

Assessment of the feeding value of South Dakota grown field peas for growing pigs. H. H. Stein\*, R. A. Bohlke, V. Rayadurg, D. Peters, and R. C. Thaler, South Dakota State University, Brookings, SD.

Five experiments were conducted to evaluate the feeding value of South Dakota grown field peas (variety *carnival*) for growing pigs. In exp. 1 and in exp. 2, 96 growing crossbred pigs (initial BW: 22.3 + 1.48 kg and 26.7 + 1.18 kg, respectively) were allotted to one of four treatment groups. In exp. 1, diets containing 0, 6, 12, or 18% peas were fed during the initial 6 wk while 0, 12, 24, or 36% field peas were included in the finishing diets. In exp. 2, 0, 12, 24, or 36% peas were included in both the grower and the finisher diets. In both exp., ADG, ADFI, and GF were similar ( $P > 0.1$ ) between the four treatment groups. At slaughter, larger ( $P < 0.05$ ) loins were harvested from pigs fed diets containing 12% peas in the finishing ration (exp. 1) or 12, 24, or 36% peas (exp. 2). In both exp., the calculated lean meat percentage was similar ( $P > 0.10$ ) between treatment groups. In exp. 3 and 4, field peas were included in phase 2 diets for nursery pigs (initial BW: 7.88 + 0.72 kg and 7.36 + 0.57 kg, respectively) at levels of 0, 6, 12, or 18% (exp. 1) or 0, 12, 24, or 36% (exp. 2). These diets were offered to the pigs during wk 3-5 post-weaning. In both exp., ADG, ADFI, and GF were similar ( $P > 0.05$ ) between treatment groups. In exp. 5, the apparent (AID) and standardized (SID) ileal digestibility coefficients of crude protein and amino acids were determined for field peas and soybean meal in six growing barrows (Initial BW: 36.5 + 2.1 g). AID for MET, TRP, CYS and SER were lower ( $P < 0.05$ ) in field peas than in soybean meal. When calculating SID, only MET was lower ( $P < 0.05$ ) for field peas than for soybean meal. Based on the results of these exp., it is concluded that South Dakota grown field peas provides a highly digestible source of amino acids that can substitute soybean meal in diets for pigs. In phase 2 diets for nursery pigs and in diets for growing and finishing pigs, at least 36% field peas can be included in the diets without any adverse effects on performance or carcass quality.