



KN18: Shift focus on a neglected ecosystem service - Farming with Alternative Pollinators (FAP) highly increases yields of faba bean

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Dr. Stefanie Christmann worked on Environmental Governance in various positions. She joined ICARDA in 2009, first with duty base in Central Asia, since 2015 in Morocco. Based on the TEEB-approach (show the value of ecosystem services and use it to trigger intrinsic motivation for better protection of ecosystem services), she developed several economically self-sustaining environmental governance approaches to protect biodiversity in the course of climate change. "Farming with Alternative Pollinators (FAP, 2012)" is her most important innovation. Based on different planting instructions, farmers gain higher net income per surface by pollinator protection. FAP obviates rewarding schemes. FAP also includes cross-sector policy instruments affordable for Low and Middle Income Countries. Different to the costly strategies for pollinator protection, which have been recently developed by some countries in the Northern hemisphere, FAP has potential to become a globally scalable model for pollinator protection.

The environmental governance approach Farming with Alternative Pollinators (FAP) was developed in 2012. One target of FAP is economically self-sustaining on-farm protection of pollinators. FAP shall obviate costly rewarding schemes for farmers as used by the European Union, because such schemes are not scalable in Low and Middle Income Countries. Three pilot projects in Central Asia and Morocco tested FAP with different main crops and proved its replicability. In 2017, trials with faba bean as main crop were conducted in Shkirat and Kenitra (adequate rainfall) and Sefrou (mountainous) areas in Morocco. FAP fields used 75% of the area for the main crop and 25% for habitat enhancement by other marketable plants. Control fields produce the main crop on 100% of the area. FAP and control fields are compared concerning diversity and abundance of pollinators, predators, pests and net income. In 2016/17 cropping season, the net income per surface was at least double in FAP faba bean fields compared to control faba bean fields, mainly due to better pollination, but also owing to more predators. The number of seeds per pod was significantly higher in FAP fields than in control fields. Habitat enhancement does not require high investment, but planting instructions and knowledge. Farmers quickly started experimenting on their own farms. The results of the FAP faba bean project can contribute to pollinator protection, better farm income and high food security. Moreover, FAP enhances the comparative advantages of faba bean as an alternative and climate friendly protein provider.