

Explained: How climate change can help or hurt bananas

A new study has found that climate change has benefited bananas over the last several decades but predicted that the trend will reverse, with climate change eventually causing a negative impact. Bananas thrive in warmer climates, and India is the world's largest producer and consumer of the fruit crop. When the planet itself is warming, does it help or hamper production? A new study has found that climate change has benefited bananas over the last several decades but predicted that the trend will reverse, with climate change eventually causing a negative impact.



The findings

The study, led by Dr Dan Bebbler from the University of Exeter and co-authored by research fellow Dr Varun Varma, has been published in Nature Climate Change. They have studied both the recent and future impact of climate change on the world's leading banana producers and exporters. They found that 27 countries — accounting for 86 per cent of the world's dessert banana production — have on average seen increased crop yield since 1961 — by 1.37 tonnes/hectare every year — due to the changing climate resulting in more favourable growing conditions. In India, data from the National Horticulture Board show broadly consistent yields in six years leading up to 2016-17, when the provisional yield was 34 tonnes/hectare.

The study says the gains in these 27 countries could be significantly reduced by 2050 — to 1.19-0.59 tonnes/hectare — or disappear completely, if climate change continues at its expected rate. The study predicts that 10 countries — including India and the fourth largest producer, Brazil — could see a significant decline in crop yields. The study highlights, on the other hand, that some countries — including Ecuador (the largest exporter) and Honduras, as well as a number of African countries — may see an overall benefit in crop yields.

Why it matters

Bananas are recognised as the most important fruit crop, providing food, nutrition and income for millions in both rural and urban areas across the globe. In Britain, for example, more than five billion bananas are purchased each year, and the United Kingdom accounts for seven per cent of the global export market, the University of Exeter said in a statement.

BANANA YIELD IN INDIA (TONNES/HECTARE)	
2011-12	35.7
2012-13	34.2
2013-14	37.0
2014-15	35.5
2015-16	34.6
2016-17*	34.0

*Provisional
Source: National Horticulture Board



Such international trade can play a pivotal role to local and national economies in producing countries. For example, bananas and their derived products constitute the second largest agricultural export commodity of Ecuador and Costa Rica, the University statement said. “We’re very concerned about the impact of diseases like Fusarium Wilt on bananas, but

the impacts of climate change have been largely ignored. There will be winners and losers in coming years, and our study may stimulate vulnerable countries to prepare through investment in technologies like irrigation,” Dr Bebbber said in the statement. Dr Varma said: “An open exchange of ideas is going to be critical going forward. We believe practical solutions already exist, but these are scattered across banana producing countries. This knowledge exchange needs to start now to counteract predicted yield losses due to climate change.”

Source: [Indian Express, September, 05, 2019 \(verbatim reproduced\)](#)