

COMPARATIVE EFFICACY OF ZUPREVO® 40 mg/ml IN THE EARLY TREATMENT OF *H. parasuis* INFECTION

A.Cabezas¹, R. Menjon², M. Jiménez².
marta.jimenez@merck.com

¹Veterinary Practitioner Premier Pigs, Agramunt, Lleida, Spain
²MSD Animal Health C/ Josefa Valcárcel 38, Madrid. Spain

Introduction

Haemophilus parasuis, the causative agent of Glässer's disease in pigs, is one of the main pathogens affecting nursery piglets. In order to control this infection, different strategies can be approached, but among them, the use of strategic antibiotic treatments in association with good management practices is one of the most common and efficacious.

Tildipirosin, the active ingredient of **Zuprevo® 40 mg/ml** (MSD Animal Health) has been granted international approvals for the treatment of SRD associated with *H. parasuis*, *A. pleuropneumoniae*, *P. multocida* as well as *B. bronchiseptica* (1). Referring specifically to its efficacy against *H. parasuis*, it has been proved its bactericidal activity in vitro (2), and also numerous experiences have demonstrated its efficacy in field conditions (1,3,4).

The aim of this study was to evaluate the field effectiveness of **Tildipirosin (Zuprevo® 40 mg/ml)** as early treatment in the control of *H. parasuis* infection, but also to evaluate it in comparison with **Tulathromycin (Draxxin®)**.

Materials and Methods

The trial was undertaken in a closed herd of 1200 sows located in the North-East of Spain.. The farm is MHyo positive. Regarding to PRRS status, the farm is classified as positive. No clinical signs are observed in sows, but PRRS is recirculating in the weaning units. All piglets are vaccinated against MHyo with a one dose vaccine at 10 days of age. Also PCV2 vaccination is conducted, and all piglets are vaccinated at 18-20 days of age, just before weaning (average weaning age of 23-24 days). The farm had a known history of Glässer's Disease affecting piglets 7-10 days post-weaning. In order to minimize the disease, all piglets were injected on a regular basis at 18-20 days of life with 0.15ml of **Draxxin®**. Although clinical symptoms improved, also other antibiotic treatments (injectable enrofloxacin or amoxicillin, or oral amoxicillin) had also to be done in 70-100% of the animals. It was decided to change antibiotic therapy, and all piglets weaned after June 2012 were treated with 0,5ml of **Zuprevo® 40 mg/ml** at weaning.

The performance of a total of 12198 piglets treated with **Zuprevo® 40 mg/ml** (weaned between June and October 2012), was compared with animals that had been weaned between January and June 2012 (a total of 12630 piglets). During all year no clinical signs were observed in sows that could indicate any change in its PRRS status. Also, no significant difference in average of Total Live Borns ($p=0.833$), Mummifies ($p=0.195$) or Total Weaned/sow ($p=0.711$) was observed

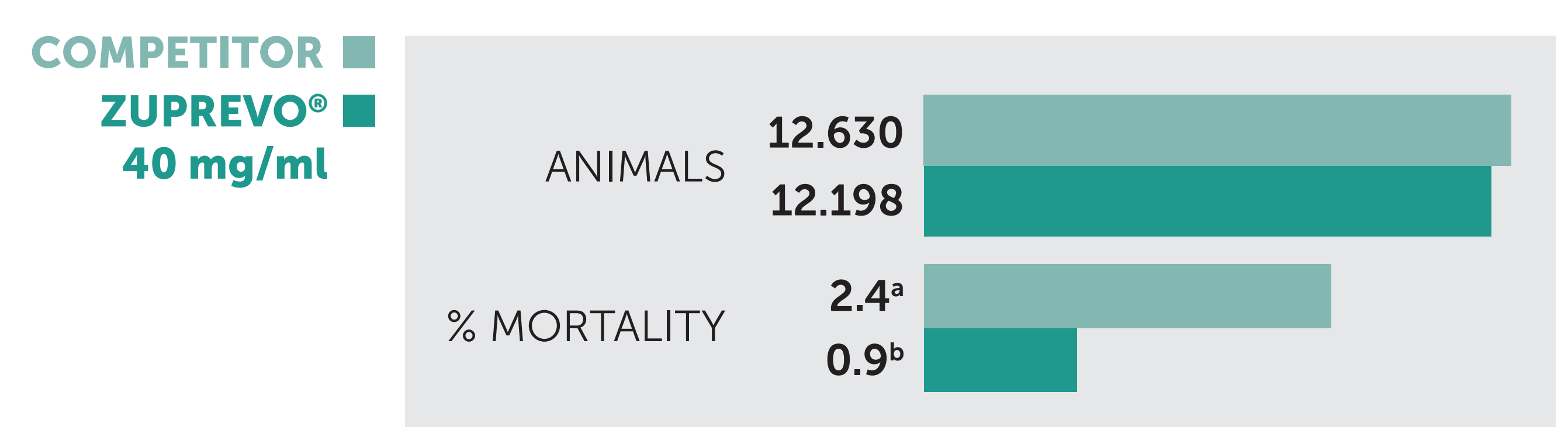
during the study period, so the two study groups were considered to be comparable.

Percentage of mortality and culls during the weaning period were recorded and compared between groups using statistical analysis (Levene test and Pearson's chi-square test).

Results

Table 1 shows the percentage of mortality and culls of each group of treatment. The animals treated with **Zuprevo® 40 mg/ml** showed a significant reduction in mortality rate (0.9% **Zuprevo® 40 mg/ml** group vs 2.4% **Draxxin®** group). The percentage of culls was also significantly reduced in the group treated with **Zuprevo® 40 mg/ml** (data not shown). Additionally, while before the instauration of **Zuprevo® 40 mg/ml** treatment at weaning, 70-100% of the animals should be extra treated with amoxicillin or enrofloxacin, only 10-30% of the animals of the **Zuprevo® 40 mg/ml** group required extra treatment.

Table 1. Production data during the fattening period



Values with different superscripts in the same row are statistically significantly different: a, b: $p<0.001$

Conclusions and Discussion

An economic model taking account only the differences in mortality and culls yielded a **financial benefit** of treating with **Zuprevo® 40 mg/ml** instead of Tulathromycin of **0.42 €/pig**, including the cost of the product.

Zuprevo® 40 mg/ml was shown to be more effective and profitable investment to control *H. parasuis* infections than other antibiotic strategies.

References

1. Petersen et al, 2012 IPVS
2. Rose et al, 2012 IPVS
3. Lorenzo et al, 2012 IPVS
4. Voss et al, 2012 IPVS