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Report SW19

Impact of Aromex® ME Plus* on nutrient digestibility

Location: FUB, Germany
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Summary

The objective of this study was to evaluate the effect of Aromex® ME Plus on the apparent ileal digestibility of nutrients in growing pigs. A total of 24 pigs (12 barrows and 12 gilts), were included in this study with an average body weight of 25.2 kg. The trial duration was of 35 days. Pigs were assigned to two treatments (12 pigs per treatment, individual housing) and allotted equally according to body weight, litter, and gender at random. Treatment 1 received the basal diet without phytogenic feed additive (T1 – Control) while pigs in Treatment 2 received the basal diet supplemented with Aromex® ME Plus added at 100 g/t (T2 – Aromex® ME Plus). The environment was automatically controlled and pigs on trial had free access to feed and water (supplied by drinking bowls).

Ileal apparent digestibility coefficients were calculated using chromic oxide (Cr_2O_3) at the dose level of 5 g/kg as an inert indigestible marker on top-dressing in diets that were offered from 21 to 35 days on trial. Therefore, all pigs were euthanized by T61 (Hoechst, BGA reg. no.: T 331) after anesthesia using a combination of ketaminehydrochloride (Ursotamin, Serumwerk Bernburg) and azaperone (Stresnil, Janssen) on 31 to 33 and on 35 days on trial. The digest from the ileum was collected for digestibility analysis. For calculations of the apparent ileal digestibility, the following formula was used:

$$\text{Ileal digestibility (\%)} = 100 - \left[\frac{\text{\% marker in feed}}{\text{\% marker in ileum}} \times \frac{\text{\% nutrient in ileum}}{\text{\% nutrient in feed}} \right] \times 100$$

Results are presented as means ± standard deviation (SD). Statistical analysis of the experimental data was performed with the statistics program SPSS 21.0 for Windows (IBM). Differences among means with a probability of $P<0.05$ were accepted as statistically significant while mean differences with P-values ranging from $0.05<P<0.10$ were accepted as trends. Results are shown in Table 1.

Under the conditions of this trial, the addition of Aromex® ME Plus to pig's diets at 100 g/t feed improved the apparent ileal digestibility of crude protein ($P<0.05$).

Table 1. Effects of Aromex ME Plus on apparent ileal digestibility of crude protein on d 33 to 35 of the trial.

Treatment groups		**T1 – Control**	**T2 – Aromex® ME Plus**	P value
Crude protein	%	76.16 ± 2.73a	79.02 ± 2.07b	**0.008**

* Aromex® ME Plus was rebranded as Aromex® Pro