

## Editorial

**The South Pacific Journal of Natural and Applied Sciences (SPJNAS)** is an international journal dedicated to the latest advancement of natural and applied sciences and provides a platform for scientists and academics in diverse areas of research.

**The University of the South Pacific (USP)** is the premier provider of tertiary education in the Pacific region and an international centre of excellence for teaching, research consulting and training on all aspects of Pacific culture, environment and human resource development needs. **SPJNAS** is USP's open access, peer-reviewed, multidisciplinary, scientific journal that publishes original research findings, review articles and short communications. The journal focuses on academic excellence, research rigidity, knowledge distribution, and reciprocated scholarly efforts in order to endorse theoretical, experimental and applied research at national and international levels, especially in the South Pacific region.

The present issue of **SPJNAS** contains two quality research papers on topics of both fundamental and applied interest and they are summarized below.

1. The first paper has evaluated the performance of improved sweet potato (*Ipomoea batatas* L.) cultivars under different soil types of Samoa. There has been need to diversify crop production in Samoa which currently depends mainly on taro crop, that has proved to be susceptible to fungus and other diseases, to as safeguard against risks of crop failures and adapt to climatic changes. The potential of introducing sweet potato as a second staple food in Samoa is explored in this study. The study has analysed the suitability of sweet potato cultivars in Samoan agro-environment and major soil types. The results revealed that soil type had a significant effect on vine growth, and storage root yield with the best yield obtained in the silty clay soils having high potassium (K) content. Retarded plant growth observed under the acidic soil having low K content resulted in lowest storage root yield. A significant varietal difference was recorded in sweet potato growth and yield. A follow-up field study is needed to verify the preliminary results under pot culture on different soil types of Samoa.

2. The second paper discusses the antibacterial and antifungal activities of essential oils (EOs) from medicinal plants found in the South Pacific. In the present study, the EO extracts from five medicinal plants showed inhibiting activities against all the tested bacteria (Gram-positive and Gram-negative) and fungi. *Salmonella typhi* bacteria (Gram-negative) were found to be very resistant despite increasing EOs concentration except for *Ocimum tenuiflorum* EO. The study reported a wide range of inhibitory activities on the tested fungi. The present investigation indicated that the selected EOs from medicinal plants showed effectiveness in inhibiting the growth of selected bacteria and fungi. Hence, selected essential oils (especially *O. tenuiflorum*) represent a potential alternative to eliminate microorganisms that can be harmful to human health, food and agricultural industries.

I hope that readers of **SPJNAS** will find these articles of great value. I would like to thank the authors for their contributions to this volume/issue of **SPJNAS**, and to acknowledge the kind cooperation of associate editors and the reviewers for their time, and in maintaining the high standard of the journal. I wish to acknowledge the continuing support of the Dean of the Faculty of the Science, Technology and Environment, Assoc. Prof. Anjeela Jokhan and Associate Dean, Research & Graduate Affairs, Prof. Sushil Kumar. I also thank Ms. Prayna Maharaj, for her

expertise in formatting all the papers, inserting corrections and preparing the table of contents, and Ms. Helen Malin (CSIRO Publishing), for her help in various ways.

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