

## New ISI publication on enabling factors for farmer-driven pollinator protection

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The replication of the FAP-cucumber trial in Uzbekistan (2013-2014) in Morocco (2015-2016) demonstrated the agronomic replicability of Farming with Alternative Pollinators (FAP). However, it also revealed that in countries with lower formal education a second enabling factor for farmer-driven pollinator protection is needed besides the method-inherent incentive of higher income per surface: a knowledge-raising campaign. This was further demonstrated by a survey conducted in Morocco, Turkey and Benin including 766 smallholder farmers.

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**FAP**



**Control**



Photo credit: Stefanie Christmann /International Center for Agricultural Research in the Dry Areas

Christmann et al. 2021 International Journal of Agricultural Sustainability

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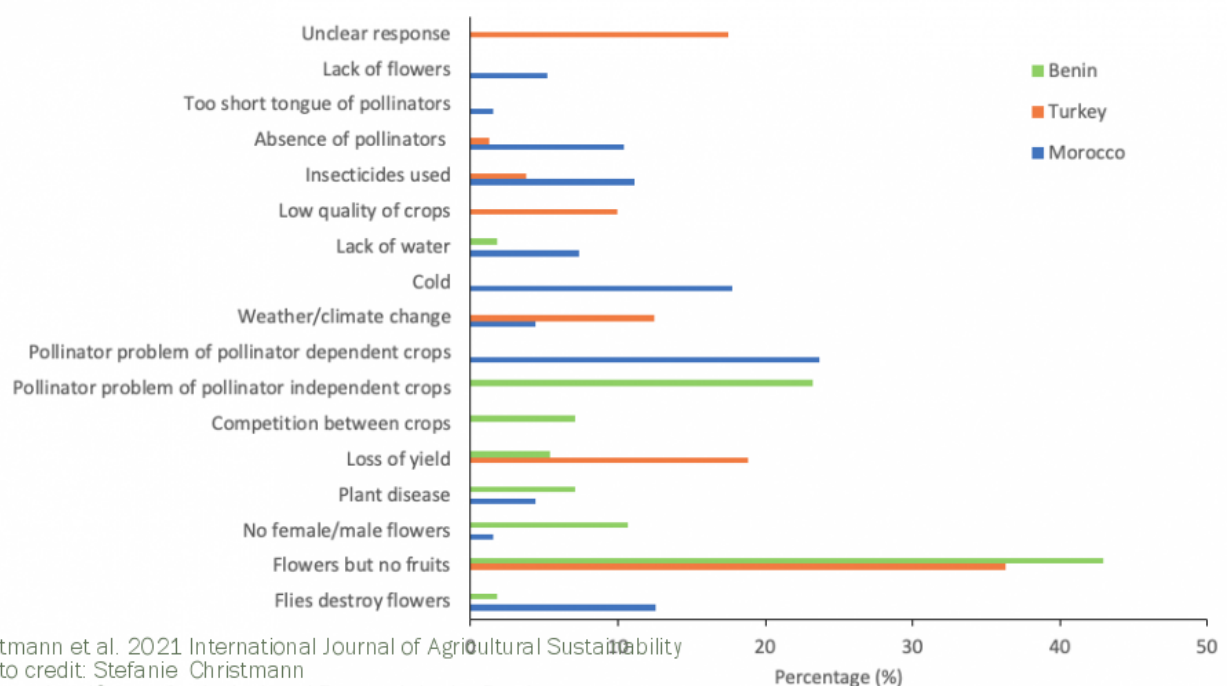
Uzbekistan had developed the methodology for FAP-trials and demonstrated on the example of cucumber and sour cherry that FAP-induced higher productivity and higher income are incentives for farmers to enhance habitats for pollinators. The second FAP-

pilot project replicated the cucumber trial from Central Asia in Morocco, a country with 26% illiterate inhabitants (whereas Uzbekistan nearly eradicated illiteracy, farmers have secondary school accomplished, partly received even higher education and often took part in agricultural courses). Also in Morocco, FAP increased the diversity and abundance of wild pollinators and natural enemies, reduced the abundance of pests and increased incomes per surface – on average over two years by more than 100% (75% (2015), 177% (2016)).

However, the trials unveiled, that farmers in Morocco often have too low knowledge on pollinators and their habitat requirements to recognize and protect them. In Morocco, the participating farmers learned agriculture from their fathers only. In 2015 for instance, the father of a participating FAP-farmer visited the field, noticed high abundance of insects and used chemicals “to protect the crop” (farmer’s father). It took about 2 weeks until FAP-2 field regained high insect diversity.

ISI article showed, that in low- and middle-income countries a second enabling factor, a knowledge-raising campaign, is necessary. The article describes that farmers often don’t know, if their crops are pollinator dependent or not, they don’t know, if lack of harvest is caused by lack of pollinators or by plant disease, pests, lack of water or other reasons. They don’t recognize the diversity of wild pollinators in their fields and mostly don’t recognize their nests.

## Pollination problems as identified by farmers



The article suggests that based on these two enabling factors - higher income per surface; knowledge-raising campaign – FAP can promote farmer-driven pollinator protection also in low- and middle-income countries.

manuals . Farmers in Morocco can contact ONCA, as ONCA extensionists received trainings to assist farmers further.

## Acknowledgement



# IKI

IKI Project. Photo credit: Laura Becker ./International Center for Agricultural Research in the Dry Areas

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## Projects

- [Conservation of pollinator diversity for enhanced climate change resilience](#)

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## CRPs, & Partners

CRP on Climate Change,  
Agriculture and Food Security -  
CCAFS



International Center for  
Agricultural Research in the  
Dry Areas - ICARDA

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## Keywords

- Farming with Alternative Pollinators (FAP)
- [morocco](#)
- wild pollinators
- [benin](#)
- [knowledge](#)
- [turkey](#)
- incentive
- pollination problem
- method-inherent incentive
- farmer-driven protection

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## Countries

- Benin
- Morocco
- Turkey

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## About the author





Stefanie Christmann is Senior scientist, Farming with Alternative Pollinators at International Center for Agricultural Research in the Dry Areas - ICARDA.

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New video: To enhance farmers' kn...



Nancy Lee Adamson from Xerces Socie...



50-minutes Farming with Alternative...



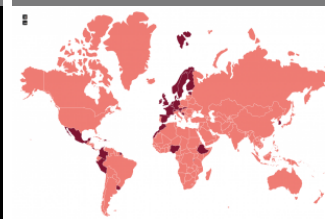
Brochure for agricultural advisors



Updated checklist of wild bee speci...



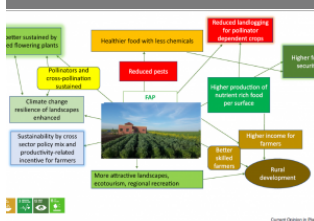
First record of the wood-boring bee...



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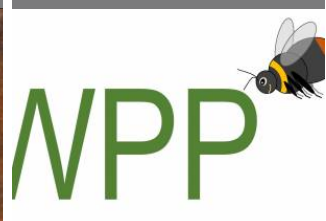
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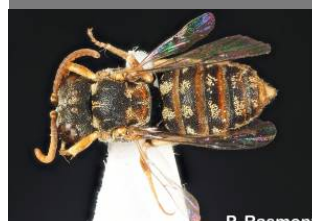
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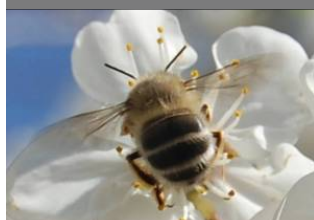
A very rare bee species, Schmiedekn...



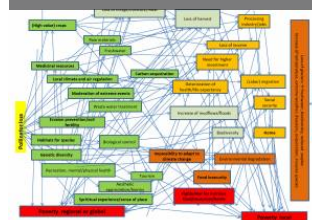
The experience of a FAP farmer afte...



Focus on Dasypoda visnaga, a wild b...



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The value of pollinators for peace



Moroccan farmers learn to recognize...



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Film documentary on the IKI-Pollina...



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New partnership protects wild bees ...