Abstract

Since the 20th century, the distribution of European heathlands rapidly decreased due to agricultural intensification, heavy use of artificial fertilizers or acidification. Therefore, various attempts of heathland restoration are under way in these days. Analysis of nematode community composition can be one of the tools suitable for succession evaluation.

In 2011, 2013 and 2014, soil samples were collected from heathland restoration experiment (launched in 2011) where different restoration methods were applied in a 3 × 3 factorial experiment; existing heathlands were also sampled to identify the target community both in dry and wet heathland. A total of 60 samples of extracted nematodes were analysed for absolute abundance, trophic groups, and genera dominance. Various indices were calculated to describe the nematode community.

We were able to proove faster development of wet heathlands towards the target community. However, because of large data variability, there was no significant difference between treatments. Development of wet and dry heathlands differed also in increased proportion of omniphagous nematodes in 2013 and predators in 2014 in dry heathlands. After three years of heathland restoration, nematode community has not yet reached parameters of the target community.

Key words: Nematoda, Netherlands, Maturity Index, sod transfer, plant material transfer, alkalization, acidification