

# #156

## Rapeseed feeds for swine - Recent studies and perspectives

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PLENARY TALKS

Feeds from rapeseed (RS), solvent extracted meal (RSM) and press cake (RPC), rank on the first position of protein feed produced in the EU. The largest portion is used for cattle, mainly cows. However, RSM and RPC have become more and more attractive also for pigs and poultry, despite the occurrence of antinutritive compounds, mainly glucosinolates (GSL), and some shortages in the availability of energy and amino acids (AA). Prerequisite to establish safe-use levels for rapeseed feeds in diets for monogastric animals is the determination and definition of the GSL content on the one hand and the use of reliable and sensitive animal-response criteria on the other. Experiments with fattening pigs and with sows show a higher variability of the feed consumption in relation to the dietary GSL content as compared with the more sensitive thyroid and iodine status. Therefore, the criteria of thyroid/animal health should be studied more frequently to complete the success of rapeseed feeds regarding the performance. The GSL content of harvested RS represents a satisfying level according to French and German monitorings, however, it is about one third higher than in the monitoring from Western Canada. The German oil mills, varying in the toasting conditions, produce at similar RS quality RSM with a high range in the content of GSL and of bioavailable AA. Gently hydrothermal processing means more standardized ileal digestible (SID) AA and more GSL; stronger toasting creates less SID AA and GSL. Oil mills should focus not only on the high quality of oil, but also on that of RSM with adequate SID AA and a tolerable GSL rest. Regarding the fiber reduction in RS by plant breeding, results of newer US experiments with the respective RSM are discussed. Among the enzymes added to pig diets with RSM, the phytase has the highest importance. The phytase induced release of phosphorus (P) from the rapeseed feeds with their high phytate-P content offer possibilities to save mineral P. In view of the consequences of present fertilizer-EU legislation particularly on regions with high livestock density, a minimizing of the P as well as the N content in the excrements/manure from RSM fed animals is challenging the animal nutrition research.

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