



# **CTU** Journal of Innovation and Sustainable Development Can Tho University

ISSN 2588-1418 | e-ISSN 2815-6412



**Vol. 16, No. 2 (July 2024)**

# CTU Journal of Innovation and Sustainable Development

ISSN 2588-1418, e-ISSN 2815-6412

Vol. 16, No. 2 (July 2024)

## EDITORIAL BOARD

Editor-in-Chief

**Tran Ngoc Hai**

Deputy Editor-in-Chief

**Tran Thanh Dien**

Section Editors

**Nigel K. Downes** **Nguyen Chi Ngon**

*GIZ/CIM Integrated Expert* *Can Tho University, Viet Nam*

**Phan Trung Hien** **Nguyen Trong Ngu**

*Can Tho University, Viet Nam* *Can Tho University, Viet Nam*

**Nguyen Dac Khoa** **Ngo Thanh Phong**

*Can Tho University, Viet Nam* *Can Tho University, Viet Nam*

**Phan Dinh Khoi** **Nguyen Thanh Phuong**

*Can Tho University, Viet Nam* *Can Tho University, Viet Nam*

**Do Thanh Nghi** **Phuong Hoang Yen**

*Can Tho University, Viet Nam* *Can Tho University, Viet Nam*

Advisory Board

**Tetsu Ando** **Nguyen Nguyen Minh**

*Tokyo University of Agriculture and Technology, Japan* *CSIRO, Australia*

**Fu-Sung Chiang** **Pham Thi Hong Nhung**

*National Taiwan Ocean University, Taiwan* *University of Foreign Languages, Hue University, Viet Nam*

**Nguyen Ngoc Dien** **Kazufumi Osako**

*Hoa Sen University, Viet Nam* *Tokyo University of Marine Science and Technology, Japan*

**Le Quoc Hoi** **Yeong Yik Sung**

*National Economics University, Viet Nam* *Universiti Malaysia Terengganu, Malaysia*

**Atsushi Ishimatsu** **Yuji Tanaka**

*Nagasaki University, Japan* *Tokyo University of Marine Science and Technology, Japan*

**Samir Kumar Khanal** **Nguyen Thanh Thuy**

*University of Hawaii at Manoa, USA* *VNU University of Engineering and Technology, Viet Nam*

**Nguyen Ngoc Lam** **Tran Trung Tinh**

*Institute of Oceanography, Viet Nam* *Can Tho University, Viet Nam*

**Juan Boo Liang** **Nguyen Hieu Trung**

*Universiti Putra Malaysia, Malaysia* *Can Tho University, Viet Nam*

**Hoang Ngoc Long** **Tran Ngoc Tuan**

*Institute of Physics, VAST, Viet Nam* *Shantou University, China*

**Juan J. Loor**

*University of Illinois, United States*

## CONTENT

<p>Resistance of Citrus species (<i>Citrus</i> spp.) to the root lesion nematode <i>Pratylenchus</i> sp. <i>Le Thi Tu Anh, Nguyen Quoc Si, La Hoang Chau, and Nguyen Ba Phu</i>..... 1</p> <p>Determinants on green purchasing behavior of generation Y: Empirical evidence in Can Tho city <i>Ngo My Tran, Bui Thi Kim Thanh, and Tran Buu Hau</i>..... 10</p> <p>Effects of salt concentration and <i>Lactobacillus plantarum</i> population on grey oyster mushroom fermentation <i>Tong Thi Anh Ngoc, Nguyen Le Thanh Cao, Nguyen Le Thanh Bach, Nguyen Cam Tu, and Phan Nguyen Trang</i>..... 25</p> <p>International research outputs of Can Tho University: The first, the most, and the top <i>Tran Thi Ngoc Nhung, and Le Ngoc Linh</i>..... 32</p> <p>Impact assessment of empowering small-scale farmers through the Mag-Uma Kaupod ang Pamilya Extension (MUKaPE) Program of the DEBESMSCAT - Cawayan Campus <i>Jacob Frederick P. Velza, Roger Y. Ibañez, Jr, and Froilan D. Mobo</i>..... 42</p> <p>An entire fruit surface imaging system with the support of a mirror system and a flipping mechanism <i>Tran Nhut Thanh, Truong Minh Thuan, Huynh Cao Tan Toi, Pham Quoc Cong, Nguyen Chanh Nghiem, and Nguyen Chi Ngon</i>.. 57</p> <p>Can Tho University's research collaboration: A view from its publications <i>Tran Thi Ngoc Nhung, Pham Hoang Son, and Le Ngoc Linh</i> ..... 66</p> <p>Health risk assessment of heavy metals transfer from soil to <i>Celosia trigyna</i> and <i>Amaranthus viridis</i> along Lekki Peninsula, Lagos, Nigeria <i>Peter Sanjo Adewale</i>..... 75</p>	<p>Going beyond borders after a pandemic: Preparedness of teachers to embrace E-learning in a small Philippine university <i>Dyanika P. Nolasco, and Danisse Mae P. Hernandez</i>.....85</p> <p>The effects of implementing the flipped class model on non-English majored students' writing performance <i>Ho Bich Nhu, Nguyen Van Loi, Bui Phuong Thao, Nguyen Van Thong, and Nguyen Trung Cang</i>..... 96</p> <p>The art of classroom observation: The Case of Quirino State University and Can Tho University <i>Liriolyn B. Pacursa, Eduard P. Alip, Thi Phuong Thao-Do, and Trinh Chi Tham</i> ..... 105</p> <p>Evaluating the performance of Random Forest, Decision Tree, Support Vector Regression and Gradient Boosting for streamflow prediction <i>Osahon Idemudia, Jacob Odeh Ehiorobo, Osadolor Christopher Izinyon, and Idowu Rudolph Ilaboya</i> ..... 116</p> <p>Lesson study: A cross-cultural analysis between the Philippines and Viet Nam <i>Romiro G. Bautista, Wilfredo B. Baniqued, Huynh Thi Thuy Diem, and Mai Phuc Tinh</i>..... 131</p> <p>The application of Gene Function Markers for identification of high quality of Vietnamese traditional rice varieties <i>Huynh Ky, Pham An Tinh, Nguyen Van Manh, Pham Vo Thao Nguyen, Huynh Nhu Dien, and Le Thi Hong Thanh</i>..... 139</p> <p>Developments and antioxidant evaluation of <i>Sesbania sesban</i>-leaf-extract loaded carboxymethyl cellulose hydrogel as a potential skin cosmetic <i>Nguyen Thi Ngoc Phuong, Nguyen Doan Xuan Tien, Nguyen Ngoc Yen, Nguyen Quoc Chau Thanh, and Pham Duy Toan</i>..... 152</p>
--	---

## About the Journal

1. CTU Journal of Innovation and Sustainable Development, ISSN 2588-1418, e-ISSN 2815-6412 is published according to the publication license No. 233/GP.BTTTT dated July 10, 2023 granted by the Ministry of Information and Communications.
2. The Journal publishes original research articles and review articles on all aspects of Agricultural and Biological Sciences; Business, Management and Accounting; Engineering; Social Sciences; etc. The article has not been earlier published in any other journal and is not being considered for publication elsewhere.
3. Authors must follow the Journal's regulations and guidelines for preparing and submitting manuscripts at the website: [ctujs.ctu.edu.vn](http://ctujs.ctu.edu.vn)
4. The Journal frequently receives manuscripts. After the peer-review process in accordance with the Journal's regulations, the approved manuscripts are published in full text at the website: [ctujs.ctu.edu.vn](http://ctujs.ctu.edu.vn)
5. For further information and making a submission, please visit the Journal's website: [ctujs.ctu.edu.vn](http://ctujs.ctu.edu.vn)

---

### **CTU Journal of Innovation and Sustainable Development**

*Address: 4<sup>th</sup> floor, Can Tho University Administration Building  
Campus II, 3/2 street, Xuan Khanh ward, Ninh Kieu district, Can Tho city, Viet Nam  
Tel: (84-292) 3872 157; Email: [ctujoisd@ctu.edu.vn](mailto:ctujoisd@ctu.edu.vn)*



Not for sale

*Publication licence No. 233 dated July 10, 2023 granted by Ministry of Information and Communications.*

*Printed by Nhu Cuong Private Enterprise.*

*Address: No. 78, 30/4 street, An Phu ward, Ninh Kieu district, Can Tho city, Viet Nam*

*Volume: 200, size 19 x 26 cm, printed and registered in the third quarter of 2024.*



Address: 4<sup>th</sup> floor, Can Tho University Administration Building  
Campus II, 3/2 street, Xuan Khanh ward, Ninh Kieu district, Can Tho city, Viet Nam.