

Leptospirosis prevalence study in pig farms reporting reproductive problems in Spain

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INTRODUCTION

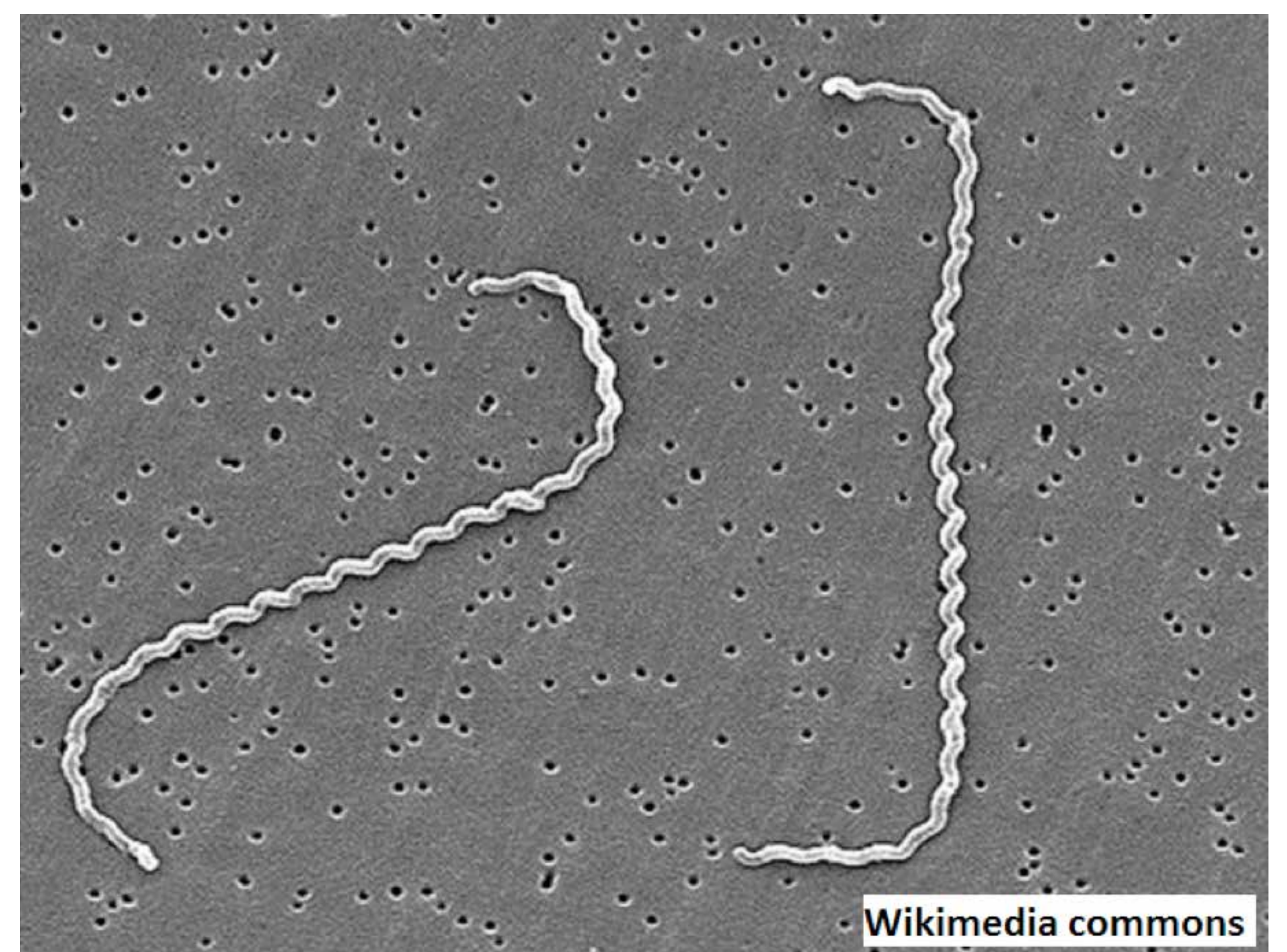
Leptospira is distributed worldwide, affects a wide range of species and is also a zoonosis. Leptospira in swine production results in severe economic losses due to its negative effect on reproductive parameters (abortions, increased stillbirths, mummified piglets, infertility), and high antibiotic use for treatment. Acute disease has also been described. The objective of this study was to establish the prevalence of Leptospira in farms reporting reproductive problems.

MATERIALS & METHODS

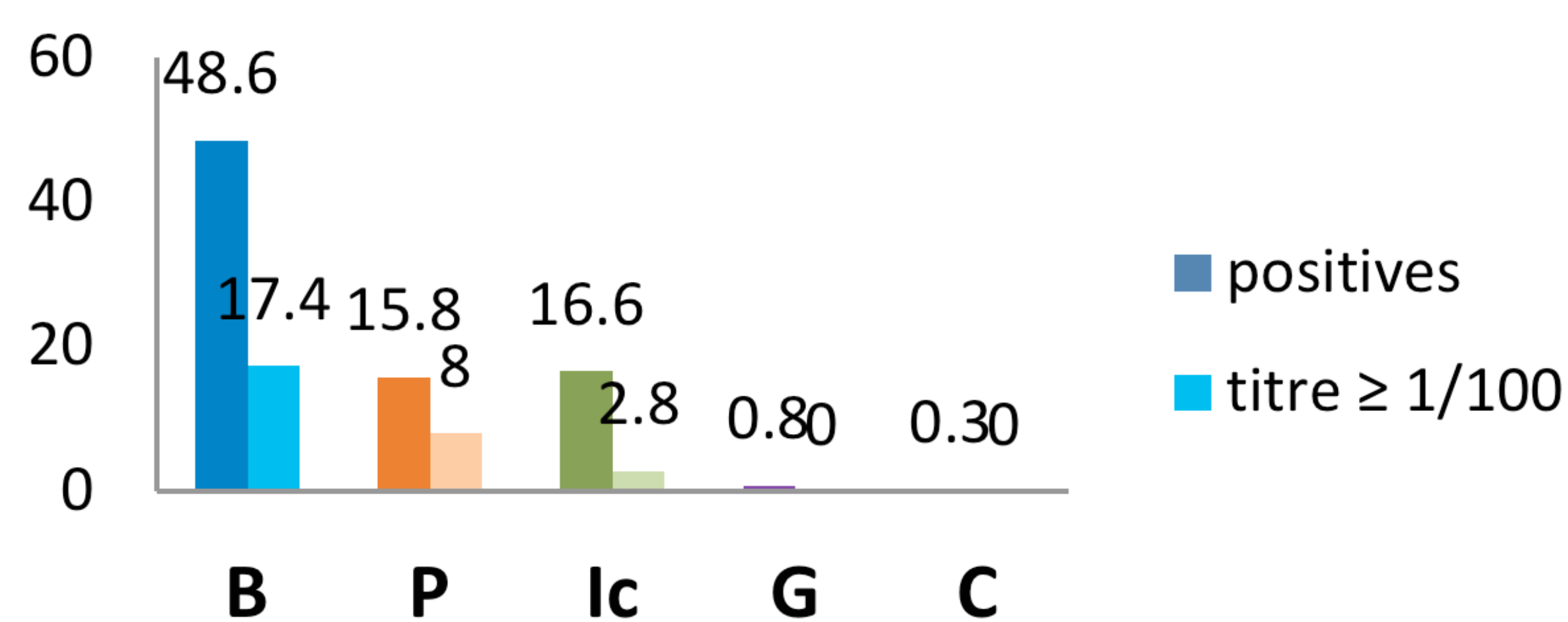
Between January 2016 and October 2017, all analytical results sent to two different Spanish laboratories for the diagnosis of reproductive problems were collected. Only those samples from confirmed reproductive problems were considered. The samples were analyzed by the MAT technique for Leptospira and results reported as: Negative or Positive with titres between 1/30, 1/50, 1/100, 1/300, $\geq 1/800$. Some studies state that titre $\geq 1/100$ is an active infection while less than 1/100 is chronic-subclinical disease. A total of 1,341 serum samples were analyzed for Bratislava serovar (B), 835 for Pomona (P), and 789 for Icterohaemorrhagiae (Ic), Canicola (C) and Gryppotyphosa (G).

RESULTS

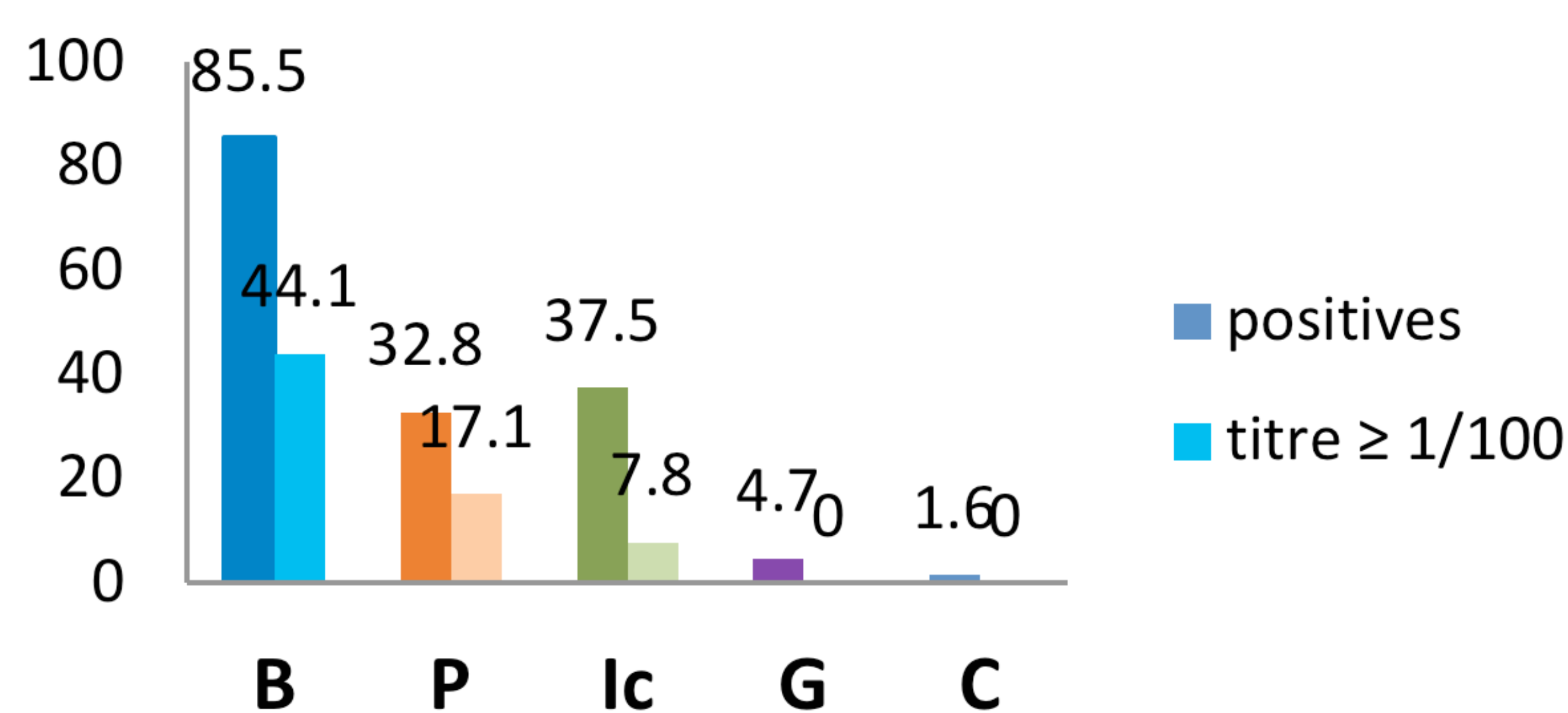
Analysis confirmed the following results: 48.6% positive against serovar B, 15.8% P, 16.6% Ic, 0.8% G, 0.3% C. Titres $\geq 1/100$, considered an active infection, were reported in 17.4% B, 8% P and 2.8% Ic. At farm level, 111 farms were sampled for B, 70 for P, and 48 for Ic, G, and C. Sample analysis per farm confirmed seropositivity of 85.5% B, 32.8% P, 37.5% Ic, 4.7% G, and 1.6% C, with titres $\geq 1/100$ in 44.1% B, 17.1% P and 7.8% Ic.



% Positives sample level



% Positives farm level



DISCUSSION & CONCLUSIONS

Serovar Bratislava is highly distributed between farms with reproductive problems in Spain. Serovars Pomona and Icterohaemorrhagiae are present as well with relative importance. Subclinical-chronic disease is more prevalent. These findings support that Leptospira presence might be a risk factor for reproductive problems in Spanish pig farms.

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