

Project Progress No. 11
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Benefits of feeding rapeseed in the diet of weaned pigs

Background

Ongoing LINK-funded R&D indicates that more rapeseed could be used in pig diets. Besides a high energy content and balanced amino acid profile, suggested anti-bacterial activity may possibly help protect newly-weaned pigs in place of Antibiotic Growth Promoters (AGPs).

Rapeseed for pigs

As a home-grown pigfeed ingredient, rapeseed has a high oil content providing digestible energy and a useful amino acid balance.

Today's varieties with low glucosinolate levels are more palatable than older ones. However, as inclusion rates increase, intake levels - and hence liveweight gain - may reduce.

Farmers currently use AGPs immediately post weaning to improve feed utilisation and gut health. However, AGPs will be withdrawn from European use in January 2006.

Without AGPs, weaning may need to be delayed to give older piglets which can better resist nutritional and infectious challenges.

Rapeseed has potential for inclusion in pig diets as feed intake is less critical in older pigs and the anti-microbial properties may replace some protection offered by AGPs. However, such an effect was not demonstrated in trials and evidence remains circumstantial from other studies.

Feeding trials

Weaned pigs, not given AGPs, were fed micronised, whole rapeseed as a substitute for soya at different inclusion levels - 0%, 5%, 10% or 20%. Litters were split with some pigs weaned at four weeks, others at six weeks.

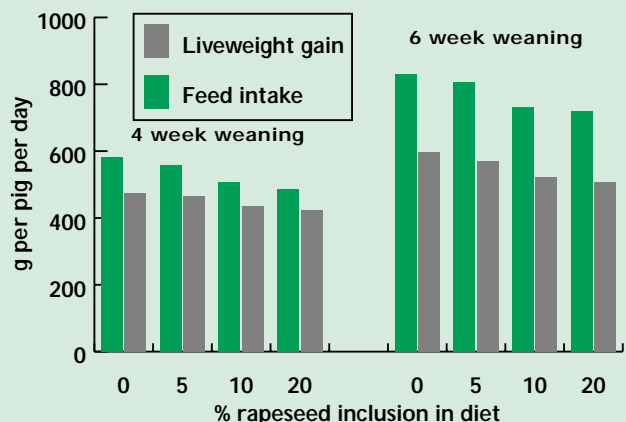
Various performance assessments were made, as well as health checks and faecal microbiology.

Regardless of weaning age, in the four weeks post weaning, feed intake and growth progressively reduced (by 3%, 10% and 13%) as the rapeseed inclusion increased (Figure 1).



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Figure 1. Effect of micronised rapeseed inclusion in piglet diets in four week period after weaning





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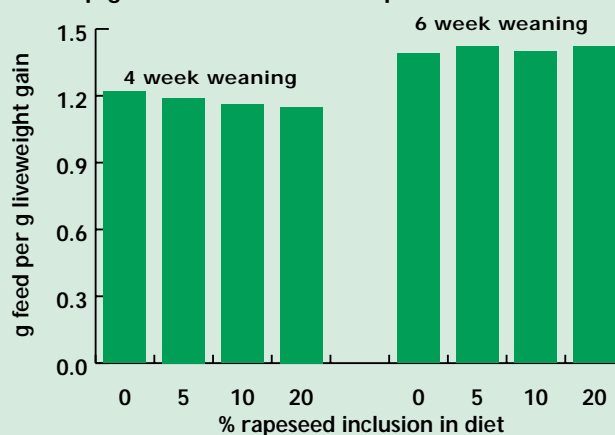
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Figure 2. Effect of micronised rapeseed inclusion in piglet diets in four week period after weaning



Feed conversion efficiency (Figure 2), pig health and measures of faecal microbiology were similar for all rapeseed inclusions.

At autumn 2004 raw material prices, assuming a current commercial price of £280/tonne for micronised rapeseed, a similar cost/kg liveweight gain was obtained for all rapeseed inclusion levels. This cost may be reduced with larger scale production of micronised rapeseed.

Potential inclusion

At present, rapeseed is rarely fed in weaner diets. Based on the trial results, inclusion of 5% gives minimal detrimental effect on growth rate and none on feed efficiency. Higher inclusion rates would only be attractive if rape became far cheaper compared to soya, or if intake reduction associated with rapeseed could be overcome.

Micronised full-fat rapeseed could be a cost-competitive source of home-grown protein for weaner diets at greater than previously accepted levels. However, at higher levels of inclusion, palatability problems that reduce feed intake and hence liveweight gain still need to be overcome.

Key messages:

- Pig producers may consider increasing levels of full-fat micronised oilseed rape in weaner pig diets.
- This may be particularly relevant if piglets are weaned later after the use of AGPs has been withdrawn.