

Abstract

*The wild musk ox (*Ovibos moschatus*) in Scandinavian has a high level of inbreeding and by using metapopulation management, the genetic variation could increase. A direct reintroduction of captive musk ox to the wild population can cause problems. By improve the body condition; the animals' possibility to survive in a wild habitat can increase. The aim of the study was to investigate the musk ox activity in relation to the size and shape of the enclosure, as well as if changing of feeding and watering places can increase the activity of the musk ox, and thereby improve their hoof status. These measures could lead to a better reintroduction of musk ox into the wild established population in the future. This study was performed at Musk ox centrum in Tännäs and at Kolmårdens Wildlife Park. The musk ox activities were registrated through a Tellus GPS-collar, and the hoof status were estimated by trimming before and after the study period. The study shows the musk ox in Tännäs was more active compared to the one in Kolmården. The activity rate was 4.7 km/day in Tännäs and in Kolmården it was 1.9 - 2.2 km/day. The hoof growth of musk ox in captivity was 1.6 cm/month for Tännäs and for Kolmården it was 1.8 cm/month. The activity of the musk ox is affected both by the size of the enclosure, and temperature. The hoof status can be improved in an environment with adapted substrate, as well as improving the condition of the animal. All this could prepare a captive musk ox for a reintroduction into an established wild population in the future.*

Keywords: Musk ox (*Ovibos moschatus*), activity, hoof status, metapopulation management, reintroduce