attitude of the FARMER'S ADVOCATE throughout this lengthy struggle was taken in accordance with what we conceived to be common sense and the known facts of science and experience. It is, therefore, with no small degree of satisfaction that we record the deliberate conclusions of the world's foremost investigator, reached after years of patient enquiry, again vindicating, as time has done in other important matters where we found it necessary to take a decided stand, the soundness of our position. The announcement has created a profound sensation throughout the civilized world, putting the treatment of human consumption upon rational and specific grounds, while the stockman can uninterruptedly pursue by every intelligent means in his power, as was always in his interest to do, a policy for the perpetuation of healthy and profitable animals.

Large Farms and Their Management.

THE CONNON FARM AT CYPRESS RIVER.

Along the line of the C. P. R. (South-western branch) one comes to the little burg of Cypress River, which is the nucleus of a fine agricultural section. Within a mile of the town, Jas. Connon—a countryman of Bobbie Burns, by the way—farms quite extensively. The estate includes about 2½ sections (1,600 acres), on which a variety of crops, from wheat to cattle, is grown. This year the owner has about 530 acres in wheat, 100 acres in oats, 120 acres of timothy, and 12 acres of Brome grass. Summer-fallowing is done to the extent of 200 acres the present year, although about 100 acres of timothy sod is broken and backset annually. The available pasture amounts to 40 acres of tame grass (timothy) and a quarter-section of native pasture. The proprietor prefers the tame to the wild grass for pasture. Seeding down is followed annually, about 100 acres being seeded each time, the timothy being sown with the second crop of wheat, wheat being preferred as the nurse crop on account of the early time at which it is sown. The manure made on the farm is applied in different ways: sometimes on the pasture, at others on the sod-breaking. Sulky plows are used, each being drawn by four horses. Four horses are used on the drills (shoe). This year a disk drill was tried. Harrowing is done before and after drilling, the number of times depending on the needs of the land. Four horses are worked to five sections of harrows. In harvest time the binders, of which there are three, are kept going steadily, five three-horse teams being used alternately. By this method the average for each binder is 20 acres a day. The firm run a threshing machine in connection with the farming operations, and a profit is made thereby. The rates charged are for stook threshing: Wheat, 6 cen — oats, 5 cents. For threshing out of the stack, 4 and 3 cents. Twenty-four horses are kept for working purposes, among them being a 3,240 pound team of Western mares, which are well thought of by their owner. —A registered Clydesdale stallion is kept, and some pure-bred Shorthorns, the cattle numbering in all 40 head of pure-breds and grades.