

# GLOBAL META-ANALYSIS SHOWS REDUCED QUALITY OF FOOD CROPS UNDER INADEQUATE ANIMAL POLLINATION

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## Background

Pollinating animals are essential for the reproduction of many cultivated plants, including fruits, vegetables, and nuts. By ensuring the production of these crops, which are among the richest in vitamins and minerals, pollinators significantly contribute to maintaining human diets healthy. Despite the large amount of research on pollinators' contribution to agricultural production and the consequences of their decline on human welfare, many aspects are still unclear or under-researched, and results are sometimes conflicting.

## Objective

The aim of this study is to provide a global quantitative review of the effects of animal pollination on several aspects of food quality including both organoleptic characteristics and nutritional value.




## Results

-  Food crops pollinated by animals had on average 23% better quality than those not pollinated by animals, indicating that almost one-fourth of the total quality of the fruit depends solely on the pollination services provided naturally by animals;
-  Pollinators critically improve the shape, size and shelf-life of fruits and vegetables, but contribute also to increasing their nutrients.



## Key Messages

The production of commercially suboptimal fruits and vegetables derived from inadequate animal pollination has important consequences:

-  it affects farmers' decision to harvest and consequently their access to fresh produce markets or alternative processing;
-  growing fruit that is short-lived and looks imperfect is likely to increase food waste, impacting on a larger scale the whole food production chain, the global consumption of healthy food, and the management of agricultural land;
-  it is necessary to maintain effective and efficient animal pollination of food crops throughout agricultural production landscapes.

## Source

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