



ICAR-HS-CCARI-Concept-2023-085
CCARI/Certified Technologies/2023-7

HABITAT SUITABILITY MAPPING OF INVASIVE RUGOSE SPIRALLING WHITEFLY, *ALEURODICUS RUGIOPERCULATUS* IN COCONUT

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TECHNOLOGY DETAILS

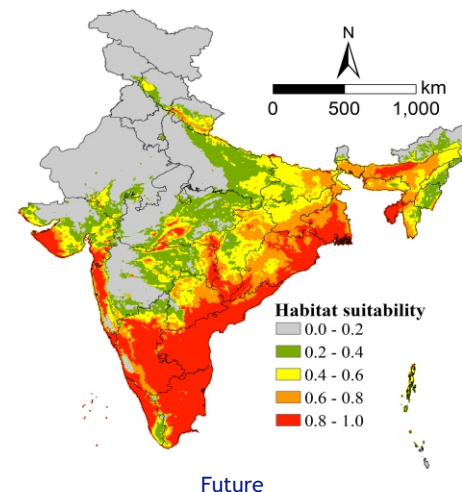
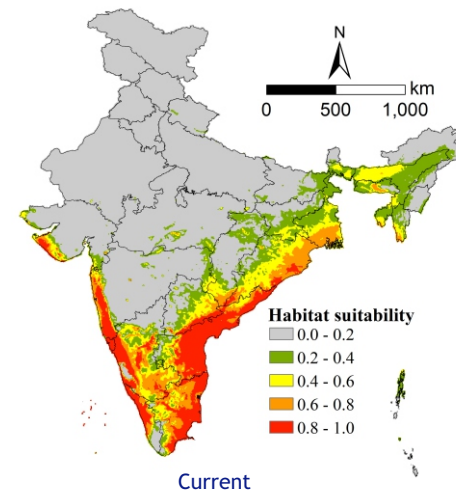
- Rugose spiraling whitefly (RSW), *Aleurodicus rugioperculatus* Martin is a recent invasive insect pests in India and the information on its potential distribution is lacking.
- The MaxEnt model performed well and predicted the potential distribution of *A. rugioperculatus* with high accuracy AUC values of 0.991 and 0.989, TSS of 0.891 and 0.842, CBI of 0.972 and 0.934 for training and testing, respectively.
- The most important bioclimatic variables for RSW distribution was annual mean temperature (Bio 1; 28.9%) followed by mean diurnal range (Bio 2: 19.5%) and annual precipitation (Bio 12: 19.1).
- Potential suitable areas for RSW establishment were mostly found in the entire coastal and southern states of India.

IMPACT

- Results of the current study would help in timely monitoring and surveillance of RSW and to formulate integrated pest management strategies at the national level to restrict its spread, invasion and damage to new areas.

PUBLICATION

- Maruthadurai, R., Das, B. and Ramesh, R. (2023) Predicting the invasion risk of rugose spiraling whitefly, *Aleurodicus rugioperculatus*, in India based on CMIP6 projections by MaxEnt. Pest Management Science. <https://doi.org/10.1002/ps.7199> (NAAS Score: 10.46)



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INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

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of

ICAR-Central Coastal Agricultural Research Institute
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has developed the technology

Habitat suitability mapping of
invasive rugose spiralling whitefly,
***Aleurodicus rugioperculatus* in coconut**

16th July, 2023
New Delhi

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