

**Field pea replacement value in calf weaning transition diets.  
ASAS Abstract**

D.G. Landblom<sup>1</sup>, D. K. Olson<sup>2</sup>, and K. Helmuth<sup>1</sup>

<sup>1</sup>NDSU - Dickinson Research Extension Center

<sup>2</sup>Dickinson State University, Dickinson, ND

In a two year study, 299 beef steer and heifer calves were weaned and moved to the Dickinson Research Extension Center's growing lots to evaluate the effect of a 37d conditioning period in which field peas replaced a portion of commonly used fiber-based ingredients (soyhulls, wheat midds, barley malt sprouts) on postweaning diet composition, subsequent feedlot performance, carcass quality and system economics. Pelleted treatments fed were: 1) SBM/Corn, 2) Pea/Corn, 3) 0% Pea, 4) 10% Pea, 5) 20% Pea and 6) 30% Pea. Test diets replaced approximately 70% of the hay offered. ADG (37d) was greater for calves receiving SBM/Corn, 0, 10 and 20% pea replacement diets ( $P < .0002$ ). Calves receiving a diet with no added pea consumed more feed/d. ( $P < .0001$ ) than calves offered SBM/corn, 10 and 20% pea test diets. Replacing 30% of fiber-based ingredients with peas depressed gain ( $P < .0002$ ), feed intake ( $P < .0001$ ), and numerically increased feed required/kg of gain. Feed efficiencies among the test diets were 7.23, 8.34, 7.34, 7.0, 7.23, 9.1, for treatments 1-6, respectively, but did not differ. Steer calves were fed to final harvest at Decatur Co. Feedyard, Oberlin, KS. Steers that received 0 and 20% pea weaning diets required numerically fewer days on feed. No difference was measured for hot carcass weight ( $P > .59$ ), REA ( $P > .53$ ), marbling score ( $P > .14$ ), yield grade ( $P > .18$ ), quality grade ( $P > .13$ ) or percent choice ( $P > .15$ ). Regarding carcass quality, steers receiving a 20% pea replacement diet graded numerically higher (71.3% Choice), however, heavier final carcass weight and lower weaning feed cost among steers started on the SBM/Corn weaning diet combined to increase net return, despite a lower number of carcasses grading choice (45.1%). Highest enterprise net returns of \$179.24, \$168.90, and \$166.56/Hd were realized for steers receiving SBM/corn, 0 and 20% pea test diets, respectively. Overall, enterprise net return favored selling after a short 37d weaning period (ave = \$264.10) vs. retaining ownership (ave = \$160.57).

Key Words: Field Peas, Calves, Weaning Diets