

**Comparison of sheep and goats under stall-feeding conditions :
roughage intake and feed selection**

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Three experiments, each with 10 near-adult castrated males per species, were conducted to test the hypothesis that goats eat more than sheep and that goats are more selective feeders than sheep.

In Experiment 1 with long lucerne (*Medicago sativa*) hay over 14 days, intake of dry matter (DM) per kg metabolic live weight ($W^{0.75}$) day (d) was 75.9 g for sheep, and 83.7 g for goats, with standard error of difference (sed) 4.7. Hay refusals (21 p. 100 of offered) of goats contained more nitrogen (N) ($23 \text{ v } 16 \pm 2.1 \text{ g/kg DM}$) and less acid detergent fibre (ADF) ($449 \text{ v } 466 \pm 20.0 \text{ g/kg DM}$). Hay offered contained 28 g N and 391 g ADF/kg DM.

In Experiment 2 with ammonia-treated barley straw over 21 days, intake of goats was higher than sheep ($57.7 \text{ v } 45.3 \pm 4.9 \text{ g DM/kg } W^{0.75} \text{ d}$). Straw refusals (25 p. 100 of offered) were not significantly different between species ($600 \text{ and } 612 \pm 6.4 \text{ g ADF/kg DM}$ for goats and sheep respectively). Both sheep and goats showed some selection as straw offered contained 567 g ADF/kg DM. Experiment 3 followed Experiment 2, with the same animals.

In Experiment 3 over 10 days, ammonia-treated straw and stinging nettle (*Urtica dioica* L.) were fed *ad libitum*. Total intake was higher for goats than sheep ($75.2 \text{ v } 65.6 \pm 4.6 \text{ g DM/kg } W^{0.75} \text{ d}$) and goats adapted more rapidly to introduction of the new feed (stinging nettle) than sheep. Refusal compositions showed similar trends to Experiments 1 and 2.

The experiments confirm that for near-adult castrated animals, goats consume more roughage than sheep. The consistent trend for goat feed refusals to contain less acid detergent fibre and more nitrogen than those of sheep confirms popular belief that goats prefer coarse roughage.

Key words : Goat, sheep, roughage, intake, feed selection.

**Use of goats as a way for discriminating
the palatability of concentrate feeds**

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The ability of goats to select the most nutritive parts of forages or feeds is higher than that of the other ruminants (MORAND-FEHR *et al.*, 1979). It was used in this experiment for discriminating the palatability of concentrate feeds.

Fourteen goats of an experimental flock were selected for cafeteria tests on their acceptability of various feeds.

Several trials were made previously to determine experimental conditions. Each goat was given two feeds simultaneously. Each feed was put in two little cans containing 200 g