

Extruded Peas for Weaner Pigs

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Field peas have now become a staple protein rich feed ingredient in swine diets in western Canada. It is fed to all classes of pigs with simple grinding as the main processing method. Weaner diets containing up to 20% ground peas have been fed with no adverse effects on 28 day old pigs. The process of extrusion has been shown to improve digestibility of nutrients in some feedstuffs. This experiment was performed to compare the performance of weaner pigs on diets containing either ground and extruded peas at 15 and 30% level by weight with a standard soybean supplemented diet. Four pens of three pigs were fed each treatment diet. Average pen starting weight of piglets were significantly different ranging from 7.03 kg to 7.78 kg and therefore was used as a covariate in the analysis. Average daily feed intake for the treatment groups over the 4 week period of the experiment ranged from 650 to 756 g.

Pigs fed a diet with 30% raw peas had a significantly lower (650 g) feed intake than the pigs fed a diet with 15% raw peas (756 g). Intakes for the other treatments were intermediate and not different. Average daily gains ranged from 466 g to 573 g. Weight gains for the treatment groups on diets containing 15% and 30% extruded peas and the 15% raw peas were significantly higher than that for those fed the 30% raw peas diet. The pigs fed the soybean based control diet had a daily gain of 520 g, which was not different from any of the other treatments. Feed conversion (F/G) for the pigs fed 30% raw peas (1.49) was significantly higher than those fed other diets, which ranged from 1.29 to 1.33. The results show that 4 week old pigs fed a diet with 30% raw peas had lower growth performance, but at 15% peas, performance is improved even beyond the control soybean meal diet primarily because of higher feed intake. Our conclusion was that raw ground field peas can be used beneficially in weaner diets at 15% and when they are heat treated by extrusion, at levels up to 30%.

Implications: Inclusion of raw ground field peas at the 15% level may improve feed intake and growth rate in weaner pigs. Extrusion of field peas prior to inclusion in weaner pig diets allow their use at a higher levels.