PRATIMA PAHADI

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CURRENT POSITION: 2021- Present

Graduate Research Assistant: School of Biology and Ecology| College of Natural Resources, Forestry and Agriculture| University of Maine

PhD Project Title: Leaf Economic Spectrum and plant response to climate change.

Supervisory committee

- Dr. Yongjiang Zhang
- Dr. Jay Wason
- Dr. Uri Hochberg (ARO, Israel)
- Dr, Brian McGill
- Dr. Jasmine Saros

UNIVERISTY EDUCATION

PhD in Plant Science, University of Maine, College of Natural Resources, Forestry and Agriculture, School of Biology and Ecology, United States (2021- Present)

Masters in Botany and Plant Pathology, University of Maine, College of Natural Resources, Forestry and Agriculture, School of Biology and Ecology, United States (2019- 2021)
GPA: 3.9

> Relevant Coursework: Experimental design and data analysis, Plant Physiology, Advanced Plant Pathology, Genetic Engineering, Soil Chemistry and Nutrition etc.

Bachelor of Science in Agriculture; Tribhuvan University, Institute of Agriculture and Animal Sciences, Nepal (2012-2016) GPA: 4.0

> Relevant Coursework: Plant Physiology, Genetics and Plant Breeding, Entomology, Plant Pathology, Horticulture, Statistics, Biotechnology, Soil Science, Biochemistry, Microbiology, Agronomy, Agricultural Economics, Social Mobilization, Extension education etc.

FELLOWSHIP AND AWARDS

2022	Recipient of Hodosh Graduate Fellowship: School of Biology and Ecology, The University of Maine: For 3 months of spring research study in Israel	$19000
2021	SBE Nominee for the Susan J. Hunter Teaching Assistantship (SJHTA)	Nominee
2021	School of Biology and Ecology's 2021 Hylland/ Hillborn Award for Outstanding Plant Research	$500
2021	Graduate Student Government (GSG) Outstanding Graduate Student Award in Botany and Plant Pathology	Award
2021	Travel Award for 12th International Vaccinium Symposium	$350
2020	Recipient of Hodosh Graduate Fellowship: School of Biology and Ecology, The University of Maine: For 3 months of summer research study in Israel.	$16,000

| 2012 | Tribhuvan University_ TU Merit Admission Scholarship: For securing a high score in the admission exam | 50%Tuition waver |
| 2010 | Recipient of Mahatma Gandhi Scholarship Scheme from Indian Embassy, In Nepal during high school. | $500 |

https://sbe.umaine.edu/2020/05/29/sbe-scholarship-and-award-winners-2020/
https://sbe.umaine.edu/2022/05/06/congratulations-to-all-our-sbe-award-winners-for-2021-22/
https://youtu.be/jl0cU-M5N0Q

PROFESSIONAL PRESENTATIONS

July 14th, 2022	Extension talk given to wild blueberry farmers on farmers field day on topic "Drought resistance of lowbush and highbush blueberries".
April 15, 2022	Presentation on UMaine Student Symposium on the topic "Response of lowbush and highbush blueberries to extreme drought: threshold of coordinated decline in physiological process and branch die back".
Aug 30th, 2021	Ecological niches and leaf economic spectrum across genotypes of *Vaccinium angustifolium* and *Vaccinium myrtilloids* species in a semi natural agricultural system. **Pahadi, P**., Hoffman, A., Zhang, Y.J.,; Presented at the 12th International Vaccinium Symposium.
Feb 11th, 2020	Effect of warming on wild blueberry production and pest. **Pratima Pahadi**, The University of Maine; Presentation for the Wild Blueberry Commission of Maine on behalf of my advisor.
July 17th, 2019	Quantifying the diversity of *Vaccinium angustifolium* and *Vaccinium myrtilloides* in Blueberry Hill Farm, Jonesboro, Maine. **Pratima Pahadi**, University of Maine. Presentation to farmers in the Annual Blueberry Hill Farm Field Day @Blueberry Hill Farm, Jonesboro, ME.

PUBLICATIONS

Chen Y.Y., **Pahadi P.**, Calderwood L., Annis S., Drummond F., & Zhang Y.J (2022). Will Climate Warming Alter Biotic Stresses in Wild Lowbush Blueberries? *Agronomy*. 12, 371. https://doi.org/10.3390/agronomy12020371

Jiang, G.-F., Brodribb, T. J., Roddy, A. B., Lei, J.-Y., Si, H.-T., **Pahadi, P**., … Cao, K.-F. (2021). Contrasting Water Use, Stomatal Regulation, Embolism Resistance, and Drought Responses of Two Co-Occurring Mangroves. Water, 13(14), 1945. doi:10.3390/w13141945

Pahadi et. al. (2017), Cluster and principal component analysis for the selection of maize (*Zea mays* L.) genotypes. *Int. J. Exp. Res. Rev*., Vol. 9: 5-10.

Pahadi, P. & Sapkota, M. (2016): Variability, correlation and path coefficient analysis of maize (*Zea mays* L.) genotypes. *Int. J. Exp. Res. Rev*., Vol. 6: 25-34.

MANUSCRIPT IN WRITING

Pahadi, P., Zhang, Y.J., & Hoffmann, A. (2022). Temporal instability of leaf economic spectrum among the genotypes of two temperate crops.

Pahadi, P., Zhang, Y.J., & Hoffmann, A. (2022). Response of lowbush   and highbush blueberries to extreme drought: threshold of coordinated decline in physiological process and branch die back.

Pahadi, P., Zhang, Y.J., & Hoffmann, A. (2022). Warming is a boon to native North American crop: More benefits than harm.

Hoffmann, A., **Pahadi, P**., & Zhang, Y.J. (2022). Study of xylem structure and tradeoff with water transport efficiency across farms of varying latitudes in *Vaccinium angustifolium* and *Vaccinium myrtilloides* species.

COLLABORATION WORKS

Working with Dr. Uri Hochnberg (Agriculture Research Organization, Institute of Soil, Water and Environmental Sciences, Israel), on the Hodosh Graduate Fellowship Project "How high Vapor Pressure Deficit and heat wave leads to the embolism of Aleppo pines that is growing on the dry edge of their distribution?"

GRADUATE RESEARCH WORK

No.	Project	Year	Activities
1.	Use of Nanocellulose materials to identify the drought resistance of *Vaccinium angustifolium* and *Vaccinium myrtilloides species*	2021	Completed experimental design, field level data collection, greenhouse construction. And planning for the drought experiment (this is summer 2021 research project and is ongoing)
2.	Ecological niches and leaf economic spectrum across genotypes of two wild blueberry species in a semi natural agricultural system. Drought resistance of lowbush and highbush blueberries (Field studies)	2019-2020	Lead of the Project Field level data collection on photosynthetic rate (LICOR-6800) Midday water potential (Pressure Chamber) Percentage loss of Hydraulic Conductivity (PLC) using balance and stem connected to the pressure head and balance Diurnal curve (LICOR-6400) Leaf Mass per Area, Wood Density Stomata Size and Density (Image J) Chlorophyll content (SPAD), Tip midge rating, harvesting, winter damage rating etc.
3.	Drought resistance of lowbush and highbush blueberries (Nursery studies)	2019-2020	Lead of the Project Built rainfall exclusion plastic house ZL6 Data logger installed connected to ATMOS 14 weather station, TERIOS 10 soil moisture sensors Data collection on Predawn water potential/ Midday water potential (Pressure Chamber), Pre-dawn Fv/Fm (Fluorpen), Stomatal conductance (Leaf Porometer), Photosynthetic rate (LICOR-6800) Turgor Loss point Percentage Loss of Hydraulic Conductivity (PLC) Caviscan using EPSON Perfection V800, leaf water potential using psychrometer, Image Analysis using Image
4.	Drought resistance of lowbush and highbush blueberries and the effect of cytokinin hormone (Greenhouse and field studies) (Part of the CUGAR research project of Emma Gibbons, working with me)	2019-2020	Lead of the Project Plants rooted through Softwood cuttings in 2019 4 different genotypes of wild blueberry tested with 6 different concentrations of cytokinin hormone (0ppm. 100ppm, 200ppm, 300ppm, 400ppm, 500ppm) Data collection on fruits number, cluster number, plant height, leaf thickness, stem diameter, chlorophyll content, soil moisture, soil temperature, berry yield etc. In 2020 data collection on plant height, stem diameter, #

			leaf, leaf thickness, chlorophyll content, soil moisture, soil temperature, Relative humidity and temperature
5.	Effect of warming on wild blueberry production and pest.	2019-2020	Assisted in data collection for Percentage Loss of Hydraulic Conductivity (PLC), Respiration Rate (LICOR-6800), midday water potential, soil moisture, soil temperature, chlorophyll content, harvesting, disease and weed rating.
6.	A Platform Using a New Cyber Physical System and UAV to Detect Temporal and Spatial Variation for Precision Agriculture	2019	Lead of the Project Coordination with the GIS expert scientist Dr. Matthew Wallhead Collection of ground-based data on midday water potential, soil moisture, soil temperature, leaf temperature, disease and weed rating, winter damage rating, harvesting, yield etc. ZL6 data logger installed connected to ATMOS 14 weather station, TERIOS 10 soil moisture sensors, NDVI and PARi sensors Communicating and mobilizing the team of 8 members.

UNDERGRADUATE RESEARCH WORK

Research project on "**Cluster and principal component analysis for the selection of maize (*Zea mays* L.) genotypes**" supervised by Assistant Professor Raju Kharel and Assistant Professor Ganga Ram Kohar.
Research project on **"Bio fortified wheat in Nepal"** supervised by Dr. Dhruba Bahadur Thapa

TEACHING EXPERIENCE

Aug 30th, 2021 to Dec 10th, 2021	Graduate Teaching Assistant at the School of Biology and Ecology, The University of Maine	BIO100 (Basic Biology)
Aug 30th, 2021 to Dec 10th, 2021	Graduate Teaching Assistant at the School of Biology and Ecology, The University of Maine	BIO100 (Basic Biology)
Jan 25th, 2021 to May 5th, 2021	Graduate Teaching Assistant at the School of Biology and Ecology, The University of Maine	BIO200 (Biology of Organisms)
Jan 21st, 2019 to May 5th, 2019	Graduate Teaching Assistant at the School of Biology and Ecology, The University of Maine	BIO200 (Biology of Organisms)

DEVELOPMENT SECTOR EXPERIENCE

Date	Position	Activities
October 1st, 2017- February 28th, 2018	Livelihood Coordinator in World Vision International Nepal during Rehabilitation Phase of Nepal Earthquake Response Program	▪ Worked with the people affected by disastrous earthquake that took place in 2016 in Nepal. ▪ Coordination with the government bodies at district level ▪ Provided several training, tools and seed money to the farmers affected by earthquake followed by frequent field visits.

April 15th, 2017- Sept 30th, 2017	Area Technical Coordinator- Livelihood in World Vision International Nepal (Humanitarian based organization)	▪ Coordination with the district level government bodies (District Agriculture Development Office, Department of Livestock Services, District Administration Office, Chamber of Commerce and Industry, Farmers Coordination Committee, Forest User Group) ▪ Supervised (Immediate supervisor) 6 employee of partner NGO and 2 employees of World Vision International Nepal ▪ Weekly, Monthly and Annual report reporting to two managers, (Central Office Manager and District Level Manager) ▪ Provided several trainings on Offseason Vegetable Farming's, Snow Water Harvest Pond, Seed Bank formation and preservation of Local Landraces, ▪ Artificial Insemination Campaign, Disaster Risk Management Trainings

VOLUNTEERING WORKS

Volunteered in Genetically Engineered Chestnut Plantation as part of American Chestnut Restoration Program: Organized by Dr. Ek Han Tan (Assistant Professor of Plant Genetics) from School of Biology and Ecology

Volunteered in UMaine Bio Blitz 2021 organized by School of Biology and Ecology, Graduate Organization (SBE GO) The University of Maine

SKILLS
▪ Excellent knowledge in R Studio, SPSS, and Excel ZL6 data logger installing and programming
▪ Excellent knowledge in Caviscan, Image Analysis using Image J, Hydraulic Conductivity Measurement
▪ Excellent knowledge in using LICOR-6400 and LICOR- 6800