

# Nutrient Digestibility of Lupin and Air-Classified Protein and Starch Fractions of Field Pea and Faba Bean in Grower Pigs

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Nine ileal cannulated barrows (25 kg) were used to establish the ileal AA and whole tract digestibility of energy, Ca, and P in lupin and the air-classified protein and starch fractions of field pea (Pea-P, Pea-S) and zero-tannin (<1%) faba bean (ZTFB-P, ZTFB-S), respectively, and compared to soy protein concentrate (SPC). A cornstarch-sucrose (CS) diet served as the N-free diet for the subtraction of basal endogenous losses.

The apparent ileal digestibility of Lysine was highest for ZTFB-P and ZTFB-S at (91%) compared to that of SPC (86%), Pea-P (89%), Pea-S (85%) and lupin (82%). For Threonine and Methionine apparent ileal digestibility was more than 5% higher for ZTFB and Pea fractions compared to lupin and SPC.

Total tract digestibility of energy and DE content was higher in Pea-P (4.24 DE, Mcal/kg), lupin (4.17 DE, Mcal/kg) and ZTFB-P (4.15 DE, Mcal/kg) than SPC (4.10 DE, Mcal/kg). Total tract digestibility of P was higher in Pea-P (69.2%) and Pea-S (59.7%) and ZTFB-P (55.5%) ZTFB-S (55.7%) than SPC (16.1%) and of Ca was highest for Pea-P (45.6%).

**Implications:** These results indicate that locally grown air classified pea and faba bean fractions could be used as a high nutritive source of protein and starch for grower pigs in replacement for the imported SPC.