Fecinor® (*Enterococcus Faecium* CECT 4515) as an alternative to medicated feed on nursery pig diets

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Post-weaning is a critical period for piglets. The immature digestive tract faces radical changes in the diet resulting in imbalances in the microbiota populations, and loss of the passive antibody protection provided by the milk. As result diarrhea episodes are frequently observed usually caused by *E. coli*. Application of Fecinor® (*Enterococcus faecium* CECT 4515) in the piglet feed has proven to be useful to modify feces consistency by modulating the intestinal microflora. The objective of the current study was to assess the effect of Fecinor® in nursery piglet performances in presence or absence of medication.

A total of 450 piglets with an initial body weight of 5.6 kg (±0.3 kg SE) were randomly distributed in 30 pens with 15 animals/pen to 3 treatments (10 replicates/treatment): T1 (commercial diet following FEDNA 2013 specifications and medicated with 3000ppm of ZnO and 300ppm of Amoxicillin). T2 (T1 + 0.05% Fecinor 500®). T3 (T1 without amoxicillin and without ZnO + 0.05% Fecinor 500®). A prestarter diet was used from 4 to 19 days post-weaning and a starter diet from 19 to 42 days. Body weight (BW), feed intake and mortality were measured. Average daily feed intake (ADFI), average daily growth (ADG) and feed conversion rate (FCR) were calculated accordingly. Feces scores were assessed by a visual score ranging from 1 to 9 points (1-3: diarrhea; 4-5: soft; 6: normal without shape; 7-8: normal with shape; 9: dry potential constipation).

Data was analysed with the statistical package Minitab, version 17.0, using ANOVA and multiple t-test routines. Significance level was set at $p < 0.05$.

T3 (medication replaced by Fecinor®) had a better ($p<0.05$) FCR and BW at the end of the prestarter phase and a better ($p<0.05$) ADFI during the starter phase. The rest of parameters included feces score were not significantly different although numerical improvements corresponded to T3.

The results of the study showed that medication in the nursery pig diet was successfully replaced by *Enterococcus faecium* CECT 4515 without any impairment in performance or health related parameters.

Treatment	BW kg		ADFI kg/d		FCR		Fecal scoring
	19 d	42 d	4-19	19-42	4-19	19-42	4-42
1	9.752^{a}	20.801	0.339	0.689^{a}	1.245^{a}	1.444	7.32
2	9.922^{ab}	20.475	0.350	0.658^{ab}	1.230^{ab}	1.458	7.53
3	10.207^{b}	20.920	0.354	0.645^{b}	1.180^{b}	1.414	7.24
SEM	0.068	0.141	0.003	0.006	0.013	0.016	-
p-value	**0.039**	0.423	0.298	**0.023**	**0.013**	0.536	-