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African Women in Agricultural Research and Development

Profile

2018 AWARD Fellow
Arshni Sanjita Shandil

Position	Research Technician
Institution	Centre for Pacific Crops and Trees (CePaCT) Pacific Community
Country	Fiji
BSc	Environmental Studies, Auckland University of Technology, 2011
Mentor	Logotonu Waqainabete, Curator, CePaCT Pacific Community
Research Area	Tissue culture conservation of banana, bele, breadfruit, ginger, taro, sweet potato, yams and mass propagation of climate-ready crops for Pacific Island countries.

Shandil's research work involves the mass propagation of climate-ready crops for the Pacific Island countries and tissue culture conservation of banana, bele, breadfruit, ginger, taro, sweet potato, and yams.

Arshni Sanjita Shandil enjoys tackling the challenges that her research assignments at the Pacific Community's CePaCT bring. "I mainly work in the lab and screen house but would really love to work in the field," says the married mother of one. Shandil's research work involves the mass propagation of climate-ready crops for the Pacific Island countries and tissue culture conservation of banana, bele, breadfruit, ginger, taro, sweet potato, and yams.

One of her research highlights was a project on breadfruit, funded by the Australian Centre for International Agriculture Research (ACIAR). "The breadfruit tree has a thick stem that hardly gets destroyed—even if there is a hurricane, it survives. It will even give shoots from where it has fallen. It is a food security crop," she says. Shandil worked on the project, whose aim was to mass propagate breadfruit, using a bioreactor machine. "Mass propagation of breadfruit is challenging. It was a difficult process, but I was very happy that I achieved good results," she enthuses, noting that this success nourished her quest to pursue a career in agriculture.

The research technician has also studied all breadfruit varieties in the field, testing for beta carotene in raw and cooked form. "One variety has more beta carotene in both forms," she explains. "I prepared a fruiting calendar to help determine which varieties to select for all year, which resulted in a supply of breadfruit for food and nutrition security." By participating in international conferences in Australia and Trinidad and Tobago, Shandil has been able to share her breadfruit research findings.

"I will share all of this knowledge from AWARD with women researchers in my institution and in the Pacific region."

Shandil is one of a growing number of women agricultural scientists who have won an AWARD Fellowship. AWARD works toward inclusive, agriculture-driven prosperity for the African continent by strengthening the production and dissemination of more gender-responsive agricultural research and innovation. We invest in scientists, research institutions, and agribusinesses to deliver sustainable, gender-responsive agricultural research and innovation.

The AWARD Fellowship is a career-development program that invests in top women agricultural scientists to ensure that confident, capable, and influential women are available to lead critical advances and innovations in the agricultural sector.

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Shandil holds a postgraduate diploma in Climate Change from the University of the South Pacific and is currently enrolled at the same institution, pursuing a master's degree in Biology. For her thesis, she is studying drought tolerance in four sweet potato varieties from the Pacific Islands. "I am comparing the levels of soil moisture to determine which variety can survive with less water and be able to tolerate drought," she explains. "Sometimes, when you take the variety outside of the controlled environment, it may not do as well," she says, highlighting the limitations of the study. "I hope to develop my research further and take it to the field."

While conducting breadfruit research in the field, Shandil faced some challenges harvesting the fruits. "I find it difficult to ask for help because with limited staff, everyone is busy, so I struggled to reach the fruits on my own," she recalls. "I would harvest, cook, and test the fruit for beta carotene." To ensure the success of the experiments, Shandil has had to put in extra time. "When planting tissue culture crops in the screen house, you have to plant so many, sometimes you have to stay late to finish planting in two days to ensure that your experiment is not affected by time lag," she says. "My motivation was that I will present my findings at an international conference. This kept me going, despite the challenges." Shandil is grateful for the good family support that allows her to concentrate on her work. Her husband, who works at the University of the South Pacific, is able to take care of their son in her absence.

In addition to her research duties, Shandil is also passionate about information dissemination for research uptake. She has given a talk on a Hindi radio channel, sharing information on the new sweet potato varieties received by the Pacific Community. "I have trained both male and female farmers on how to transfer plants from tissue culture to the screen house," she shares. "I also train Pacific farmers on how to mass propagate tissue culture plants."

Shandil hopes to become a leader at her institution. "I want to gain more science skills and experience, learn to write winning proposals, and improve my interpersonal and communication skills," she states. "The AWARD Fellowship will enable me to gain more knowledge that will be an invaluable component of my career growth." She appreciates the training opportunities provided by the fellowship, and she has already identified which of her skills needs improvement. "I will share all of this knowledge from AWARD with women researchers in my institution and in the Pacific region," she promises.