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WEEDS AND BIODIVERSITY

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The occurrence of alien plant species in field margins in Finland

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Agriculture facilitates the spread of alien plant species in terms of intentional and unintentional dispersal, and by creating and maintaining disturbed habitats (e.g. fields and field margins). These habitats are often more prone to the introductions of new species than natural ones, and may act as dispersal corridors. This study aimed exploring the occurrence of alien plant species in field margins and other semi-natural agricultural habitats in Finland.

We used data set of 631 vegetation plots (50 m² in size) representing 10 different semi-natural habitats and four distinct geographical regions in Finland. The data were originally collected for the monitoring study on the effects of the Finnish agri-environment support scheme in 2001 and 2005. The data were combined with data of ecological traits, mostly taken from BiolFlor database. The number of species and frequency were compared between habitats and geographical regions. The differences in ecological traits between the groups of native, archaeophytes and neophytes were tested with chi-square tests.

A total of 118 alien plant species were detected which comprised of 34% of total species number. Most of the alien species (77%) had been introduced to Finland before 1600 (i.e. archaeophytes) and minority after 1600 (i.e. neophytes). The mean number species and frequency of alien plant species were higher on road verges and field margins next to a road than on other habitats. In western Finland, less alien plant species was found than in other geographical regions. Only three neophytes (*Amelanchier spicata*, *Lupinus polyphyllus*, *Sambucus racemosa*) found in the study are regarded as an invasive plant species in Finland. The results suggest that alien plant species comprise an important part of the biodiversity of Finnish field margins and semi-natural agricultural habitats. The role of field margins as dispersal corridors for invasive alien plants is limited for certain species.