

Sharing Knowledge and Experiences

University of Kentucky – Nusa Cendana University

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A team at University of Kentucky, in collaboration with Nusa Cendana University, Kupang, Indonesia, held a student-centered workshop to introduce the concept of pathogen detection using combinations of molecular based detection, spore trapping, and in-field diagnostics, as well as outreach strategies for communicating with growers. This project was supported by APS-Office of International Program (OIP).

Indoor activities

Introduction of concepts, presentation of materials, and discussions (hybrid format – online & in-person participation)



Total of 60 participants (including over 50 students) participated in the two-day hybrid-format workshop followed by one-day in-field disease diagnostic training at Kupang, Indonesia on March 2023.

Topics included extension; plant disease and pathogen identification; molecular approaches to pathogen detection; spore trapping, & combinations of spore trapping & molecular detection.

Training on PCR primer design using open access sources was also conducted during the workshop.



Field activities

In-field diagnostics training and activities



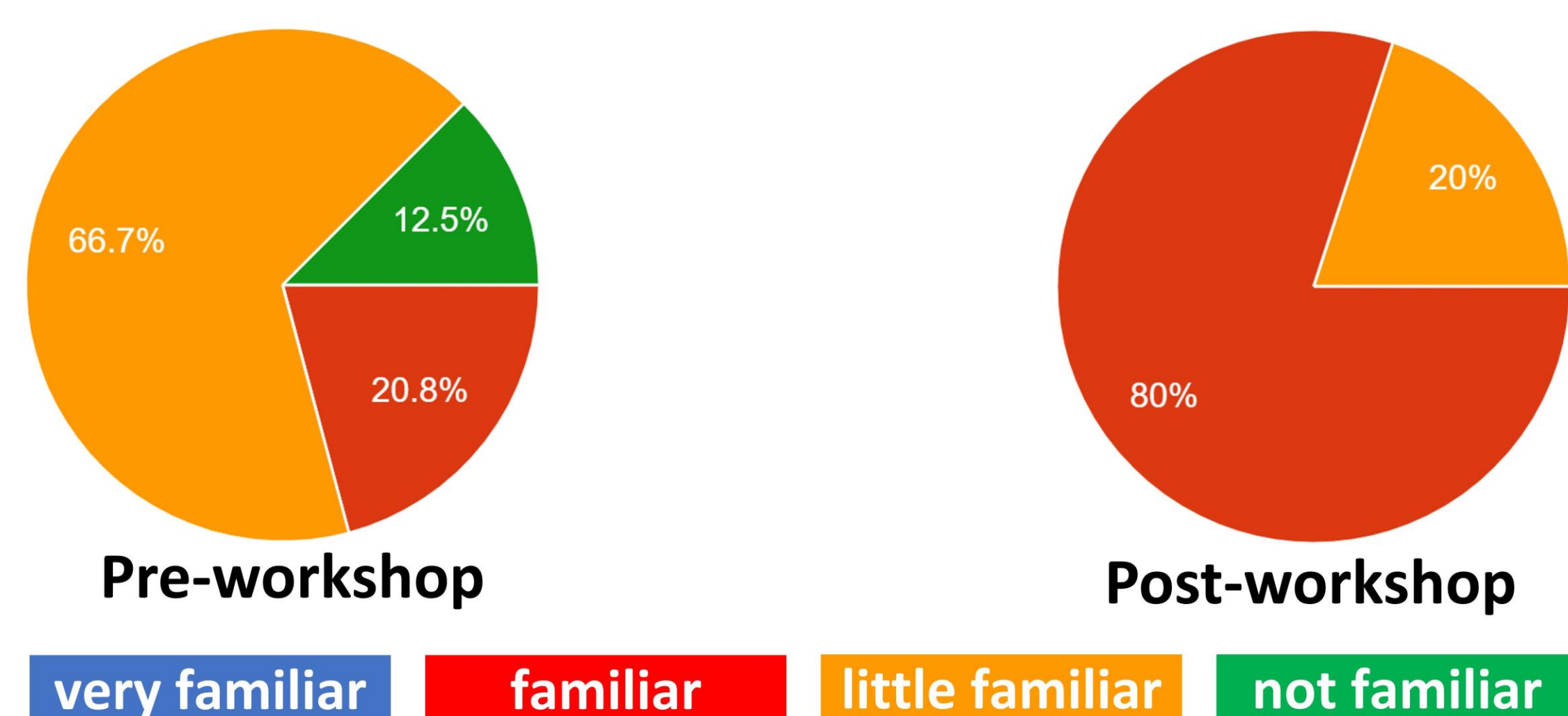
In-field disease diagnostic training took place at grower owned peanut-corn double cropping and papaya fields.

Participants were trained on how to recognize disease pattern and distinguish them from patterns caused by abiotic factors. They were shown how to use hand lenses to observe pathogen signs on symptomatic plants.

Pre- and post-workshop surveys on understanding and application, as well as general knowledge quizzes, were performed to measure knowledge transfer.



Survey of participants' knowledge and familiarity of the concepts & techniques of molecular-based pathogen identification and spore trapping.



Impact

Based on the survey, participants gained knowledge on materials and techniques offered in the workshop.

Student participants are future scientists, educators, and/or agriculture practitioners. As Indonesia's agricultural research is expanding to benefit from cutting-edge technologies, they may be in the position to provide services such as molecular diagnostics and grower outreach.

Adoption, implementation, and expanded research using concepts shared through this workshop can help Indonesian growers in accurate identification and early detection of pathogens, as well as disease management.

Survey of participants' knowledge and familiarity of in-field disease diagnostics: recognizing disease symptoms, patterns, and how it is different with injury due to mechanical, chemical, and stress.

