

Decreased bee populations linked to 427,000+ deaths a year

SOURCE: Harvard T.H. Chan School of Public Health, news release, Dec. 14, 2022

Research from the Harvard T.H. Chan School of Public Health shows that bees matter more to human health than many might think, with lost crops of vegetables, fruits and legumes linked to an excess of 427,000 deaths a year, and loss of pollinators may affect global human health.

The negative impact of climate change on pollinators like bees is linked to a 3% to 5% loss of produce and nut production and an estimated 427,000 excess deaths each year from heart disease, stroke, diabetes and certain cancers, according to a study published in Environmental Health Perspectives.

"This study shows that doing too little to help pollinators does not just harm nature, but human health as well," said study author Matthew Smith.

Full story below from: HealthDay News (12/14); <https://consumer.healthday.com/bee-2658952559.html>

Loss of Bees Could Harm Health of Millions of People

By Cara Murez, Published on December 14, 2022

Key Takeaways

- Bees help crops grow, but if climate change continues to challenge them it could be bad for human health
- Inadequate pollination has triggered a 3% to 5% loss in produce and nut production, which is linked with an additional 427,000 deaths every year
- The health burden was heaviest in more developed countries, while the economic burden of lost crops was biggest in low-income countries

WEDNESDAY, Dec. 14, 2022 (HealthDay News) -- Bees, in their role as master pollinators, increase crop yields, leading to more production of healthy fruits, vegetables and nuts.

But new research claims that the challenges these important insects face from changes in land use, harmful pesticides and climate change is affecting food production, leading to less healthy food in global diets and more diseases causing excess deaths.

"A critical missing piece in the biodiversity discussion has been a lack of direct linkages to human health. This research establishes that loss of pollinators is already impacting health on a scale with other global health risk factors, such as prostate cancer or substance use disorders," said senior study author Samuel Myers. He is a principal research scientist of planetary health in the department of environmental health at the Harvard T.H. Chan School of Public Health, in Boston.

Inadequate pollination has led to a 3% to 5% loss of produce and nut production, according to the study. That is associated with an estimated 427,000 excess deaths annually from illnesses such as heart disease, stroke, diabetes and certain cancers, the researchers said.

A 1% to 2% annual decline of insect populations has led some to warn of an "insect apocalypse" that will come in the decades ahead. Pollinators would be part of that, seriously affecting healthy food supply because they increase the yields of three-fourths of crop varieties.

To study the issue, researchers used evidence from a network of hundreds of experimental farms across Asia, Africa, Europe and Latin America. The investigators looked at "pollinator yield gaps" for the most important pollinator-dependent crops, so they could determine how much crop loss was due to not having enough pollination.

The research team then used a global risk-disease model to estimate the health impacts the changes in pollination could have. They also calculated the loss of economic value from lost pollination in three case-study countries.

Lost food production was concentrated in lower-income countries, the findings showed. However, the health burden was largest in middle- and higher-income countries, where there is more non-communicable disease.

While typically health effects from climate change are centered among the poorest populations in regions such as South Asia and sub-Saharan Africa, in this case middle-income countries like China, India, Indonesia and Russia were most affected.

Lower-income countries also lost significant agricultural income because of these lower yields, potentially 10% to 30% of total agricultural value, the researchers found.

"The results might seem surprising, but they reflect the complex dynamics of factors behind food systems and human populations around the world. Only with this type of interdisciplinary modeling can we get a better fix on the magnitude and impact of the problem," study co-author Timothy Sulser, a senior scientist at the International Food Policy Research Institute, said in a Harvard news release.

The researchers noted that this isn't simply an environmental issue, but one that affects health and economics.

"This study shows that doing too little to help pollinators does not just harm nature, but human health as well," said lead author Matthew Smith, a research scientist in the department of environmental health at Harvard.

More information: The U.S. Department of Agriculture has more on pollinators.