

Scopus AI

The Scopus AI tool searches the Scopus database from 2013 until now. Scopus AI minimizes hallucinations by using Scopus content identified by the vector search. The answers are generated with references to the journals and documents used.

Natural language queries

Questions can be asked in a natural, dialogue-oriented way.

Summary with Scopus references

Scopus AI provides a summary with scientific references for each search.

What threat does climate change pose to coffee production?

Summary

Climate change poses a significant threat to coffee production, particularly in Central America . ¹ The impact of climate change on coffee production includes reduced yields, lower quality, and increased vulnerability to pests and diseases . ² The Intergovernmental Panel on Climate Change (IPCC) predicts that climate change will decrease worldwide coffee yields and reduce suitable land for coffee production by 2050 . ³ The changing climate imposes greater pressure on coffee production systems, which has direct consequences on the livelihoods of coffee producers . ⁴ To mitigate the effects of climate change on coffee production, adaptive measures such as altitudinal shifts, resilient cultivars, and altering agrochemical inputs are being explored . ² However, more research is needed to better understand the risks and threats posed by climate change and to develop timely adaptation and mitigation strategies . ⁴



References

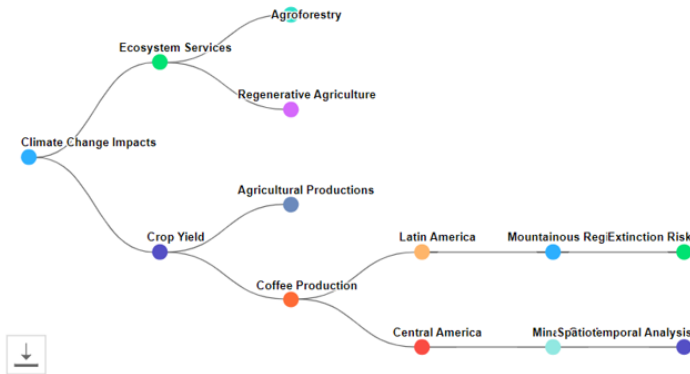
- ¹ Coffee and chocolate in danger
Gross M.
Current Biology ↗ 2014
- ² Opportunities for enhancing the climate resilience of coffee production through improved crop, soil and water management
Bracken P., Burgess P.J., Girkin N.T.
Agroecology and Sustainable Food Systems ↗ 2023
- ³ A Systematic Review on the Impacts of Climate Change on Coffee Agrosystems
Bilen C., El Chami D., Mereu V., (...), Spano D.
Plants ↗ 2023
- ⁴ Impact of climate change on coffee production
Guerrero-Carrera J., Jaramillo-Villanueva J.L., Mora-Rivera J., (...), Chulim-Estrella N.
Tropical and Subtropical Agroecosystems ↗ 2020

[Show all references](#)

Additional Features:

Concept Map (visual representation of entities)

Scopus AI provides a more complete picture of a topic and shows the relation to other research areas.



Expanded Summary (more comprehensive overview)

Scopus AI offers the possibility to receive a more comprehensive and in-depth response.

Expanded summary

Climate change poses several threats to coffee production, affecting plant growth, development, quality, and flavor. Here are the key findings from the relevant abstracts:

1. Climate change negatively affects coffee plant growth and development due to increased frequency of extreme climate events, such as drought and heat stress . [1](#) [2](#) [3](#)
2. Specific climate-related risks to coffee production include a reduction in suitable production areas, lower yields, increased pest and disease incidence, and changes in precipitation patterns . [1](#) [2](#) [4](#)
3. Climate change impacts coffee quality and flavor by reducing the optimal areas for coffee cultivation and increasing the distribution of pests and diseases that indirectly affect coffee production . [2](#)

Foundational papers

Scopus AI lists the most influential scientific papers on a specific topic

Foundational papers

The Impact of Climate Change on Indigenous Arabica Coffee (*Coffea arabica*): Predicting Future Trends and Identifying Priorities

A.P., Davis, Aaron P., T.W., Gole, Tadesse Woldemariam, S., Baena, Susana, J.F., Moat, Justin F.
PLoS ONE 2012

269
citations

Towards a climate change adaptation strategy for coffee communities and ecosystems in the Sierra Madre de Chiapas, Mexico

G., Schroth, Gotz, P.R., Läderach, Peter Roman, J., Dempewolf, Jan, (...), J., Ramírez-Villegas, Julián

Mitigation and Adaptation Strategies for Global Change 2009

152
citations

Topic Experts (academic expert search)

Scopus AI identifies the leading researchers on a topic and summarizes their work and contributions.

Topic Experts



Ramalho, José C. J.C.

| 3578 citations 5 matching documents 41 h-index

José C. Ramalho is an expert in the impact of climate change on coffee production, as evidenced by their research on the biochemical and molecular responses of coffee plants to supra-optimal temperatures and elevated CO₂, as well as their investigation into the effects of drought, warming, and high CO₂ on coffee in the context of future climate change scenarios.

Van Asten, Piet J.A. P.J.

| 2875 citations 3 matching documents 31 h-index

Piet J.A. Van Asten is an expert in the adaptation strategies of coffee production to climate change. Their work focuses on understanding the critical thresholds for global coffee production under climate change, the influence of vapour pressure deficit on coffee ripening, and the exploration of adaptation strategies for coffee production in the face of climate change using process-based models.

Deeper query explanation

Scopus AI offers additional queries to discover further unknown aspects of a topic.

↳ How does rising global temperatures affect the growth and yield of coffee plants?

↳ What are the specific climate-related factors that contribute to the spread of coffee diseases and pests?

↳ How does changing rainfall patterns impact the quality and flavor profile of coffee beans?