

BHIM CHAULAGAIN

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EDUCATION

PhD (Plant pathology), University of Florida (UF), US. **Aug 2014 – May 2019**

Dissertation: “Investigations into sugarcane rusts: disease prediction modelling and management”.

MS (Plant pathology), Tribhuvan University, Nepal. **Aug 2009 – Dec 2011**

Thesis: “Yellow rust disease progress and its effect on yield and yield components of wheat multivars”.

BS (Agricultural Economics), Tribhuvan University, Nepal. **Jan 2005 – July 2009**

PROFESSIONAL EXPERIENCE

Postdoctoral Associate in Plant Pathology, Oregon State University **June 2019 – current**

Spatiotemporal spread of wheat stripe rust. Conducting field studies of wheat stripe rust as an experimental model for testing effects of mitigation practices (e.g. timing and extent of fungicide applications and other broad-scale population protection) on epidemics caused by pathogens exhibiting long distance dispersal. Responsible for experimental design, implementation, data collection, data analyses, and publication of results.

Graduate Research Assistant in Plant Pathology, University of Florida **Aug 2014 – May 2019**

- Performed all aspects of small plot trial research including field preparation, planting, spraying, data collection, statistical analysis and presented in professional and extension meetings.
- Performed invitro bioassays including detached leaf bioassay, growth chamber and greenhouse research to determine the efficacy of fungicides on spore germination and pustule formation. Developed detached leaf bioassay protocol for rapid screening of fungicides against sugarcane rust pathogen.
- Studied the biology and epidemiology of rust pathogens, and developed rust disease forecasting system. Managed undergrads and interns during the research period in the lab and greenhouse.
- Teaching assistant for plant pathology (PLP 5005) class. Gave lectures on plant pathology lab experiments and assisted with set-up laboratory materials.

Agricultural Officer, Government of Nepal **April 2013 – Aug 2014**

- Managed ‘Improved seeds for farmers (ISFP)’ project. Involved in improved seed production of vegetables (lentil, onion, cucumber, tomato, okra) and cereals (rice, wheat, maize), and development of formal seed marketing and distribution system in collaborations with commercial seed companies.
- Characterization of biological and chemical formulated products/extracts for the management of plant diseases.

Plant Protection Officer, Government of Nepal **Oct 2010 – April 2013**

- Disease detection (primarily fungal diseases), diagnosis, pathogen isolation, culture preparation and maintenance. Biological characterization of plant diseases. Designed and conducted field, greenhouse and lab experiments for the management of vegetable and cereal diseases using biological and chemical formulated products. Technical support to the growers. Managed 10 people working in the lab, greenhouse and field.

SKILLS

- Programming: R programming language, SAS, JMP/SAS, SPSS, Sigma plot, Git
- Bioinformatics: Quality check / Statistics (FastQC, BBtools), Alignment/ Mapper (BLAST, Bowtie), Geneious (Bioinformatic tool)
- Laboratory skills: Pathogen isolation, culture preparation and maintenance, Polymerase Chain Reaction/qPCR
- Statistical Analyses: Univariate and Multivariate statistics, Network analysis, GIS, Bayesian statistics, Machine learning
- Communication: English (fluent in speaking and writing), Hindi (fluent), Nepali (Native)

REFERRED PUBLICATIONS

- **Chaulagain, B.**, Dufault, N., Raid, R. N., and Rott, P. 2019. Sensitivity of sugarcane rust fungi to fungicides in uredospore germination and detached leaf bioassays. *Crop Protection*, 117:86-93. <https://doi.org/10.1016/j.cropro.2018.11.014>
- **Chaulagain, B.**, Raid, R. N., Dufault, N., Santen, E. V., and Rott, P. 2019. Application timing of fungicides for the management of sugarcane orange rust. *Crop Protection*, 119:141-146. <https://doi.org/10.1016/j.cropro.2019.01.007>
- **Chaulagain, B.**, Raid, R. N., and Rott, P. 2019. Timing and frequency of fungicide applications for the management of sugarcane brown rust. *Crop Protection*, Accepted manuscript <https://doi.org/10.1016/j.cropro.2019.05.020>
- **Chaulagain, B.**, Small, I., Shine, J., Clyde, F., Raid, R. N., and Rott, P. 2019. Weather based predictive modeling of sugarcane orange rust in Florida. *Phytopathology*, <https://doi.org/10.1094/PHTO-06-19-0211-R>
- Sanjel, S., **Chaulagain, B.**, Small, I. M., Comstock, J. C., Hincapie, M., Raid, R. N., and Rott, P. 2019. Comparison of progress of brown rust and orange rust and conditions conducive for severe epidemic development during the sugarcane crop season in Florida. *Plant Disease*, 103:825-831. <https://doi.org/10.1094/PDIS-05-18-0862-RE>
- **Chaulagain, B.**, Khatri Chhetri, G. B., Shrestha, S. M., Sharma, S., Sharma-Poudyal, D., and Lamichhane, J. R. 2017. Effect of two-component cultivar mixtures on development of wheat yellow rust disease in the field and greenhouse in the Nepal Himalayas. *Journal of General Plant Pathology*, 83:131-139. <https://doi.org/10.1007/s10327-017-0705-z>
- Khatiwada, B. P., **Chaulagain, B.**, and Osti, S. 2012. Availability and use status of plant genetic diversities from forests for food, nutrition and livelihood security: A case from Chepang tribal communities of Nepal. *World Journal of Science Technology and Sustainable Development*, 9:147-158. <https://doi.org/10.1108/20425941211244298>

MEETING ABSTRACTS

- Primary author on 10 scientific abstracts and co-author on 9 additional abstracts. 5 oral presentations and 5 poster presentations. 3 Plant disease management reports in Plant Disease Management Network

EXTENSION AND OUTREACH ACTIVITIES

- Willamette Valley Cereal Field Day at the Hyslop farm in Corvallis. 5 June 2019. Organized by OSU Wheat Breeding Program and Cereals Extension.
- South Florida Fair. 12 to 28 January 2018. Organized by South Florida Fair & Palm Beach County Expositions, Inc.
- Sugarcane Rust Survey Meetings. 15 February 2017 and 20 February 2018. Organized by BASF at Everglades Research and Education Center (EREC), Belle Glade, Florida.
- Lettuce Advisory Meeting. 20 February 2018. EREC, Belle Glade, Florida.
- Grower Field Days. 14 April 2015 and 24 March 2017. EREC, Belle Glade, Florida.
- The Value of Science, Open House Field Day. 6 April 2017. EREC, Belle Glade, Florida.
- Workshop on 'Sugarcane Diseases'. 31 August 2016. EREC, Belle Glade, Florida.

AWARDS AND HONORS

- BASF Fellowship for PhD at University of Florida, US.
- Trellis fellowship, trellis project round 6, Horticulture Innovation Lab, UC Davis.
- William C. and Bertha M. Cornett Fellowship for an academic year of 2018-2019 from UF/IFAS/CALS.
- UF/IFAS/CALS Graduate Student Travel Grant to attend International Congress of Plant Pathology (ICPP) 2018: Plant Health in A Global Economy. 29 July-3 August 2018, Boston, MS.
- PPGSO/Plant Pathology Department Travel Award to attend International Congress of Plant Pathology (ICPP) 2018: Plant Health in A Global Economy. 29 July-3 August 2018, Boston, MS.

- Denver T. Loupe Best Poster Award in the 47th Joint Florida and Louisiana Annual Meeting of the American Society of Sugar Cane Technologists. 14-16 June 2017, New Orleans, LA.
- Davidson Graduate Student Travel Scholarship to attend the 2017 American Phytopathological Society Annual Meeting. 5-9 August 2017, San Antonio, Texas.
- UF Graduate Student Council Travel Grant Award to attend the 47th Joint Florida and Louisiana Annual Meeting of the American Society of Sugar Cane Technologists. 14-16 June 2017, New Orleans, LA.
- UF Graduate Student Council Travel Grant Award to attend the 2016 American Phytopathological Society Annual Meeting. 7-9 March 2016, Tampa, Florida.

PRIMARY REFERENCES

Dr. Philippe C. Rott, University of Florida, Professor of Plant pathology, pcrott@ufl.edu, (561) 221-8185

Dr. Richard N. Raid, University of Florida, Professor of Plant pathology, rnraid@ufl.edu