

Voluntary intake of feed concentrates and changes in body weight of reindeer hinds and their calves during the summer.

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Summary: The semi-domesticated reindeer (*Rangifer tarandus tarandus* L.) is remarkably well-adapted to the arctic and subarctic environments. During the brief arctic summer the reindeer has a considerable growth rate. In tundra and forest areas reindeer ingest a mixed diet of browse, grass and herbs during summer. They feed on over 350 different species of plants. The nutritive value of growing plants, sedges and grasses is very high and the animals always select the highest quality forage available. Reindeer's summer food contains about 22% crude fibre and 15% crude protein in dry matter. Mushrooms are a valuable nutritive and vitamin-rich food during late summer and autumn. Energy requirements for lactation and growth are usually the major process in Cervids elevating metabolic rate above the levels of maintenance. The range of daily milk output of reindeer hinds extends from 47 ml to 2 l and the milk intake of reindeer calves during the first two weeks is on average 0.95 l/day containing approximately 8 MJ energy. The daily weight gain of newborn calves can be as much as 400–500 g. Calves' body-weight doubles within 8–10 days of life.

Six reindeer hinds and their calves were fed with concentrates during summer 1987 in Kaamanen Research Station. The concentrate ration was based on cereals, rapeseed meal and grassmeal. The mixture contained 13.9% crude fibre, 20.7% crude protein and 6.1% crude fat

in dry matter. Minerals and vitamins were also added to the ration. Reindeer were fed twice daily ad lib. The amount of feed given and the daily feed remains were weighed. The daily intake of concentrates by a hind and its calf together was calculated as the mean of six hinds and calves. Control animals grazed on natural summer pasture in the mountains. The reindeer used in this trial were middle weight hinds. Their calves had equal birth weights. There were three female and three male calves in the experimental group. The reindeer in the concentrate feeding group were weighed weekly. The control animals were weighed every other week.

The voluntary intake of concentrates varied between 1.8 kg and 5.4 kg/day and increased from the beginning of the experiment until September. The body weight of the hinds in the experimental group was on average 64.2 kg after calving. The animals gained 12.0 kg during the summer until mid September. The control hinds on natural pasture weighed on average 64.0 kg after calving and gained 10.8 kg during the summer. The calves fed concentrates gained 42.9 kg on average during summer. The daily weight gain was 365 g (mean of six calves) from birth until 120 days of age. The highest daily weight gain in the experimental group was in July, 630 g. Calves on natural pasture gained 34.1 kg on average during summer. Their daily weight gain was 290 g (mean of 12 calves).