

A Note on Rapeseed Meal and Reproduction in Cattle and Sheep

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There have been suggestions that rapeseed meal may reduce the reproductive efficiency of animals. Observations to test this were made in cattle and sheep using high glucosinolate rapeseed meals.

Heifers were given straw and concentrate feed sufficient to gain 1 kg daily during three months before service and for six weeks after service: at this stage they were killed and the embryos were recovered. Twelve received a concentrate feed based on soyabean meal and 12, one based on rapeseed meal as the protein supplement. There was a tendency for the six-week old embryos of the rapeseed meal group to be slightly smaller than those of the soyabean meal group, but there were no effects of diet on the patterns of oestrus before service, on behavioural oestrus nor on the numbers that conceived.

Ewe lambs were used in a similar experiment. They were given straw and concentrate feed containing soyabean meal or rapeseed meal — extracted or expeller — for three months as they approached puberty, and during this time oestrus activity was recorded using vasectomised rams. During the following six weeks entire rams were run with the lambs. They were killed when the embryos were approximately 35 days of age. Feed intake was low in some of the lambs given extracted rapeseed meal at a high level and a small number were, in consequence, transferred to the soyabean meal diet. For the remainder of the lambs, feed intake was restricted where necessary to avoid wide differences among treatment groups at mating. However, apart from a non-significant trend towards fewer ovulations in lambs given the rapeseed meal diets, there were no ill effects on reproduction: behavioural and hormonal oestrus, conception rate and survival of embryos were similar for all treatment groups.