

Editorial - Volume 11, 2016

This is the eleventh Volume of the OUSL Journal, the Journal of the Open University of Sri Lanka which is published biannually. The articles published in this Volume include research based on physics, floriculture, agriculture, education, social and health sciences.

Lightning is an unexpected electrostatic discharge during an electric storm between electrically charged regions of a cloud (called intra-cloud lightning), or between two clouds (CC lightning), or between a cloud and the ground (CG lightning) or between ground and the cloud (GC lightning). When designing of aircrafts one must consider lightning. Studies of electromagnetic threat due to lightning strikes are important for the safety of an aircraft and its electronic devices. A research paper by Kajaluxshy and Thirukumaran titled “Two-Dimensional Free Space Mesh Generation for Cloud-to-Ground Lightning Simulation using Finite Difference Method” considers the Cloud-to-Ground lightning flash. This paper presents generating a two-dimensional mesh in free space scenario using finite difference method for producing the potential and electric field distribution of the Cloud-to-Ground lightning flash.

Educational environment directly influences the learning process and allows the students to pay more attention on learning. A research study by Youhasan and Sathaananthan assesses the medical and nursing students' perceptions on the educational environment at the Faculty of Health-Care Sciences, Eastern University, Sri Lanka (FHCS, EUSL). The study reveals that, both groups of students perceived the learning environment at FHCS, EUSL was more positive than negative but that a proper supportive system needs to be developed for the students who get stressed or bored with courses.

Temperature stress due to the global warming is a major concern for plant scientists worldwide. Changes in climate may have an impact on agriculture and consequently affect the world's food supply. Dishani and De Silva, in their article titled “Effect of Simulated Temperature and Water Stress on Growth, Physiological and Yield Parameters of Tomato Grown with Mulch” compare the growth, yield

and quality parameters of Tomato (*solanum lycopersicum*) variety Thilina grown with mulch when subjected to temperature and water stress. It was found that, there is a significant effect of mulch on growth parameters of Tomato plants exposed to water and temperature stresses. Higher temperature treatments with saw dust mulch showed significantly higher plant height. The water stress resulted in significant decreases in chlorophyll content and the leaf relative water content. There is a significant effect of water and temperature on yield parameters such as fruit weight, fruit yield *etc.* Thus, tomatoes could be cultivated in green houses at optimum temperature using mulches such as saw dust and coir dust.

A recent Labour Survey indicates female labour force participation as 34.7% and a large portion of the working women are within the child bearing age. Sunethra Goonetilleke in her paper titled “Maternity Legislation in Sri Lanka; Are Women Equal, Special or Different?” critically analyzes and compares the laws governing maternity benefits in Sri Lanka, particularly focusing on the public-private divide, in order to uncover the foundations on which these laws are built. The aspects studied are maternity leave, pay, nursing intervals, job security, health and safety of mother and child, paternity benefits and crèche facilities. It was found that each law dealing with maternity benefits reflects a different legislative intention so that the maternity laws taken as a whole, lack uniformity and thereby unjust to employees of different sectors on no justifiable ground.

Total, partial, supraglottic, and hemi-laryngectomy are the four main types of laryngectomies. Total laryngectomy is a surgical removal of larynx and surrounding structures and it causes the loss of voice. Cancer of the larynx is the most common cause for total laryngectomy. Loss of voice creates emotional and social changes that may result in withdrawal symptoms and depression. The reactions of others persons in society also have a significant impact on these patients’ day-to-day life. Rathnayaka *et al* in their research paper titled “Life with Lost Voice: An Exploration of the Experiences of Patients with Total Laryngectomy” explore the experiences of patients with Laryngectomy among the members of Laryngectomies’ Association of National Hospital of Sri Lanka (NHSL). The findings

revealed that the patients with laryngectomy faced major changes in their lifestyle due to altered airway such as loss of voice, body image concerns, and challenges with eating and communicating.

Climatic changes influence the severity of environmental stress imposed on vegetable crops. Extreme climatic conditions cause negative impact on soil fertility and increase soil erosion. Gunawardena and De Silva in their research paper examine the effects of temperature and water stress on tomato (*Lycopersicon esculantum*) Var. Rajitha. The findings suggest that the temperature stress made the fruits crack and have low moisture content which led to disease attacks and low marketable value for the fruits. Disease outbreak is also heavier in high temperature stress conditions. Therefore, Tomato variety Rajitha could not be a successful open field crop in the dry zone of Sri Lanka, but tomato could be cultivated under green house by providing adequate water and required kind of soil temperature, and management practices.

Kalpna Ambepitiya in her research paper titled “Employability of Graduates of Public and Private Management Education Institutes: A Case Study of Two Institutes in Sri Lanka” investigates the degree of employability of graduates in the public and private sector higher education institutes which offer Management degree programmes. It was found that, academic knowledge, soft, practical and technical skill development are the major factors that prepare an undergraduate for future employment. Salaries, career growth, qualification requirement, relevance to the field of study and family wellbeing are the top most important incentives of private sector employees, but, job security, pension, family wellbeing, travelling distance, time saving and freedom are the main concerns of public sector employees

Weerahewa and Somapala, in a review article, examine the role of silicon on enhancing disease resistance in tropical fruits and vegetables. Silicon is taken up by plants at concentrations similar to the essential nutrients. The beneficial effects of silicon are enhanced insect and disease resistance, reduced mineral toxicity, increased photosynthetic activity, superior nutrient imbalance, and enhanced drought and frost tolerance.

We welcome your suggestions for further improvement of this journal. We look forward to publishing your current research findings in our next volume.

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