

Faba Bean and Field Pea Protein Concentrates as Replacements for Specialty Proteins in Nursery Diets for Weaned Pigs

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Specialty protein feedstuffs are an expensive component of diets for weaned pigs, and cost-effective alternatives should be developed to ensure that feed costs can be contained. The effect of replacing three specialty protein sources (5% soy protein concentrate, 5% corn gluten meal, 5% menhaden meal) with the air-classified protein fractions of locally grown zero-tannin (< 1%) hulled faba bean (16%), dehulled faba bean (16%), or field pea (17.5%) in nursery diets on daily feed disappearance, weight gain, and feed conversion in 3-week-old weaned pigs was tested in this experiment.

In total, 192 crossbred Hypor pigs (7.5± 1.4 kg) were used. The wheat-based test diets contained 10% SBM and 10% whey permeate apart from the test ingredients. Two barrows and two gilts per pen had *ad libitum* access to the test diets from the pen self-feeder for 28 d starting one week post-weaning (20 d). Pigs were individually weighed and pen feed disappearance was measured weekly. Measured for the entire study period, protein source did not affect daily feed disappearance (648-685g/d), weight gain (483-504g/d), or gain:feed (0.740-0.758), indicating that changes in specialty protein sources at the specific dietary inclusion levels did not affect growth performance.

Implications: These results indicate that locally grown air classified faba bean and field pea protein fractions are cost effective replacements for specialty protein sources in diets for weaned pigs.