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**Faba beans in diets for growing-finishing pigs**

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## Abstract

Two experiments were carried out to study the effects of using the new faba bean (*Vicia faba* L.) cultivar Kontu as a domestic protein source for growing-finishing pigs. In the first experiment, 100 pigs were used with a body weight (BW) of 25–110 kg to study the effects of replacing 0, 25, 50, 75, and 100% of rapeseed meal with faba beans in barley + rapeseed meal based diets. Restrictedly fed grower and finisher diets contained 137–317 and 114–260 g kg<sup>-1</sup> faba beans, respectively. A barley + soya bean meal based diet was included as a control. The replacement of rapeseed meal with faba beans exerted a quadratic effect on daily weight gain and on the feed conversion ratio of pigs in the growing period and during total fattening ( $P < 0.05$ ). The growth rate of growing pigs declined when 75 or 100% of rapeseed meal was replaced with faba beans. In addition, the complete replacement of rapeseed meal with faba beans decreased feed consumption ( $P < 0.05$ ). The best overall growth performance and feed conversion ratio were observed when 50% of rapeseed meal was replaced with faba beans. Pigs fed a faba bean based diet had a better feed conversion ratio than those fed a barley + soya bean based meal diet ( $P < 0.05$ ). The Minolta L\* value of the longissimus dorsi muscle decreased linearly with increasing dietary faba bean levels. This indicates that the meat became darker. Therefore, Experiment 2 was carried out with 20 pigs (25–107 kg BW) to study the effect of faba beans on the colour and ultimate pH of the meat. The pigs were fed barley + soya bean meal or barley + faba bean based diets (243 g kg<sup>-1</sup> faba beans). The ultimate pH of the longissimus dorsi muscle was higher in pigs fed the faba bean diet ( $P = 0.05$ ), but meat colour did not differ between the treatments ( $P > 0.05$ ). In conclusion, inclusion of over 200 g kg<sup>-1</sup> of faba beans in barley + rapeseed meal based diets is not recommended for growing pigs because it may result in reduced growth performance. Faba beans may influence meat colour, but this effect should be investigated further.

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