



By Ed Leahy

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Bee shortage reducing yields

A new study in the US reveals the drop in pollination and production associated with declining bee populations



A decline in wild bees in the US is limiting yields of major fruit crops according to a new study.

Cherry, blueberry and apple production all suffered from lower numbers of wild bees, as well as managed bees, say researchers whose study was published in *The Royal Society journal*.

The study found that wild bees made up a significant role in pollination of apple and cherry crops, estimating that wild bees are worth \$1.06 billion to the US apple industry, and \$50 million to blueberry growers.

The scientists behind the study recommended greater investment in promoting wild bee populations, such as wild flower borders along large-scale farms.

Bees perform a crucial role of pollinating the flowers which go on to produce the fruit, harvested for consumption and sale across global markets.

Senior author of the study, Rachel Winfree, said: "Honeybee colonies are weaker than they used to be and wild bees are declining, probably by a lot."

"Agriculture is getting more intensive and there are fewer bees, so at some point the pollination will become limited. Even if honeybees were healthy, it's risky to rely so much on a single bee species. It's predictable that parasites will target the one species we have in these monocultural crop fields.

"The trends we are seeing now are setting us up for food security problems," Winfree added. "We aren't yet in a complete crisis now but the trends aren't going in the right direction. Our study shows this isn't a problem for 10 or 20 years from now – it's happening right now."

The study sampled seven different crops, blueberry, apple, sweet cherry, tart cherry, almond, watermelon and pumpkin on farms across the USA and part of Canada.

The paper stated it found evidence of pollinator limitation in five of the seven crops, with apples, blueberries and cherries the worst affected by lower numbers of pollinators.

"Our new evidence of pollinator limitation is particularly valuable in comparison to previous analyses, because we specifically targeted larger commercial farms that represent the context for the majority of production," the study states.

The study concludes: "Given the evidence of widespread pollinator limitation, especially in tree fruits and blueberry, our results suggest that the adoption of practices that conserve or augment wild bees, such as wildflower enhancements and the use of alternative managed pollinators is likely to be successful for increasing yields."

<http://www.fruitnet.com/americafruit/article/1474/parts-of-san-diego-quarantined-as-psyllid-count-mounts>

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