

Eric ROYER (1a), Didier GAUDRE (1b) and Alain QUINSAC (2)

(1) IFIP-institut du porc, Pôle Techniques d'élevage, (a) 31500 Toulouse, France, (b) 35650 Le Rheu, France

(2) CETIOM, Service Transformation et Valorisation des graines oléagineuses, 33600 Pessac, France

www.ifip.asso.fr

www.cetiom.fr

Glucosinolates (GSL) and fibre from rapeseed may play a key role in the palatability of rapeseed meal (RSM) for pigs. Therefore, a high RSM inclusion in pig diets could lead to a lower feed intake or modify feeding behaviour, especially when competition is high. Two experiments were conducted to evaluate the effects of GSL and fibre resulting from RSM, and of the competition degree at feeding, on feed intake and performance of piglets during the post-weaning period from 12 to 30 kg (phase 2).

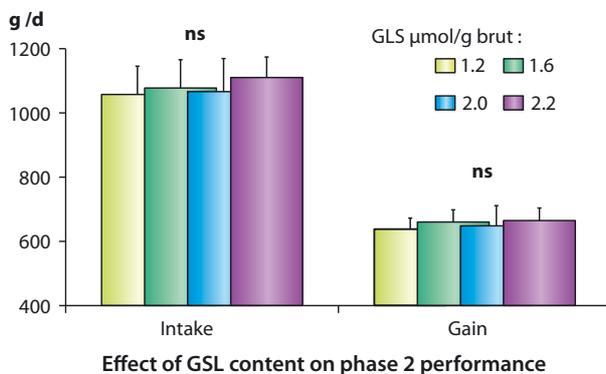
Experiment 1

300 weaned crossbred piglets (8.2 kg and 28 d old) in a 41 d experiment.

From 12.8 kg, four phase 2 diets given *ad libitum*:

■ 9% RSM0	1.2 μmol GSL/g (as fed)
■ 15% RSM1	1.6 μmol GSL/g
■ 15% RSM2	2.0 μmol GSL/g
■ 15% RSM3	2.2 μmol GSL/g

The increasing GSL content of phase 2 dietary regimen did not influence daily feed intake, average daily gain and feed conversion ratio during the period.



Experiment 2

360 weaned crossbred piglets (8.5 kg and 28 d old) in a 40 d experiment using a 2x2 factorial design:

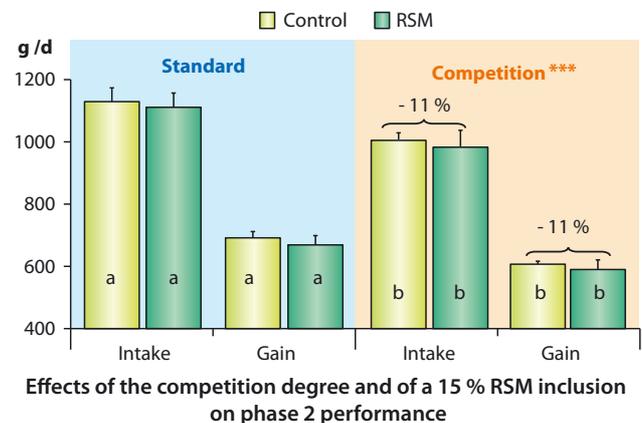
- control diet with medium fibre content (49 g ADF/kg) vs. 15% RSM high fibre diet (72 g ADF/kg and 2.25 μmol GSL/g), given *ad libitum* from 12.2 kg
- standard vs. high degree of competition

Competition decreased feed intake ($P < 0.001$) and growth ($P < 0.001$).

No RSM x competition interaction was observed.

RSM pigs had lower intake (1009 vs. 1076 g/d; $P < 0.01$) and gain (593 vs. 649 g/d; $P < 0.01$) than control pigs for the lightest weight group, whereas there was no difference for medium and heavy groups.

This could be explained by abrupt change from a highly digestible phase 1 diet to a high fibre phase 2 diet.



Conclusion

Piglets tolerate doses up to 2.2 $\mu\text{mol/g}$ of GSL resulting from the use of RSM at 15% in phase 2 diets. This limit is not affected by the degree of feeding competition. The GSL and fibre contents in pig diets are more important criteria to formulate than the RSM percentage.