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Two Enabling Factors for Farmer-driven Pollinator Protection in Low- and Middle-income Countries

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Abstract

Reward-based wildflower strips are the most common approach for pollinator protection in high-income countries. However, farmers greatly dislike or even reject them even if a payment is provided. Low- and middle-income countries cannot afford this practice. A promising pilot study in Uzbekistan introduced an alternative approach, Farming with Alternative Pollinators, focusing on farmers as target group, marketable habitat enhancement plants and a method-inherent incentive: higher income per surface achieved already in the first year. We hypothesised that higher income would be a replicable enabling factor across continents, but a knowledge-raising campaign would be necessary in many low and middle-income countries. We assessed the replicability of the incentive with a small number of farmers 2015–2016 in Morocco but focused on assessing if farmers have sufficient knowledge to recognise wild pollinators and use this approach. We conducted 766 interviews using a standardised questionnaire with randomly selected smallholder farmers in three culturally different farming societies of low- and middle-income countries (Morocco, Turkey and Benin). Farming with Alternative Pollinators induced higher income (75 % (2015), 177 % (2016)) also in Morocco. The trial and the survey show the indispensability of a knowledge-raising campaign as second enabling factor. Farmers often don't know the value of wild pollinators, they cannot recognise beneficial insects and disregard them as pests, they destroy nests unwillingly, they are not aware of the habitat requirements of wild pollinators working in their fields. Many farmers have only vague knowledge concerning pollinator-dependency of their crops and even less knowledge concerning the reasons of crop failure. This bears the risk of decisions, which do not solve the problem, but are counterproductive for pollinators. However, based on capacity building, Farming with Alternative Pollinators could have indeed high potential to promote pollinator protection in low- and middle-income countries.

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