

Field margin floral enhancements increase pollinator diversity at the field edge but show no consistent spillover into the crop field: a meta-analysis

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Abstract

Conventional intensification of agriculture has reduced the availability of resources for pollinators, reducing their diversity and affecting plant pollination, both in natural habitats and croplands. Field margin floral enhancements such as flower strips or restored field margins could counteract these negative effects. The approaches to assess the success of these management measures generally evaluate separately the pollinator response at the edge and within the crop, as proxies for pollinator conservation and pollination services, respectively. We performed a meta-analysis to understand the influence of field margin floral enhancements on the abundance and richness of pollinators at the edge and within the field, and on crop yield. We estimated 137 effect sizes from 40 studies, all from the northern hemisphere. Overall, the field margin floral enhancements increased the abundance and richness of pollinators at the field edge but had no consistent effect in the interior of the crop fields. Few studies evaluated crop yield, and in these studies no effects were observed. These results suggest that field margin floral enhancements can constitute a positive conservation action for pollinators but not necessarily associated with pollination ecosystem service.

Palabras clave

Palabras clave de autor: [agroecosystem](#); [conservation tool](#); [floral margins](#); [hedgerows](#); [meta-analysis](#); [pollination service](#)

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