

14. NATURAL CONTROLS OF PLANT PARASITIC NEMATODES IN SAND DUNES: BACKGROUND AND FIRST RESULTS OF THE EU-ECOTRAIN PROJECT

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EcoTrain aims at examining factors that control plant parasitic nematodes in coastal sand dunes. I will start with an overview of previous studies on endo- and ectoparasitic nematodes infecting the sand-binding grass species *Ammophila arenaria* (marram grass) that is natural to coastal foredunes in Europe. The endoparasitic nematodes *Heterodera arenaria* and *Pratylenchus penetrans* seem less harmful to marram grass than *Meloidogyne maritima* and the ectoparasite *Telotylenchus ventralis*. However, in the field, *Meloidogyne* can be outcompeted by the other endoparasites, while in the density of *Telotylenchus* is 80 times lower than the potential density in optimal conditions in sterilized soil. All together, a number of control mechanisms seem active in the root zone of marram grass acting differently on the various plant parasitic nematode taxa. In the EU-project EcoTrain, seven Ph.D. students and Postdocs are investigating the various control mechanisms of plant parasitic nematodes of marram grass as a training opportunity. I will outline the project, present the project team, and discuss our first results. I would like to receive feedback on the application value of such fundamental knowledge for biological control in crop systems. More information on EcoTrain is available at www.nioo.knaw.nl/projects/ecotrain/index.htm