International Scholars Journals

Global Journal of Plant and Soil Sciences ISSN 2756-3626 Vol. 6 (4), pp. 001-002, December, 2022.
Available Online at www.internationalscholarsjournals.com © International Scholars Journals

Opinon Article

Impact of physiological factors on crop production

Rinah David*

Department of Land Economy, University of Cambridge, England, UK.

Received: 28-Nov-2022, Manuscript No. AAB-22-88138; Editor assigned: 30-Nov-2022, Pre QC No: AAB-22-88138 (PQ); Reviewed: 15-Dec-2022, QC No: AAB-22-88138; Revised: 22-Dec-2022, Manuscript No: AAB-22-88138 (R); Published: 29-Dec-2022

ABOUT THE STUDY

Several crop physiologists investigate specific plant cells. Some focus on certain plant components like leaves, stems, or roots. Others investigate how plants interact with their environment. Crop physiologists study how plants adapt to their changing environment and what factors influence their growth. Because they transform solar energy into chemical energy that humanity can consume, plants allow life on Earth. Photosynthesis is that process. For food, fibre, medications, and a vast range of natural compounds, we all depend on plant products. Crop cultivation involves a number of tasks that farmers complete throughout duration. When you cultivate attractive plants indoors, you might find that these tasks are similar to those performed by a gardeners or even by you. To improve plant yield, it is essential to comprehend crop growth, which can be done through the study of crop physiology. To make the book as comprehensive and widely focused as feasible, Physiology of Crop Production includes a wide range essential data and resources from various parts of the world. For plant physiologists, soil and crop scientists, breeders, agronomists, agronomy administration in the agro-industry, educators, and upper-level undergraduate and graduate students, Physiology of Crop Production is a crucial desktop resource. Crop simulation models, which have been updated to include new information on soils, crop physiology, and atmospheric processes, continue to be effective tools for integrating understanding of the various processes that contribute to the formation and manifestation of yield.

Climate change

The main crop plants remain to be drought-sensitive. Since decades, we have been breeding for plants that are more drought-tolerant and we are familiar with many of the mechanisms at play. However, the climate is shifting. The weather is changing more frequently. Requirements for the manufacturing of food, fibre, and energy are also increasing.

Efficient water and nutrient use

For each and every two pounds of grain produced by our main crop plants, 250 to 530 gallons of water are used. (That much water is equivalent to nearly 20 loads of washing) We might be able to breed plants that are more productive if we understand how plants use water. The majority of the nutrients that plants need come from the soil. Plants that use fertilizers more effectively may be bred by paying attention to how their root systems interact with the soil.

Lack of new cropland

As the population grows, there is less land available for growing food and fibre. We must make better use of the lands we already have. Crop physiologists are trying to figure out why some plants are more productive per acre because they are more efficient. We can harvest more and more nutritious crops if we plant the crops that are most productive at using water, nutrients, and solar energy.

Soil biology

There is essentially little knowledge on how plants interact with beneficial soil microbes. Plants can benefit from the assistance of soil bacteria in obtaining nutrients, fighting off illnesses, and even producing substances that stimulate growth. Understanding how this occurs could help scientists develop crop plants that collaborate more closely with soil bacteria. Farmers may need to use fewer fertilisers and pesticides while yet getting higher harvests thanks to this. Visit our blog to learn how to avoid plant diseases.

*Corresponding author. Rinah David
Email: rinahs01@yahoo.com