Key Words: Piglets, Botanicals, Flavor

M111 Effect of bedding with mycotoxin contaminated straw and low levels of dietary mycotoxin on piglet performance. B. E. Strickler and P. Spring*, *Swiss College of Agriculture, Zollikofen, Switzerland.*

The aim of this study was to evaluate the effect of using mycotoxin-contaminated straw as bedding for weaning piglets fed diets with and without mycotoxin adsorbent on animal performance. The trial was set up as a complete randomized block design with 18 groups of 5 weaning piglets each (BW: 8.5 kg). Piglets received a starter diet (14.0 MJ/kg DE, 16.5% CP and 1.20% lysine) and water ad libitum. Treatments were as follows: Control: bedding with 200 g of wood shavings/hd/d; Straw: bedding with 200 g of contaminated straw/hd/d; Straw+Adsorbent: bedding with 200 g of contaminated straw/hd/d plus diet with 2000 ppm of mycotoxin adsorbent (Mycosorb#8482, Alltech Inc.). Straw was contaminated with 821 ppb deoxynivalenol (DON), 528 ppb zearalenone (ZEA) and < 50 ppb T-2 toxin. The piglets were also exposed to a natural infection with HPS (Haemophilus parasuis). Feed intake, ADG FCR, medical treatments and fecal scores were recorded. Data were analyzed by ANOVA and means were compared using the test of Tukey-Kramer. The mycotoxin-contaminated straw had no effect on piglet performance. However, the mycotoxin adsorbent led to improved performance during the first trial period. The feed was designed to contain low levels of mycotoxin, however analyses revealed 220 ppb on DON, < 10 ppb ZEA and < 50 ppb T-2. The data suggest that in piglets exposed to weaning stress and a natural infection with HPS, DON levels as low as 220 ppb can decrease performance. From day 15-20, all piglets were treated with Vital TSS (Trimethoprimum, Sufathiazolum and Sulfidimidinum). This treatment effectively controlled the HPS infection. During this trial phase no differences in performance were recorded between treatments, indicating that a reduction in stress level did allow the piglets to cope with 220 ppm of dietary DON. Mycotoxin-contaminated straw did not affect piglet performance or health. However, low levels of dietary DON led to a reduction in performance in piglets exposed to weaning and microbial stress. Mycotoxin adsorbent can help in alleviating the negative effects on performance.

Table 1: Effect of contaminated straw and mycotoxin adsorbent on piglet performance

Parameter	Control	Straw	S + Adsorbent	SE
ADFI, g (d1-14)	346	334	378	15.3
ADFI, g (d15-28)	752	705	705	24.3
ADFI, g (d1-28)	549	520	542	17.6
ADG, g (d1-14)	218a	226a	276b	11.5
ADG, g (d15-28)	520	473	500	21.6
ADG, g (d1-28)	369	350	388	13.6
FCR (d1-14)	1.65c	1.54cd	1.38d	0.06
FCR (d15-28)	1.44	1.48	1.42	0.05
FCR (d1-28)	1.48	1.48	1.41	0.03

a,b $P<0.05$; c,d $P<0.10$

Key Words: Straw, Mycotoxin, Piglet