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**TITLE**

# INFLUENCE OF POLYPHENOLS (HYDROXYTYROSOL AND CARNOSIC ACID) SUPPLEMENTATION ON REPRODUCTIVE PERFORMANCE OF SOWS

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**CONTENT**

Key words: Hydroxytyrosol, carnosic acid, reproductive, sows, piglets.

BACKGROUND AND OBJECTIVES
Swine production has markedly increased its reproductive performance over the past 50 years. One of the most important limitations to continue increasing the size of the litter, or to fully express the genetic potential of the breeders, is the prenatal mortality of embryos. Among other causes the antioxidant/oxidative balance has a key role, alternative sources of antioxidants are polyphenols and, particularly, the current study aimed to analyze the usefulness of hydroxytyrosol and carnosic acid during gestation supplementation in the reproductive performance of sows in commercial herds.
MATERIAL AND METHODS
A total of 97 female breeding pigs from the 1st to the 7th litter were allocated into two treatment groups during the whole gestation period to compare the effects of supplementation with hydroxytyrosol and carnosic acid (MiaPhenol; 150 ppm; group MPH) and control group. Both treatments received the same basal diet. Data were collected individually for total number of born piglets, live-born piglets, stillborn piglets and mummified piglets at the farrowing moment (<12 h post farrowing).
RESULTS
Throughout the treatment, the group MPH showed higher number of total born piglets (18.28 vs. 16.39), as well as, number of live-born piglets (16.65 vs. 14.78) compared to control group. Number of stillborn and mummified piglets did not significant differs among groups (1.41 vs. 1.24; 0.22 vs. 0.37 respectively).
DISCUSSION AND CONCLUSSION
The present trial indicates that the supplementation with hydroxytyrosol and carnosic acid during gestation period improve number of total born piglets. Moreover, the addition of polyphenols does not affect stillborn and mummified number of piglets. Further studies are needed to clarify mode of action and efficacy of MiaPhenol.