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ADDRESS

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PLENARY TALKS

Damage from the brassica pod midge *Dasyneura brassicae* in relation to landscape factors and abundance of the midge and the seed pod weevil *Ceutorhynchus obstrictus*

We have surveyed damages from the brassica pod midge *Dasyneura brassicae* in oilseed rape (OSR) fields, in relation to abundance measures of the seed pod weevil *Ceutorhynchus obstrictus*, *D. brassicae* itself (in 2018 only), and the area of oilseed rape (OSR) from the previous year and the area of various non-crop habitats in the surrounding landscape within distances of 1000-4000 m radius. In 2017 without an untreated control zone but with the number of treatments (0-2) included in the statistical models. In 2018, a 20 x 24 m untreated control zone was included in each field. The abundance of *C. obstrictus* was estimated by visual surveys of OSR flowers, and by yellow sticky traps and yellow pan traps at the field edge, whereas the abundance of *D. brassicae* (in 2018) was estimated from yellow sticky traps only.

There was good agreement between different abundance measures for *C. obstrictus* from different monitoring systems. In 2017 abundance of *C. obstrictus* was high (up to 46 weevils/trap/day). As were damages from *D. brassicae*, reaching up to >90% at field edges and 71% in the field interior. In correlations between different individual parameters, abundance of *C. obstrictus* was correlated with *D. brassicae*-damaged pods at field edges and with the proportion of non-crop habitat within 2000 and 3000 m radii. Proportion of non-crop habitat within 1000 m radius was also correlated with pod damage. Neither the abundance of *C. obstrictus* or pod damages were correlated with the proportion of OSR area at any scale. In various multiple regression analyses, however, pod damages were often positively correlated with models featuring the proportion of OSR area at the 1000m scale, proportion of non-crop area at the 3000m scale, abundance of *C. obstrictus* in pan traps, and negatively correlated with number of chemical treatments. In 2018 abundance of *C. obstrictus* was low (at most 7 weevils/trap/day) and pod damage from *D. brassicae* much less (at most 17%), with no consistent patterns of correlations between landscape parameters, trap catches, and pod damage. There were, however, clear effects of chemical treatments between treated areas and control zones on pod damages.

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