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Title: The relation between oilseed rape and pollination of later flowering plants varies across plant species and landscape contexts<!--<query id="Q1"> "Your article is registered as a regular item and is being processed for inclusion in a regular issue of the journal. If this is NOT correct and your article belongs to a Special Issue/Collection please contact v.subramanian@elsevier.com immediately prior to returning your corrections."



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PII:	S1439-1791(17)30007-5
DOI:	http://dx.doi.org/doi:10.1016/j.baae.2017.08.001
Reference:	BAAE 51046

To appear in:

Received date:	12-1-2017
Accepted date:	2-8-2017

Please cite this article as: {http://dx.doi.org/

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ACCEPTED MANUSCRIPT

The relation between oilseed rape and pollination of later flowering plants varies across plant species and landscape contexts

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Abstract

Increasing cultivation of oilseed rape may have consequences for pollinators and wild plant pollination. By providing pollinating insects with pollen and nectar, oilseed rape benefits short-tongued, generalist insect species. Long-tongued bumble bee species, specialized to other flower types, may instead be negatively affected by increased competition from the generalists (e.g. due to nectar-robbing of long-tubed flowers) after oilseed rape has ceased flowering. We expected that the increased abundance of shorttongued pollinators and reduced abundance of long-tongued bumble bees in landscapes with a high proportion of oilseed rape would impact the pollination of later flowering wild plant species. In addition, we expected contrasting effects on plants pollinated by short-tongued pollinators and those pollinated by long-tongued bumble bees. We predicted that semi-natural grasslands, which provide insects with

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