204 Production responses of weanling pigs fed diets containing REAP® Starter enzymes or added fat. H. H. Stein*[1], D. Y. Kil[1], D. N. Peters[2], D Spangler[3], P. Brown[3], D. P. Casper[3], and K. Haydon[4], [1]*University of Illinois*, *Urbana*, [2]*South Dakota State University*, *Brookings*, [3]*Agri-King Inc.*, *Fulton, IL*, [4]*Prince Agri-Products*, *Quincy, IL*.

One hundred ninety-two pigs were weaned at approximately 20d of age and fed a common starter diet for 2 wk. Pigs were then weighed and allotted to 1 of 4 treatments in a 2 x 2 factorial design. Treatments included 2 levels (0 or 0.1%) of a proprietary enzyme mixture, REAP® Starter (RS), and 2 levels (0.5 or 3.0%) of added fat (AF). There were 4 pigs per pen and 12 replicate pens per treatment. The experimental period was 28d and ADG, ADFI, and G:F ratio were measured for d 0 to 14, d 14 to 28, and d 0 to 28. All diets were based on corn and soybean meal and the source of added fat was choice white grease. No interactions between RS and AF were detected. Pigs fed RS had greater ($P \leq 0.05$) BW at the end of the experiment than pigs fed diets without RS (27.97 vs. 26.97 kg). Pigs fed diets containing 3% AF also had greater ($P \leq 0.06$) BW at the end of the experiment than pigs fed diets containing 0.5% AF (27.94 vs. 27.00 kg). From d 0 to 14, ADG was not influenced by RS or AF. However, from d 0 to 28, ADG increased ($P \leq 0.05$) if RS was included in the diet (0.647 vs. 0.614 kg/d) or when AF was 3% rather than 0.5% (0.651 vs. 0.610 kg/d). The ADFI tended ($P \leq 0.07$) to be greater for pigs fed RS from d 14 to 28 and from d 0 to 28 than for pigs fed diets without RS, but there was no effect of the level of AF on ADFI. Values for G:F were not influenced by RS, but pigs fed diets containing 3% AF had a greater ($P \leq 0.05$) G:F from d 14 to 28 and from d 0 to 28 than pigs fed diets containing 0.5% AF. In conclusion, the addition of RS to a corn soybean meal based diet fed to weanling pigs increased BW, ADG, and tended to increase ADFI, while 3% AF increased BW, ADG, and G:F compared with 0.5% AF. The lack of a significant interaction between main effects indicates that RS enhances nutrient digestibility of a corn soybean meal diet, which results in growth rates of weanling pigs that are similar to pigs fed a diet containing 3% AF.

Key Words: Enzymes, Fat, Pigs