

How much canola or cottonseed meals can be used for commercial chicken meat production

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Background - Previous research using broiler chickens in cages indicated that, high levels of selected canola meal (CM) and cottonseed meal (CSM) support satisfactory broiler performance when diets are formulated on a digestible amino acid (DAA) basis.

Objective – The present study will provide the poultry industry with practical recommendations for CM and CSM for chicken meat production in a semi-commercial environment.

Design - There were three treatments x 15 replicate pens x 40 birds (20 males and 20 females day old Cobb chicks) in a completely randomised block layout of the 45 pens. Crumbled diets during the starter period were fed from 1 to 21 d old including a control commercial diet, a CM diet (200 g/kg inclusion) and a CSM diet (200 g/kg inclusion). During the finisher period (21-43 d old), inclusions of each CM or CSM was increased to 300 g/kg and were offered as pelleted diets formulated on a DAA basis in both periods.

Outcomes - The results in the starter period indicated that feed intake (FI), liveweight gain (LWG) and feed efficiency were not influenced by the level of CSM or CM in the diet. During the finisher period, FI of birds fed on CM was lower ($P < 0.05$) but this did not affect LWG or feed efficiency, which were not different ($P > 0.05$) from the control diet.

Conclusions - It is concluded that for chicken meat production, up to 200 g/kg of either CSM (solvent extracted) or CM (solvent extracted or extruded) can be used during the starter phase, and up to 300 g/kg of either CSM (solvent extracted) or CM (solvent extracted or extruded) can be used during the finisher phase in diets formulated on a digestible AA basis.