SINGLE-IMPACT FICHE – AGROFORESTRY

IMPACT: POLLINATION

Data extracted in June 2020

Note to the reader: This fiche summarises the impact of Agroforestry on POLLINATION. It is based on a review of one peer-reviewed synthesis research paper, involving 3 primary research studies.

1.WEIGHT OF THE EVIDENCE

- CONSISTENCY OF THE IMPACT: The only synthesis paper available shows a positive effect of agroforestry on pollination compared to cropland in the Temperate region (Canada, France, Turkey, UK and USA) (**Table 1**). See **Table 2** for details.

Table 1. Summary of effects. The numbers between parenthesis indicate the number of synthesis papers with a quality score of at least 50%. Details on quality criteria can be found in the next section.

		Effects (all studies)				Effects (only studies including EU)			
Impact	**Comparator**	**Positive**	**Negative**	**No effect**	**Uncertain**	**Positive**	**Negative**	**No effect**	**Uncertain**
Increase pollination	Croplands without trees	1	0	0	0	1	0	0	0

- QUALITY OF THE SYNTHESIS PAPER: *The quality score summarises 16 criteria assessing the quality of three main aspects of the synthesis papers: 1) the literature search strategy and studies selection; 2) the statistical analysis; 3) the potential bias. Details on quality criteria can be found in the methodology section of this WIKI* .

2. IMPACTS

The main characteristics and results of the synthesis paper are summarized in **Table 2**. Summaries of the meta-analyses provide fuller information about the results reported in each synthesis paper, in particular about the modulation of effects by factors related to soil, climate and management practices.

Table 2. Main characteristics of the synthesis papers reporting impacts of agroforestry systems on pollination.

	Reference	Population	Geographical scale	Intervention	Control	Conclusion	Quality score	Global effect
1	Staton, T; Walters, RJ; Smith, J; Girling, RD. 2019	Temperate arable systems	Temperate region, defined as latitude> 40° north or south (Canada, France, Turkey, UK and USA)	Silvoarable agroforestry systems.	Crop monocultures.	Pollinators were more abundant in silvoarable than arable systems, but study replication was low.	94%	Positive, compared to cropland.

3. KNOWLEDGE GAPS

- Very few published studies with low replication for pollinators.