

Role of Plants to Restore Nature and to Increase Food Productions Simultaneously

Chandrika Nanayakkara 



Department of Plant Sciences, University of Colombo, Colombo 03, Sri Lanka

*Corresponding author's email address: chandi@pts.cmb.ac.lk

Summary: This editorial writing gives the reader(s) insights of some of our last issue's published works, what the authors mentioned and what significance they provide. Moreover, this writing gives the audience(s) some of recent information that how plants play role to restore our nature and to make foods for the people. The plants from terrestrial to ocean here tried to mention to sink CO₂, which is considered as a major factor for increasing world temperature. Hopefully, the witting will help reader(s) about the journal's last issue in a brief along with the main theme of this editorial.

Author's Role: Editor-in-Chief, Plants and Ecosystem.

The current world is facing problems related to climate change which would create a substantial crisis in the food production system in the future (1). Not only changing pattern of climate is an only precursor for this situation, but also the increasing population. Many regions of the world have already witnessed how the overcrowded populations surge the many other problems associated with climate change, greenhouse effect for example (2). As the population increase, the land area with plants decreases to support the additional amount of population to provide food and shelter mainly (3). Thus, the degradation of nature and the food crisis are most probably due to the outcomes of plants diminishing abruptly (4). Now researchers are trying to develop the ideas to set up activities to save the nature as well as to solve the upcoming food crisis. They are developing new strategies or techniques to increase plants or plants derived foods through advanced and alternative farming approaches (5,6). Recently, Khatun et al. reported that onion can be produced hydroponically

where there are several possibilities to use the methods as environment-friendly (7). They used several types of supporting media, environment-friendly inert materials, to produce onion without using soil that would be an indicative way for many nations where huge lands needed to produce onion. Besides, satellite-associated remote sensing in the crop fields to monitor crop yielding is a good example of technological advancement which can maximize productivity without affecting the fields (8). Even, the use of artificial intelligence in monitoring crop fields and hydroponic production system can ensure the proper fertilizer or nutrient utilization, which is considered as one of the reasons to degrade other farm fields nearby (9). Moreover, plants, seaweeds mostly in the ocean, act as a sink of CO₂ which is identified as the main cause for greenhouse effects in the earth's atmosphere (10).

Hopefully, in the future plants will play a vital role at the policy level by most of the nations because of international organizations rising awareness towards the necessity of plants for the world. Scientists will develop more techniques that will provide food and at the same time will remove hazardous chemicals from the environment (11). Many barren lands, destructing forests, and degraded ecosystems will be green again with the help of the advancement of plant sciences. Terrestrial to aquatic everywhere plants will be a game-changer to abate environmental degradation and to increase productivity. Already scientists emphasized that plants and their photosynthetic capacity can solve most of the current environmental problems directly or indirectly (12).

In conclusion, future research on all areas of plant science will embrace the positive aspects of



restoring nature along with increasing food productions. Therefore, to restore nature as well as to solve the food crisis, plants have unavoidable significance.

REFERENCES

1. Curtin TRC. Climate change and food production. *Energy & Environment*. 2009;20(7):1099-1116. **[doi]**
2. Smirnov BM, Zhilyaev DA. Greenhouse effect in the standard atmosphere. *Foundations*. 2021;1:184–199. **[doi]**
3. Yu W, Liu J, Zhu M, Yuan Y. Study on the status of urbanization development and the change of cultivated land area in Nanjing. *Journal of Quantum Computing*. 2020;2(3):129-135. **[doi]**
4. Archana MK. Impact of deforestation on climate change. *IOSR-JESTFT*. 2013;4(2):24-28.
5. Khatun I, Das SK, Hossen R. Assessment of germination and feasibility of hydroponic growth of onion by four common water sources from Barishal region, Bangladesh. *Fmg & Mngmt*. 2019;4(2):82-86. **[doi]**
6. Khatun I, Karim S, Das SK, Hossen R. Onion cultivation approach by custom-made outdoor hydroponics: A very first attempt in Bangladesh. *Journal of Aridland Agriculture*. 2021;7:48-51. **[doi]**
7. Khatun I, Haider I, Das SK, Hossen R. Performance test of three supporting media during outdoor hydroponic farming of onion. *Plants and Ecosystem*. 2021;1:3-8. **[doi]**
8. Andrianto H, Suhardi, Faizal A. Development of smart greenhouse system for hydroponic agriculture. *Information Technology Systems and Innovation International Conference*. 2020; pp. 335-40. **[doi]**
9. Alanagh EN, Garoosi G, Haddad R, Maleki S, Landín M, Gallego PP. Design of tissue culture media for efficient *Prunus* rootstock micropropagation using artificial intelligence models. *Plant Cell Tissue Organ Cult*. 2014;117:349–59. **[doi]**
10. Vaughan A. Tropical forests may stop absorbing CO₂. *The New Scientist*. 2020;245(3273):14. **[doi]**
11. Hoffmann J, Berni R, Hausman JF, Guerriero G. A review on the beneficial role of silicon against salinity in non-accumulator crops: Tomato as a model. *Biomolecules*. 2020;10(9):1-15. **[doi]**
12. Khan AM, Obaid M, Sultana R. Production of bio-diesel from marine algae to mitigate environmental pollution. *J Chem Soc Pak*. 2015;37(3):612-620.

ARTICLE HISTORY

Received: 30 Mar 2022, **Published:** 16 Apr 2022

TO CITE THIS ARTICLE

Nanayakkara C. Role of plants to restore nature and to increase food productions simultaneously. *Plants and Ecosystem*. 2022;2:1-2.