

## Mushrooms: An important route of radiocaesium transfer from soil to grazing reindeer

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*Abstract:* In the late summer and fall of 1988 mushrooms were present in abundance in Scandinavia and concomitantly increased levels of radiocaesium were observed in both domestic and wild grazing animals. Subsequent studies revealed high concentrations of radiocaesium in several species of mushrooms highly sought by reindeer and other ruminants. In August the intake of radiocaesium by oesophageally fistulated reindeer grazing in birch forest amounted to as much as 1.9–5.7 kBq per feeding bout of 10 min. A major component of the ingesta was mushrooms.

In sacco studies showed a rapid release of radiocaesium from mushroom tissue into the rumen. Feeding trials with contaminated mushrooms to goats also showed that radiocae-

sium was easily available and behaved similarly to oral doses of ionic Cs. Radiocaesium from mushrooms was rapidly transferred to milk. It can be assumed that the higher activity found in reindeer calves than in females partly can be explained by intake of milk and partly by larger intake of food per unit of body weight than in adult animals.

Recent studies have shown that old bomb test fallout of radiocaesium can be mobilized into the food chain by mushrooms. Although the general level of radiocaesium in reindeer forages decrease slowly, radiocaesium from the Chernobyl accident can, when there is a large mushroom crop, probably cause serious problems to the reindeer industry in the years to come.