259 Impact of Formaldehyde Treated Pig Feed Containing Spray Dried Plasma on Weaned Pig Growth Performance. J. M. Campbell*[,1], J. D. Crenshaw[1], J. Polo[1], D. Mellick[2], M. Bienhoff[2], H. H. Stein[3], *[1]APC, Inc., Ankeny, IA, [2]Kemin Industries, Des Moines, IA, [3]University of Illinois at Urbana-Champaign, Urbana, IL*

The objective of the experiment was to determine effects of applying Sal CURB® ASF at 0.3% to a diet containing 5% spray dried plasma (SDP) compared with an untreated soy protein concentrate control diet and an untreated diet containing 5% SDP for a total of 3 treatments. Pigs were fed treatment diets for 14 d post-weaning and response variables were ADG, ADFI, and G:F. Sal CURB® ASF liquid antimicrobial (Kemin, Des Moines, IA, US) is a blend of an aqueous formaldehyde solution and propionic acid that is used in animal feed to maintain feed biosecurity. Formaldehyde may denature proteins and if directly applied to SDP may impact the functional proteins associated with SDP. However, the impact on pig growth performance of applying formaldehyde to diets containing spray dried plasma are not well known. The formaldehyde product

was applied directly to the complete SDP diet. Pigs (n = 135) were weaned in 2 groups at 20 ± 2 d of age (6.75 ± 0.28 kg initial BW) and allotted to pens within weaning group and balanced by BW, sex, and litter to provide 10 replicate pens per treatment. There were 5 replications with 4 pigs per pen and 5 replications with 5 pigs per pen. The nursery was not cleaned between groups to create a dirty environment. All diets contained 25% SBM and 20% dried whey, were non-pelleted, non-medicated and formulated to contain 3.4 Mcal ME/kg and 1.45% standardized ileal digestible lysine. From d 0 to 14, pigs fed the SDP diets untreated or treated had increased ($P < 0.05$) ADG (116 and 100 vs. 55 g), ADFI (210 and 202 vs. 153 g) and G:F (0.53 and 0.50 vs. 0.29) compared with pigs fed the control diet. Final BW of pigs fed SDP diets untreated or treated were also greater ($P < 0.05$) compared with pigs fed the control diet (8.38 and 8.17 vs. 7.52 kg). However, formaldehyde treatment of the plasma containing diet did not affect pig growth performance ($P > 0.10$) compared to untreated SDP diet. In conclusion, treating the complete feed with formaldehyde did not affect pig growth performance when 5% SDP was included in the diet, and pigs fed diets containing SDP had improved growth performance compared to pigs fed the control diet without SDP.

Key Words: pigs, spray dried plasma, formaldehyde