LEPTOSPIROSIS TESTING

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During the last 6 months of 1955 and the first 3 months of 1956 leptospirosis antigen prepared by a commercial veterinary establishment has been available for use at the Iowa Veterinary Medical Diagnostic Laboratory on an experimental trial basis. The antigen was prepared according to the method described by Stoenner[1] and used as a rapid plate agglutination test. For a period of a few weeks antigens of *L. pomona, L. icterohemorrhagia,* and *L. canicola* were simultaneously available for use. During this period all bovine and swine blood samples received for leptospirosis testing were routinely tested with each of the three antigens. In other words, each and every blood sample received three separate tests for leptospirosis. Tabulation of the results secured by the testing procedure are summarized in the following tables.

These results indicate that with bovine blood samples a relatively high percentage of them give negative results with *L. pomona* antigen but positive results with *L. canicola* antigen. In instances concerning two herds, vaccination with *L. pomons* bacterin had been carried out about 8 months earlier in one herd and 12 months earlier in the other herd, but the subsequent performance of the herds had differed from that observed in other leptospirosis infected herds following vaccination. In both instances the owners reported breeding difficulties as their main problem. In each of these herds negative test results were secured with *L. pomona* antigent and two or more positive reactions with *L. canicola* were found. Considerable more study of this possible *L. canicola* infection of cattle is necessary before the significance of our observations can be determined.

Similar test results have been observed with swine samples, however, the swine reactors which gave negative results with *L. pomona* antigen were many fewer than were found with bovine samples. In this limited survey which showed a total of 172 swine reactors to one or more of the three antigens only 6.4 percent of them failed to give positive results with *L. pomona* antigen. But in the 239 bovine reactors 23.2 percent failed to give positive results with *L. pomona* antigen and 22 percent of this group gave positive results with *L. canicola* antigen only.

The results of the survey raises many questions for speculation and further study. Until additional information is available it seems advisable that all bovine samples for leptospirosis testing be routinely tested with both *L. pomona* and *L. canicola* antigens if the testing procedure is similar to that used in this survey.

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[1] Stoenner, H. G., U. S. Department of Health, Education and Welfare. Rocky Mountain Laboratory, Circular 16, Feb. 1955.

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BOVINE LEPTOSPIROSIS TESTS

Total samples		1376
Negative	1137	82.6%
Reactors	230	17.4%
Pomona positive, Ictero negative, Canicola negative	129	54% of reactors
Pomona positive, Ictero positive, Canicola negative	31	13% "
Pomona positive, Ictero negative, Canicola positive	16	6.7% "
Pomona positive, Ictero positive, Canicola positive	7	2.9% "
Pomona negative, Ictero positive, Canicola negative	2	0.8% "
Pomona negative, Ictero positive, Canicola positive	1	0.4% "
Pomona negative, Ictero negative, Canicola positive	53	22.0% "

SWINE LEPTOSPIROSIS TESTS

Total Samples		1423
Negative	1251	88%
Reactors	172	12%
Pomona positive, Ictero negative, Canicola negative	104	60% of reactors
Pomona positive, Ictero positive, Canicola negative	43	25% "
Pomona positive, Ictero negative, Canicola positive	4	2.3% "
Pomona positive, Ictero positive, Canicola positive	10	5.8% "
Pomona negative, Ictero positive, Canicola negative	5	2.9% "
Pomona negative, Ictero positive, Canicola positive	0	
Pomona negative, Ictero negative, Canicola positive	6	3.5% "