Long term effect of prestarter feed without antibiotics and zinc oxide

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Background and objectives

Early and abrupt weaning of piglets is characterized by a high prevalence of digestive disorders. Specific diets without antibiotics and zinc oxide at therapeutic level have been shown to reduce digestive disorders [1]. The objectives of this study are to evaluate, in commercial situation, the long-term effect of prestarter feed without antibiotic and zinc oxide and the characteristics of these farms having adopted such weaning feed.

Materials and methods

15 weaning to finish units, with available production data from 2011 to 2016, were included in the study. 8 farms used prestarter feed with antibiotics during these 6 years ("M" farms), 7 farms used prestarter feed without antibiotic and zinc oxide at therapeutic level ("NM" farms). The following 3 parameters were available for all the farms: average daily gain, feed conversion ratio (standardized between 8 and 115 kg) and the feed cost for one kg gain.

All the farmers have filled an extensive questionnaire about the farm features and management. The questionnaire answers were coded in categorical variables divided into 5 topics: biosecurity / health / farm management / farmer / general. MCA was implemented to select the variables that maximized the visual discrimination of M and NM farms, when projecting the farm status (M/NM) as a supplementary variable in the MCA.

Results

During the 6 years of follow-up no difference is observed on the 3 parameters monitored.

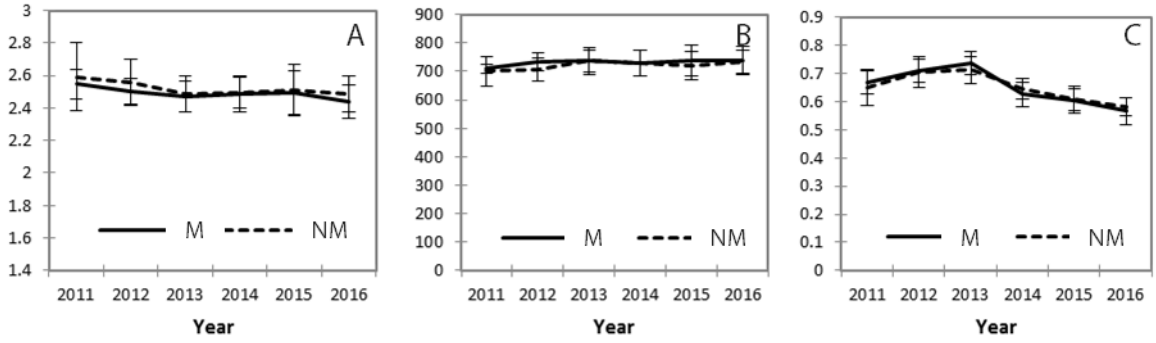

Figure 1 - Average performances of farms using prestarter feed with (M) or without antibiotics (NM) (A – Standardized feed conversion ratio; B – Standardized average daily gain g/kg; C – Feed cost per kg gain €)

The MCA selected a mix of variables from the 5 topics: weaners management (allotting by litter), health (mycoplasma status) and farmer (frequency of technician visits, perceived health costs, farm organization, education).

Conclusions and discussion

Farmers who decided to stop using prestarter feed with antibiotics or zinc oxide show specific patterns in terms of health of their animals and farm management. Anyway, they maintain long-term performance equivalent to farmers using antibiotics.

References

[1] H. Gilbert, J. Ruesche, N. Muller, Y. Billon, F. Robert, L. Roger, and L. Montagne, "Responses to weaning in two pig lines divergently selected on residual feed intake depending on diet," *67th Annu. Meet. Eur. Fed. Anim. Sci.*, pp. 43–54, 2016.