

# AVINASH AGARWAL

PLANT BIOLOGIST



## PERSONAL PROFILE

I am a 28 year old plant biologist with four years of research experience in the field of indoor cultivation under LED lighting and plant health assessment through leaf image analysis. I am a plant lover and relish planting seeds and watching them grow.

## CONTACT

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## SKILLS

- Morphological and physiological evaluation of seedlings.
- Real-time evaluation of plant health status by leaf image analysis.
- Designing and optimization of LED lighting systems for improving growth and nutritive quality of microgreens.
- Well-acquainted with programming languages including Matlab.
- Adept at performing statistical analyses including multivariate data analysis.
- Documentation of data and report writing.

## EDUCATION

- B.Tech in Biotechnology, 2012  
West Bengal University of Technology, India
- M.Tech in Agricultural Biotechnology, 2015  
Indian Institute of Technology Kharagpur, India
- PhD in Agricultural Biotechnology, (final year), Indian Institute of Technology Kharagpur, India

# RESPONSIBILITIES AS A SENIOR RESEARCH FELLOW

- Maintenance of plant populations under different LED lighting systems.
- Conducting routine experiments for quantitative and qualitative evaluation of plants under different growth conditions.
- Mentoring undergraduate and post-graduate students in their research projects.
- Documentation of work progress and periodic submission of reports.

## PUBLICATIONS

- Agarwal, A., Dutta Gupta, S., Barman, M., Mitra, A. (2018) Photosynthetic apparatus plays a central role in photosensitive physiological acclimations affecting spinach (*Spinacia oleracea* L.) growth in response to blue and red photon flux ratios. *Environmental and Experimental Botany*, 156, 170-182.
- Agarwal, A., Dutta Gupta, S. (2018) Assessment of spinach seedling health status and chlorophyll content by multivariate data analysis and multiple linear regression of leaf image features. *Computers and Electronics in Agriculture*, 152, 281-289.
- Dutta Gupta, S., Agarwal, A., Pradhan, S. (2018) Phytostimulatory effect of silver nanoparticles (AgNPs) on rice seedling growth: An insight from antioxidative enzyme activities and gene expression patterns. *Ecotoxicology and Environmental Safety*, 161, 624-633.
- Dutta Gupta, S., Agarwal, A. (2017) Artificial lighting system for plant growth and development: Chronological advancement, working principles, and comparative assessment. In: Dutta Gupta, S. (Ed.), *Light emitting diodes for agriculture*. Springer, Singapore, pp. 1-25.
- Dutta Gupta, S., Agarwal, A. (2017) Influence of LED lighting on in vitro plant regeneration and associated cellular redox balance. In: Dutta Gupta, S. (Ed.), *Light emitting diodes for agriculture*. Springer, Singapore, pp. 273-303.
- Agarwal, A., Dutta Gupta, S. (2016) Impact of light-emitting diodes (LEDs) and its potential on plant growth and development in controlled-environment plant production system. *Current Biotechnology*, 5, 28-43.

## AM I THE RIGHT GUY ?

I am an easy-going and fun loving person. I love working in groups, but am ready to handle situations solo if need be. I feel that a balance between hard work and smart work can help me achieve any goal. I am ready to learn and adapt, I believe in commitment, to work, to family, and to the community at large.

The growing concept of plant-factories and urban-farming is very enticing for me. I have always wanted a job where I am surrounded by the smile of thriving plants. It will be a dream-come-true if I get to work in a plant production company such as yours.