

Debalina Saha

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Education

Doctor of Philosophy – Horticultural Sciences: Environmental Horticulture 2015 – present

University of Florida; U.S.

Dissertation: Effect of Herbicide- Mulch Combinations on Weed Control, Phytotoxicity, and Herbicide Persistence and Movement in Landscape Planting Beds and Container Nursery Production.

Chair: Dr. S. Christopher Marble

GPA: 3.92/4.0

Bachelor of Education 2013

Bangalore University; India.

Master of Science – Botany 2011

University of Calcutta; India.

Thesis: Establishment of *Agrobacterium* mediated transformation in *Solanum tuberosum*.

Chair: Dr. Karabi Dutta

GPA: 4.823/5.0

Bachelor of Science – Botany (Honors), 2009

Presidency College, University of Calcutta; India.

Work Experience

Graduate Research Assistant; August 2015 – present

Department of Environmental Horticulture, Dr. S. Christopher Marble; Mid-Florida Research and Education Center, University of Florida, Apopka, FL.

Being a Research Assistant, my duties and responsibilities involve:

- Conducting various experiments in the greenhouses, laboratory, and fields for determining the effects of different herbicides on the weed species in the ornamental crop production for nurseries and landscape industries.
- Conducting herbicide trials for the agrichemical companies such as BAYER, OH2, and Syngenta etc.
- Collecting data and analyzing data by various statistical programming tool (SAS 9.4, R, JMP programmings).
- Preparing manuscripts for both peer-reviewed journals and extension journals.
- Analyzing and summarizing data and reporting them in different scientific reports, journals, and oral presentations.

Graduate Teaching Assistant; January 2017- April 2017

Department of Environmental Horticulture, Dr. Brian J. Pearson; Mid-Florida Research and Education Center, University of Florida, Apopka, FL.

I have worked as a Teaching Assistant for the course ORH 4236C/HOS 6932 (Ornamental Landscape Management) which was a both undergraduate and graduate level course and consisted of 35 students (spring 2017).

My responsibilities included:

- **Developing course lectures/ modules:** I have developed a completely new lecture set called, "**Weed Management in Landscapes**" for the Ornamental Landscape Management, spring 2017. This lecture focused on strategies to control weeds in landscapes, concepts of different herbicides, how weeds can develop herbicide resistance, strategies to overcome herbicide resistance, how to read herbicide label, and important information on the personal protection equipment (PPE). I have prepared the entire content of the lecture and presented to the class.
- **Preparing rubric for the assignments:** Based on different teaching objectives, I have developed various rubrics for homework assignments, scholar's ignite (two minute lightning presentation based on a single PowerPoint slide), and challenge question assignments.
- **Grading students:** Grade various assignments based on the teaching objectives and rubrics.

Subject Matter Expert/ Content Developer in Biology; April 2014 – September 2014

Fitkids Education and Training Private Ltd, Bangalore, India.

Being a Subject Matter Expert, my duties involved:

- To work on end-to-end experiment designs in Biology for STEM programs.
- Work on internal testing of the experiments in the field of Microbiology, Botany, Anatomy, Ecology, Zoology, Biochemistry and other major sections of Biology.
- To investigate and test different parameters of experiments to bring into new variations and to know the underline principles and laws.
- Critically analyze and prepare reports for the experiments.

Graduate Research Assistant; January 2011 – July 2011

Department of Botany, Dr. Karabi Dutta, University of Calcutta, Kolkata, India.

As a Graduate Research Assistant, I worked at the Plant Molecular and Biotechnology Lab over a project where my duties and responsibilities included:

- Confirming *Agrobacterium* strain containing the plasmid vector pCAMBIA 1301 by isolating the plasmid pCAMBIA 1301 followed by restriction digestion and finally amplification (PCR) of the GUS gene from pCAMBIA 1301.
- Establishing *Agrobacterium* mediated transformation in potato plant, which involved media formulation, multiplication of potato plantlets, pre-conditioning of ex-plants, culturing and sub-culturing of *Agrobacterium* followed by centrifugation, inoculation of the pre-conditioned explants and transferring to selective media.
- Studying the average percentage of expected transformed plants obtained from the *Agrobacterium* inoculated ex-plants.

Achievements, Honors and Awards

- **International Plant Propagator's Society Graduate Research Competition –1st Place, 2017**

This award of **\$1000** is awarded by International Plant Propagator's Society to the graduate students for their oral presentations at the graduate research competition.

- **International Plant Propagator's Society Travel Grant Recipient – 2017**

This travel award of **\$500** is granted to students presenting their research papers at the International Plant Propagator's Society graduate research competition for their travel expenses.

- **Outstanding Graduate Student Oral Presentation by Florida Academy of Sciences-2017**

The Florida Academy of Sciences gives this award to the graduate student for the outstanding oral presentation at their annual conference.

- **Dr. Elizabeth A. Hays Travel Award by Florida Academy of Sciences Inc.- 2017**

This travel award of \$100 is given to students presenting an oral presentation at the Florida Academy of Sciences to support their travel expenses.

- **International Plant Propagator's Society Graduate Research Competition –2nd Place, 2016**

This award of \$500 is awarded by International Plant Propagator's Society to the graduate students for their oral presentations at the graduate research competition.

- **International Plant Propagator's Society Travel Grant Recipient – 2016**

This travel award of \$500 is granted to students presenting their research papers at the International Plant Propagator's Society graduate research competition for their travel expenses.

- **Outstanding Academic Achievement Award, University of Florida International Center, University of Florida – 2016**

This is awarded to the outstanding international students for maintaining overall GPA 4.0 at the University of Florida.

- **Order of Merit – 3rd Place in Master of Science (Botany), University of Calcutta – 2011**

This award is given to **top three** students of University of Calcutta for maintaining the highest GPA in the Master of Science Degree program

- **Order of Merit – 7th Place in Bachelor of Science (Botany Honors), University of Calcutta-2009**

This award is given to **top ten** students of University of Calcutta for maintaining the highest percentage in the Bachelor of Science (Honors) Degree program.

Fellowships and Scholarships

- **William C. and Bertha M. Cornett Fellowship by College of Agricultural and Life Sciences, University of Florida – 2017**
This fellowship of \$1,500 is awarded to graduate students for maintaining high academic excellence by the College of Agricultural and Life Sciences, University of Florida.
- **L. Russell Norton Memorial Fellowship by Dade County AGRI Council, Inc.- 2017**
This fellowship of \$400 is awarded to full-time graduate students conducting research on problems relating directly to the agriculture of the Miami Dade county area, Florida.
- **International Plant Propagator’s Society Vivian Munday Scholarship – 2016**
This scholarship is awarded to young horticultural professionals for serving and assisting hands on work at the International Plant Propagator’s Society annual meeting.

Peer-reviewed Publication

Saha, D., C. Marble, C. Stewart, and A. Chandler. 2017. Preemergence and postemergence control of Artillery weed (*Pilea microphylla*) in container nurseries and landscapes. *Weed Technology* 31(4): 574-581.

Extension Publications

Saha, D., C. Marble, R.H. Stamps, S. Steed, and N.S. Boyd. 2016. Biology and management of ragweed parthenium (*Parthenium hysterophorus* L.) in ornamental crop production, ENH 1270. University of Florida Institute of Food and Agricultural Sciences EDIS.

Saha, D., C. Marble, S. Steed, and N.S. Boyd. 2016. Biology and management of *Pilea microphylla* (Artillery weed) in ornamental crop production, ENH 1272. University of Florida Institute of Food and Agricultural Sciences EDIS.

Proceedings Publications

Saha, D., C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, D. Odero, A. Chandler. 2017. Mulching for weed control: Influence of type, depth, herbicide formulation and activation irrigation level on germination and growth of three container nursery weed species. *Proceedings of International Plant Propagator’s Society Southern Region. (In Press)*

Saha, D., C. Marble, N.S. Boyd, and S. Steed. 2016. Impacts of preemergence herbicide formulation on cost and weed control efficacy for container nursery crop production. Proceedings of International Plant Propagator's Society Southern Region. (*In press*)

Abstracts

Saha, D., C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, and D. Otero. 2017. Effects of mulch depth, herbicide formulation, and activation moisture on weed control in landscape planting beds. The Center for Landscape Conservation and Ecology Urban Landscape Summit. Gainesville, FL.

Saha, D., S.C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, and D. Otero. 2017. Assessing herbicide formulation, mulch depth, and activation moisture on weed control in landscape planting beds. Florida Scientist 80 (1): 2.

Saha, D., S.C. Marble, C. Stewart, and A. Chandler. 2017. Preemergence and postemergence control of Artillery weed (*Pilea microphylla*) in container nurseries and landscapes. Florida Weed Science Society Conference. Haines City, FL.

Saha, D., C. Marble, B.J. Pearson, G.E. MacDonald, D. Otero, and H.E. Perez. 2017. Impact of herbicide formulation, mulch depth and activation moisture on weed control efficacy in landscape planting beds. Northeastern Weed Science Society of America Conference. Philadelphia, PA.

Oral Presentations

Saha, D., C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, D. Otero, A. Chandler. 2017. Mulching for weed control: Influence of type, depth, herbicide formulation and activation irrigation level on germination and growth of three container nursery weed species. International Plant Propagator's Society (Southern Region) Conference. Dallas, TX. Oct. 28- Nov.1

- Student Oral Presentation Award- 1st Place

Saha, D., S.C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, and D. Otero. 2017. Assessing herbicide formulation, mulch depth, and activation moisture on weed control in landscape planting beds. Florida Academy of Sciences. Lakeland, FL. March. 10-11.

- Outstanding Graduate Student Oral Presentation Award

Saha, D., S.C. Marble, C. Stewart, and A. Chandler. 2017. Preemergence and postemergence control of Artillery weed (*Pilea microphylla*) in container nurseries and landscapes. Florida Weed Science Society Conference. Haines City, FL. March. 6-7.

Saha, D., C. Marble, B.J. Pearson, G.E. MacDonald, D. Otero, and H.E. Perez. 2017. Impact of herbicide formulation, mulch depth and activation moisture on weed control efficacy in landscape planting beds. Northeastern Weed Science Society of America Conference. Philadelphia, PA. Jan. 3-6.

Saha, D., C. Marble, N.S. Boyd, and S. Steed. 2016. Impacts of preemergence herbicide formulation on cost and weed control efficacy for container nursery crop production. International Plant Propagator's Society (Southern Region) Conference. Virginia, VA. Oct. 22-26.

- Student Oral Presentation Award – 2nd Place

Poster Presentations

Saha, D., C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, D. Otero, A. Chandler. 2017. Weed seed germination and growth response to physical properties of commonly used landscape and nursery mulches. International Plant Propagator's Society (Southern Region). Dallas, TX. Oct. 28- Nov.1.

Saha, D., C. Marble, B.J. Pearson, H.E. Perez, G.E. MacDonald, and D. Otero. 2017. Effects of mulch depth, herbicide formulation, and activation moisture on weed control in landscape planting beds. The Center for Landscape Conservation and Ecology Urban Landscape Summit. Gainesville, FL. March. 16-17.

Marble, S.C., **D. Saha**, C. Stewart, and A. Chandler. 2017. Efficacy of five granular preemergence herbicides as influenced by five different seeding intervals before and after application. Northeastern Weed Science Society of America Conference. Philadelphia, PA. Jan. 3-6.

Funded Grant Proposals

Marble, S.C., and **D. Saha**. 2016. Assessing the impact of herbicide formulation, mulch depth, and activation moisture on weed control in Florida Landscapes. Center for Landscapes Conservation & Ecology, University of Florida (IFAS). 2016-2017. \$12, 975 (Funded).

Marble, S.C., and **D. Saha**. 2016. Impact of herbicide application carrier volume on weed control in the absence of rainfall or irrigation for activation. Florida Nursery, Growers and Landscape Association. 2016-2017. \$4,800 (Funded).

Leaderships, Mentorships and Services

Services at the Mid-Florida Research and Education Center (MREC, University of Florida, Apopka).

Student Representative at MREC. 2016- Present.

- Managing the on-site housing facility to ensure a safe and better place to live for the graduate students and visiting scholars.
- Part of the social committee at the research center and participates in several events that are conducted by the social committee at the MREC.

Member of Environmental Graduate Student Association, University of Florida. August 2015- present

- Participated in coleus plant production and propagation at the greenhouses for the Environmental Horticulture Graduate Student Annual Spring Plant Sale in 2016.
- Managed a booth at the Gainesville Farmer's Market for selling Gator Glory (Honey) and Gator Jam for fund raising in 2016.

Christ King Public School. Guest lecturer. June 2013-September 2013. Bangalore, India.

(As a part of Bachelor of Education degree, program at Bangalore University, India)

- Guest lecture on Biology and Chemistry for 8th, 9th, and 10th grades.
- Independently taught 50 students five times a week for 4 months.
- Conducted quizzes and examinations.