

FIELD STUDY COMPARING TWO NEONATAL DIARRHOEA VACCINES IN MEXICO

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INTRODUCTION

Neonatal diarrhoea is an important and devastating disease responsible of a substantial economic impact in farms worldwide (1). In general, most neonatal infections can be prevented by passive calostr al and lactogenic immunity obtained by vaccination of the sow. Neonatal diarrhoeas induced by E.coli are commonly prevented through sow vaccination that are booster VACCINATING 2-3 weeks before farrowing (2). SUISENG[®] contains purified adhesion factors (F4ab, F4ac, F5 and F6) and the heat labile toxin (LT) of *Escherichia coli*, the β toxin of *Clostridium perfringens* type C and the α toxin of *Clostridium novyi*. The aim of this study is to compare the production parameters in farrowing units during 2011 and 2012 in a commercial farm located in Mexico.

MATERIALS AND METHODS

The study was carried out in a 3000 sow's farm in Puebla State, Mexico. The vaccination protocol included a commercial Coli vaccine. However, the main concern in the farrowing units was neonatal diarrhoea appeared in piglets after 3 day of life. Crushed piglets, starvation and diarrhoea were the main causes of death. The Colibacillosis diagnosis of the diarrhoea was carried out by a multiplex PCR. This PCR is able to detect different Coli adhesins factors linked with virulence (F4, F6, F5) and toxin β and α produced by different types of *Cl. Perfringens* (3). Sampling was performed using fecal samples from piglets showing acute signs of the diarrhoea. F4 and F6 adhesins were detected from the samples.

Vaccination using SUISENG[®] was implemented at the beginning of January 2012 and the vaccination program used was one dose 8 weeks before farrowing and a revaccination 4 weeks later. A booster dose was administrated 4 weeks before the subsequent farrowing.

In order to assess the field efficacy of SUISENG[®] data of piglet mortality, piglets weaned per litter, weaning weight and piglets with diarrhoea were reported during 2011 and 2012.

RESULTS

The different parameters assessed are shown in the next figures (Figure 1, 2, 3 and 4). Statistical differences between 2011 and 2012 were observed in all the parameters evaluated. (p<0,05, t-test for independent samples).

Figure 1: Piglet mortality rate mean ($\pm$ SEM).

Figure 2: Piglets weaned per litter mean ($\pm$ SEM).

Figure 1

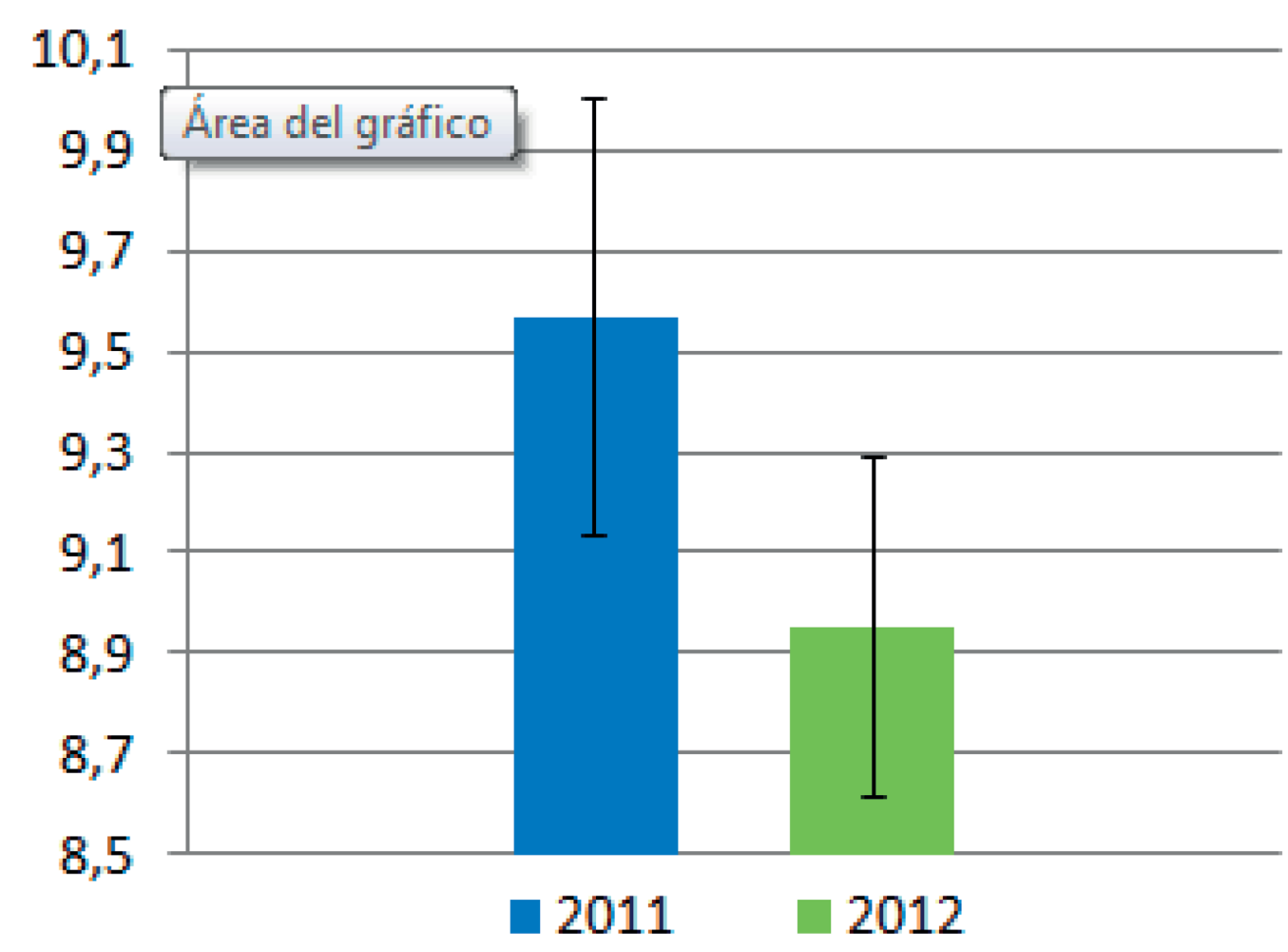


Figure 2

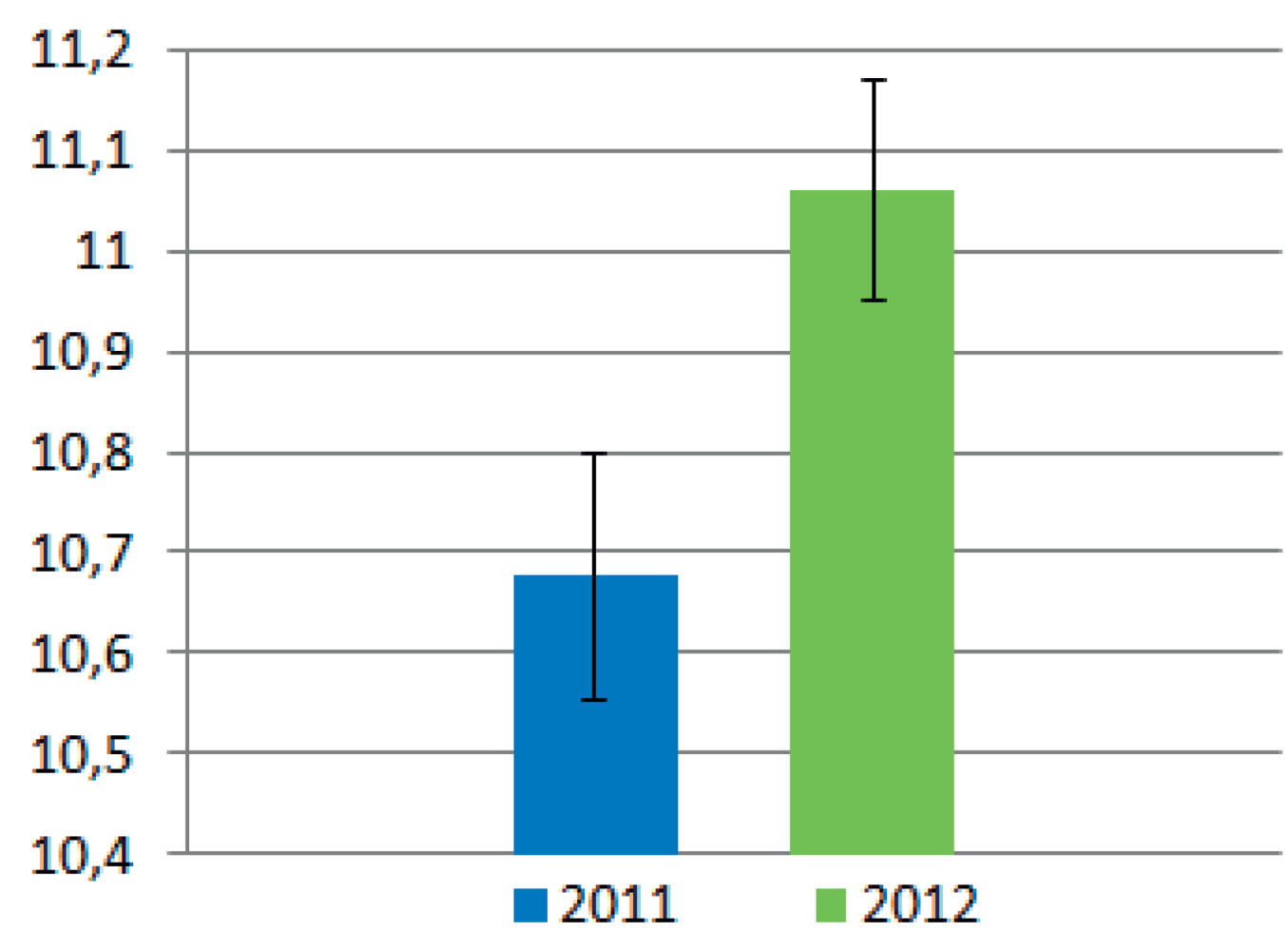


Figure 3: Body weight mean at weaning ($\pm$ SEM).

Figure 4: Mean percentage of piglets with diarrhoea ($\pm$ SEM).

Figure 3

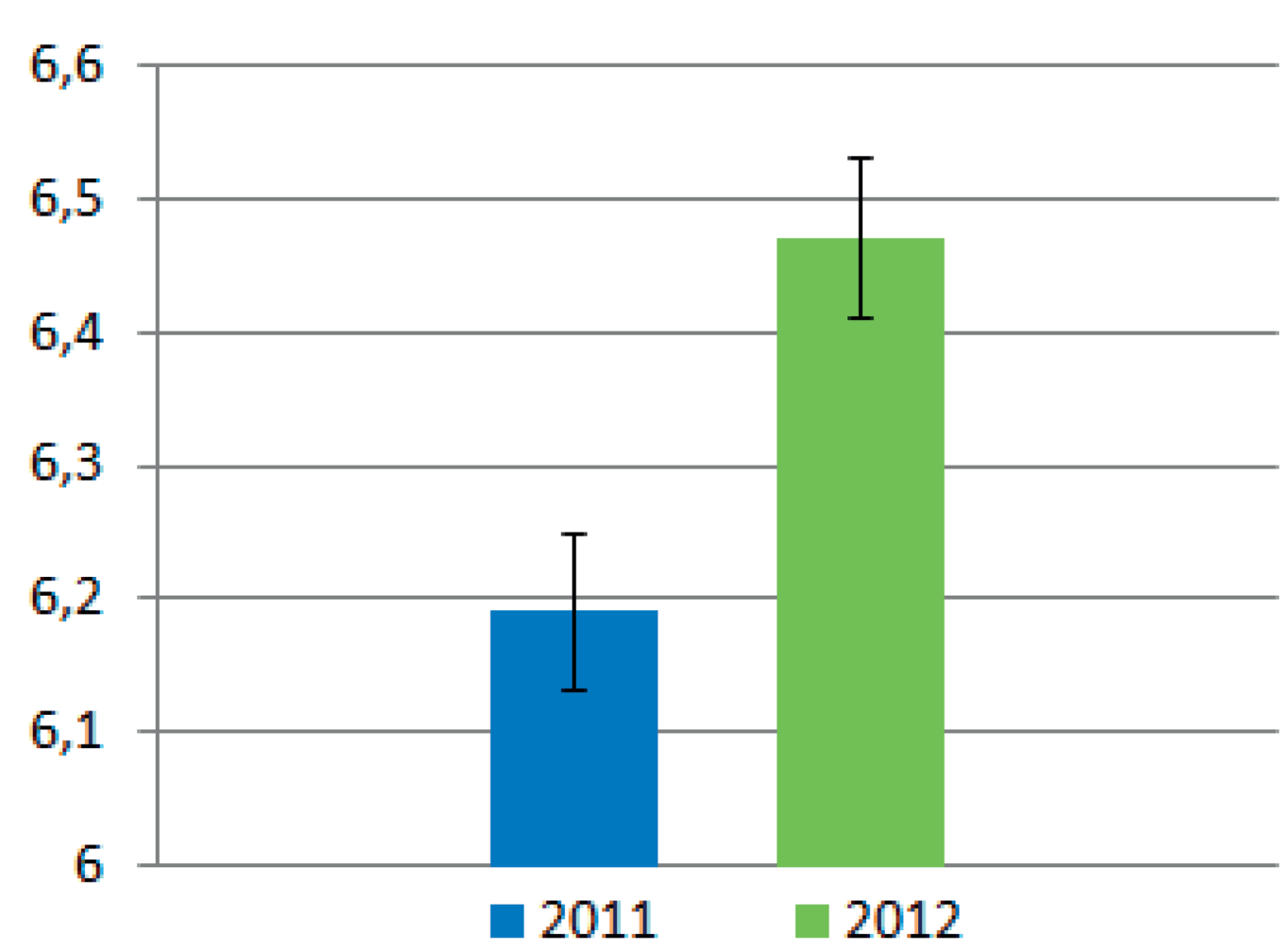
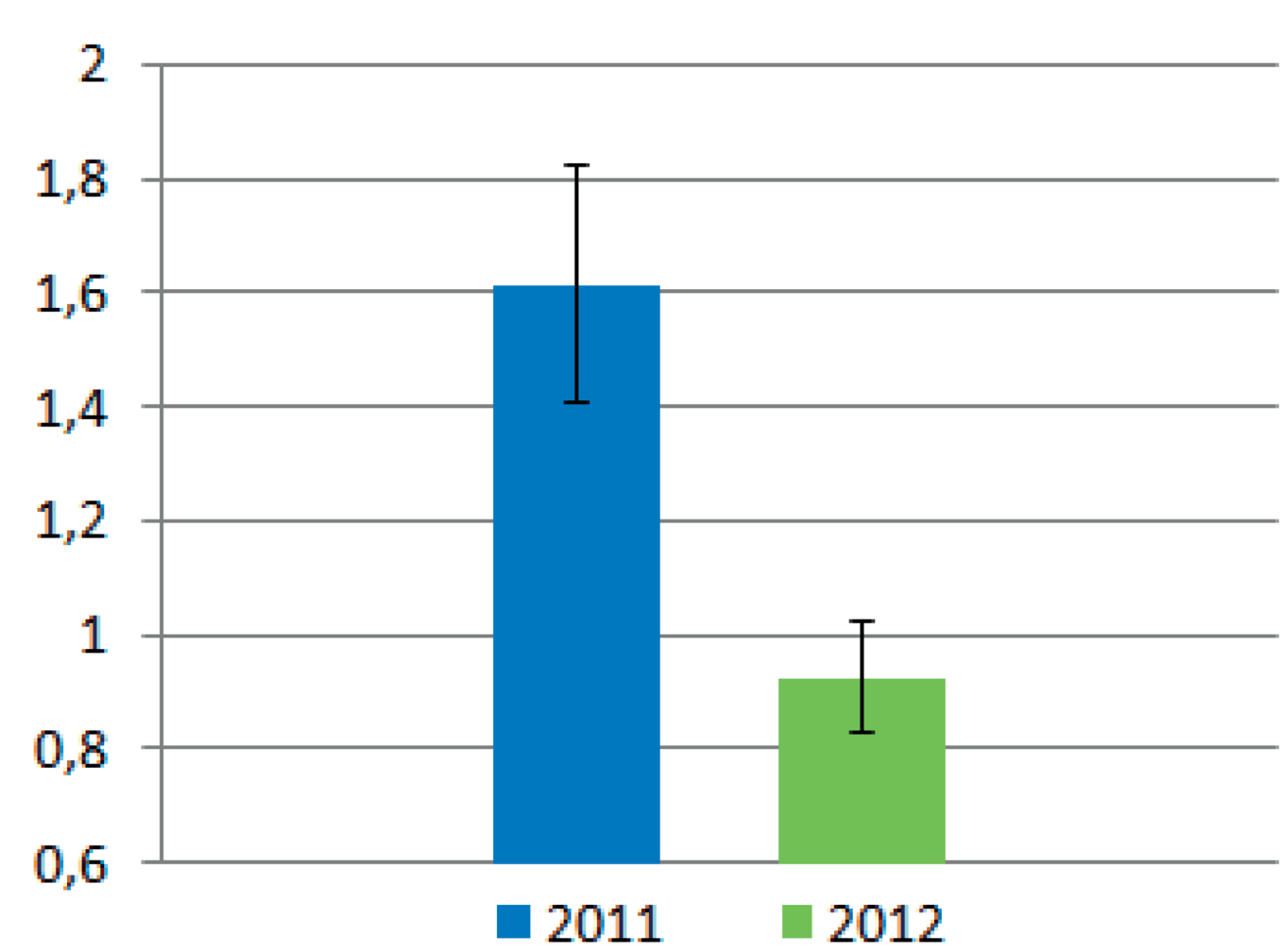


Figure 4



CONCLUSIONS AND DISCUSSION

Based on the data presented, SUISENG[®] vaccination program implemented in a farm affected by a chronic Colibacillosis was able to prevent the negative effects of E. coli infection in suckling piglets; thus improving pre-weaning mortality and percentage of piglets with diarrhoea, and consequently improving the weaning weight and piglets weaned per litter.

REFERENCES

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