ICAR - Central Coastal Agricultural Research Institute
Old Goa, North Goa - 403402, Goa

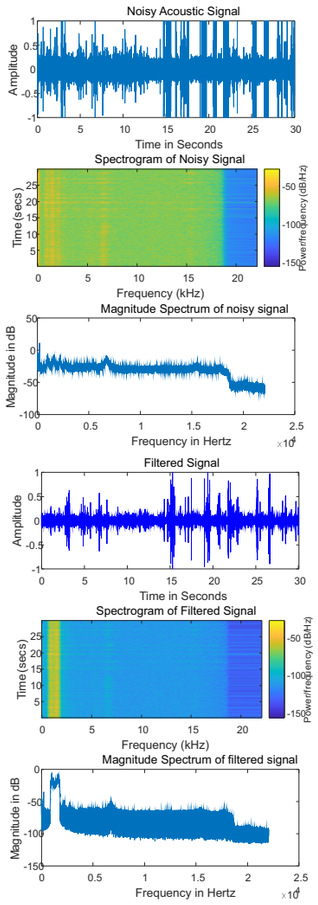
ICAR-HS-CCARI-Concept-2023-084
CCARI/Certified Technologies/2023-6

ACOUSTIC DETECTION OF STEM AND ROOT BORER *Neoplocaederus ferrugineus* (COLEOPTERA: CERAMBYCIDAE) INFESTATION IN CASHEW

Lead Developer : Dr.Maruthadurai R.
Associate Developers : T. Veerakumar

TECHNOLOGY DETAILS

- Standardized acoustic based early detection technique for stem and root borer *N. ferrugineus* infestation in cashew.
- The success rate of prediction is 90.3%, 96.67%, 96.15%, 96.67% and 100% in the first, second, third, fourth, and fifth instar, respectively.
- The detection performance of the acoustic device under field conditions shows that infested trees are correctly detected with 91% accuracy.



IMPACT

- Early detection enables to save the cashew trees around 70-75% from stem borer damage.
- The developed methodology or algorithm could be tested or modified for early detection of other wood borers and hidden insect pests on various agricultural and horticultural crops.

PUBLICATION

- **Maruthadurai R**, et al. 2022. Acoustic detection of stem and root borer Neoplocaederus ferrugineus (Coleoptera: Cerambycidae) in cashew. Journal of Asia Pacific Entomology. 25(3):101968. (NAAS Score: 7.58)

Website : ccari.icar.gov.in Ph : 0832-2993097 E-mail : director.ccari@icar.gov.in

ICAR-HS-CCARI-Concept-2023-084

भाकृअनुप
ICAR

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

Certified that

Dr. Maruthadurai. R
(Lead Developer)

Associate Developer
Dr. T. Veerakumar

of

ICAR-Central Coastal Agricultural Research Institute Goa

has developed the technology

Acoustic detection of stem and root borer Neoplocaederus ferrugineus (Coleoptera: Cerambycidae infestation in cashew

16th July, 2023
New Delhi

(Vishaw Bandhu Patel)
Assistant Director General (F&PC)

(Tilak Raj Sharma)
Deputy Director General (HS)