

TO THE EDITOR:

This letter is in reply to your inquiry about the 164 strains of "soil saprophytes" supplied by me which Forbus and associates [*A.M.A. Arch. Path.* **66** (1958) 1-9; see *THE JOURNAL* **26** (1958) 293]; tested for pathogenicity and found to show on the whole more activity in the animals and by the methods employed than the several named mycobacteria used in the same way. These cultures were all isolated from samples of soil by a technique which was described in 1930 by a graduate student of mine, Carl A. Frey [*Science* **71** (1930) 366], or by a more convenient variant of that method.

Since the incubation temperature was 47.5°C, all of the strains isolated have to be considered as thermophilic. In all probability there are acid-fast bacteria in soil that will not grow at so high a temperature. Even so, we managed to find acid-fast bacteria in every sample of soil we ever tested [C. A. Frey and W. A. Hagan, *J. Infect. Dis.* **49** (1931) 497]. Frey himself isolated more than 100 strains, and others later isolated many more. The soil samples came from at least 20 states and several foreign countries. Even sand from Arizona finally and reluctantly yielded a few colonies.

It was very interesting to learn that there appears to be a problem in man similar to one with which we have been battling in cattle since the early days of the tuberculin test. The problem is causing much concern to government officials, now that bovine tuberculosis has nearly been eliminated from the United States. This problem concerns the substantial number of cows that react (or apparently react) to tuberculin when the epidemiologic and necropsy evidence is quite conclusive that they are not affected with tuberculosis. The numbers of such animals are not really large but they occur sporadically in many herds, and since we are depending upon testing and retesting of herds with removal of all reactors as the means of eliminating bovine tuberculosis, they cause no end of trouble. Wherever such animals occur, the herds in which they are found must be tested and retested until it is quite certain that actual tuberculosis does not exist in them.

We have known for many years that such animals existed, and considerable fruitless work has been done on the problem. When we had a fairly high prevalence of tuberculosis in cattle the problem did not

attract the attention it is now receiving. Substantially more than half of all reacting cows now are "no-lesion" cases. Not all of these are spurious, of course, but too many are.

In the days when I was actively working on the problem we tried in many ways to sensitize cattle to tuberculin, using many of these "soil saprophytes," but had little success. We had none on feeding massive doses of them, and only occasionally would we induce some tuberculin hypersensitiveness by injection. We got more sensitizations to avian tuberculin than to mammalian tuberculin, which was not surprising since we have seen many more instances of cross reaction between avian tubercle bacilli and others than between mammalian types and others.

Dr. A. F. Ranney, chief of the Tuberculosis Eradication Section, Agricultural Research Service, U.S. Department of Agriculture, Washington 25, D.C., is much concerned with this problem, and would doubtless be interested in the collateral problem which you suggest may be involved in reactivity of normal persons to lepromin.

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