CURRICULUM VITAE

University of Idaho

NAME: Kamal Khadka

DATE: April 10, 2023

RANK OR TITLE: Assistant Professor/Research Faculty

DEPARTMENT: Plant Sciences

OFFICE LOCATION: Department of Plant Sciences
University of Idaho
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DATE OF FIRST EMPLOYMENT AT UI: February 6, 2023

DATE OF TENURE: Untenured

DATE OF PRESENT RANK OR TITLE: February 6, 2023

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., University of Guelph, Guelph, ON, Canada, 2020, Plant Breeding and Genetics
M.S., Tribhuvan University, IAAS, Rampur, Nepal, 2007, Plant Breeding and Genetics
B.S., Tribhuvan University, IAAS, Rampur, Nepal, 2005, Plant Breeding Major

EXPERIENCE:

Teaching, Extension and Research Appointments:

Assistant Professor (February 2023 - present): University of Idaho, Idaho
Postdoctoral Fellow (May 2020 – January 2023): University of Guelph, Canada
Program Coordinator (October 2007 – August 2014): Thematic program "Agricultural Innovations for Livelihood Security", Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Pokhara, Nepal
Plant breeder (October 2007 – August 2014): Rice, dryland/upland rice, hillside maize, small millets, potato, and ricebean; Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Pokhara, Nepal

TEACHING ACCOMPLISHMENTS:

Areas of Specialization:

Cereal crops breeding [wheat, maize, rice, and small millets]
Potato and ricebean research and development
Abiotic stress tolerance (drought)
Participatory crop improvement (PCI) [Participatory plant breeding (PPB), client-oriented breeding (COB), grassroots breeding, participatory variety selection (PVS)]
In-situ germplasm conservation
Community-based seed production (CBSP)
Approaches to livelihood enhancement in rural communities
Program management/coordination

Courses Taught:

Introductory plant breeding, PB2121, Tribhuvan University, Nepal, 2006
Introduction to agri-food systems, AGR1110, University of Guelph, Canada, Fall 2017 (Teaching Assistant)
Introduction to agri-food systems, AGR1110, University of Guelph, Canada, Fall 2018 (Teaching Assistant)

Students Advised:

Undergraduate Students:

Supervised one undergrad student (Winter/Summer/Fall), University of Guelph, 2022
Supervised two undergrad summer students (Summer/Fall), University of Guelph, Canada, 2021
Supervised one undergrad student (Summer/Fall), University of Guelph, Canada, 2020
Advised a fourth-year Agriculture student in his final year research project, University of Guelph, Canada, 2018

Graduate Students:

Mentored a M.S. student for a course UNIV 6900, Research Seminar in Environmental Sciences (Individual Development Plan), University of Guelph, 2022
Supervised thesis research field study (in Nepal) of an M.S. student from University of Manitoba, Canada, 2013/14
Advisory committee member an M.S. student, Tribhuvan University, Nepal, 2012.
Supervised thesis research field study (in Nepal) of an M.S. student from University of Manitoba, Canada, 2012
Supervised field study of an M.S. student (in Nepal) from University of Bangor, Wales, UK, 2009

Non-credit Classes, Workshops, Seminars, Invited Lectures, etc.:

Guest lecture at the University of Manitoba, March 2022: Participatory plant breeding for improving local seeds (1 hour)
Provided training on "Approaches to Participatory Crop Improvement" to professionals from two NGOs and plant breeders from Department of Agriculture, Sri Lanka (2011), two agricultural universities and three NGOs in India (2012), staff of an NGO in Bangladesh (2012), staff of Bhutan potato development program (2012), young plant breeders from Department Agriculture, Sri Lanka (2013 and 2014)

Honors and Awards:

Best poster presentation award (first position), Poster presented at the 88th Annual Meeting of the Canadian Phyto-pathological Society (CPS), and the Annual Meeting of the Canadian Society of Agronomy (CSA), June 18-22, 2017, Winnipeg, Canada
Best poster presentation award (second position), Poster presented at the 9th Canadian Wheat Fusarium Head Blight (CWFHB) and 4th Canadian Wheat Symposium (CWS) Conference, November 18-23, 2018, Winnipeg, Canada
IDRC Graduate Research Award, Canada, 2017
Craig Pearson International Scholarship, Ontario Agriculture College, University of Guelph, Canada, 2016
Best Technical Officer Award, Local Initiatives for Biodiversity, Research and Development (LI-BIRD, Nepal, 2009
Merit Scholarship, Institute of Agriculture and Animal Sciences (IAAS), Tribhuwan University, Nepal, 2001-2005

SCHOLARSHIP ACCOMPLISHMENTS:

Peer Reviewed/Evaluated:

Khadka K., Kaviani, M., Raizada, M.N., Navabi, A. Phenotyping and Identification of Reduced Height (*Rht*) Alleles (*Rht-B1b* and *Rht-D1b*) in a Nepali Spring Wheat (*Triticum aestivum* L.) Diversity Panel to Enable Seedling Vigor Selection. *Agronomy*. 2021; 11(12):2412. https://doi.org/10.3390/agronomy11122412
Khadka, K., Burt, A. J., Earl, H. J., Raizada, M. N., and Navabi, A. (2021). Does leaf waxiness confound the use of NDVI in the assessment of chlorophyll when evaluating genetic diversity panels of wheat ? *Agronomy* 11, 486. doi:https://doi. org/10.3390/agronomy11030486
Khadka, K., Earl, H., Raizada, M., and Navabi, A. (2020a). A physio-morphological trait-based approach for breeding drought tolerant wheat. *Front. plant* 11, 715. doi:10.3389/fpls.2020.00715
Khadka, K., Torkamaneh, D., Kaviani, M., Belzile, F., Raizada, M. N., and Navabi, A. (2020c). Population structure of Nepali spring wheat (Triticum aestivum L.) germplasm. *BMC Plant Biol.* 20,

530. doi:10.1186/s12870-020-02722-8

Khadka, K., Raizada, M. N., and Navabi, A. (2020b). Recent progress in germplasm evaluation and gene mapping to enable breeding of drought-tolerant wheat. *Front. Plant Sci.* 11, 1149. doi:10.3389/fpls.2020.01149

Witcombe, J. R., **Khadka,** K., Puri, R. R., Khanal, N. P., Sapkota, A., and Joshi, K. D. (2017a). Adoption of rice varieties. 2. Accelerating upake. *Exp. Agric.* 53, 627–643. doi:10.1017/S0014479716000624

Witcombe, J. R., **Khadka,** K., Puri, R. R., Khanal, N. P., Sapkota, A., and Joshi, K. D. (2017b). Adoption of rice varieties - I. Age of varieties and patterns of variability. *Exp. Agric.* 53, 512–527. doi:10.1017/S0014479716000545

Luitel, B. P., Khatri, B. B., Lama, L., Dhakal, R., **Khadka, K**., Choudhary, D., et al. (2017). Yield evaluation of nutrient-rich potato clones in high hill of Nepal. *J. Nepal Agric. Res. Counc.* 3, 6–14. doi:10.3126/jnarc.v3i1.17269

Gartaula, H., Patel, K., Johnson, D., Devkota, R., **Khadka, K**., and Chaudhary, P. (2017). From food security to food wellbeing: examining food security through the lens of food wellbeing in Nepal's rapidly changing agrarian landscape. *Agric. Human Values* 34, 573–589. doi:10.1007/s10460-016-9740-1

Upadhya, D., Dhakal, R., **Khadka, K**., Rana, S., Acharya, P., Rana, R., et al. (2016). Local knowledge on climate-induced traits in rice for improving crop yield, food security and climate resilience. *Int. J. Agric. Innov. Res.* 5, 385–396

Ragupathy, S., Dhivya, S., Patel, K., Sritharan, A., Sambandan, K., Gartaula, H., Sathishkumar, R., **Khadka**, **K.,** Nirmala, B.C., Kumari, A.N. and Newmaster, S.G. (2016). DNA Record of Some Traditional Small Millet Landraces in India and Nepal. *3 Biotech* 6, 133. doi:10.1007/s13205-016-0450-6

Joshi, K. D., Khanal, N. P., Harris, D., Khanal, N. N., Sapkota, A., **Khadka, K**., et al. (2014). Regulatory reform of seed systems: Benefits and impacts from a mungbean case study in Nepal. *F. Crop. Res.* 158, 15–23. doi:10.1016/j.fcr.2013.12.011

Giri, R.K. B.l Yubraj, G. Sanjeev, P.B. Paneru, G.D. Subedi, **K. Khadka**, L. Lama, B.B. Khatri, B.P. Luitel, H. Regmi, D. Khadka, D.B. Kathayat, C. Budha. Performance of Micronutrient Dense Potato Genotypes. *Journal of Agriculture and Environment.,* 16: 118-123

Gartaula, H. N., Chaudhary, P., and **Khadka, K.** (2014). Land redistribution and reutilization in the context of migration in rural Nepal. *Land* 3, 541–556. doi:10.3390/land3030541

Devkota, R., **Khadka, K.,** Gartaula, H., Shrestha, A., Upadhay, D., Chaudhary, P. and Patel, K. (2014). Farmers' seed networks and agrobiodiversity conservation for sustainable food security: A case from the mid-hills of Nepal. *Biodivers. Watch* 4, 109–133. Available at: https://www.semanticscholar.org/paper/Farmers%E2%80%99-seed-networks-and-agrobiodiversity-for-a-Khadka-Gartaula/4f318505a34d252e1acee901dfb438175a5004d6

Rosyara, U. R., **Khadka, K.**, Subedi, S., Sharma, R. C., and Duveiller, E. (2009). Field resistance to spot blotch is not associated with undesirable physio-morphological traits in three spring wheat populations. *J. Plant Pathol.* 91, 113–122. doi:10.4454/jpp.v91i1.631

Rosyara, U. R., **Khadka, K.,** Subedi, S., Sharma, R. C., and Duveiller, E. (2007). Heritability of stay green traits and association with spot blotch resistance in three spring wheat populations. *J. Genet. Breed.* 61, 00. Available at: https://www.semanticscholar.org/paper/Heritability-of-stay-green-traits-and-association-Rosyara-Khadka/ccfd73be4e4854a31389d571b2d5893a8739d00a

Khadka, K., and Khanal, A. R. (2013b). Ricebean in Home Gardens of the Chitwan Valley. *J. Agric. Environ.* 14, 141–148. doi:10.3126/aej.v14i0.19794

Puri, R. R., **Khadka, K.** and Paudyal, A. (2010). Separating climate resilient crops through screening of drought tolerant rice land races in Nepal. *Agron. J. Nepal* 1, 80–84. Available at: https://www.nepjol.info/index.php/AJN/article/view/7546

Refereed/Adjudicated:

Giri, R. K., Chalise, B., Paneru, P. B., Subedi, G. D., and **Khadka, K.** (2017). Evaluation of nutrient dense potato genotypes at Jumla district of Nepal. in Proceedings of the ninth national horticulture workshop (May 31-June 1, 2017), 182–188

Devkota, R., **Khadka, K.,** Gartaula, H., Shrestha, A., Karki, S., Patel, K. and Chaudhary, P. (2016). Gender and labor efficiency in finger millet production in Nepal. In: J.R. Parkins, A. Kaler and, J. Njuki (eds.) Transforming gender and food security in the Global South. New Delhi: Routledge, pp 76–95. doi:10.4324/9781315564111-12

Chaudhary, P., Joshi, B.K., Thapa, K., Devkota, R., Ghimire, K.H., **Khadka, K.,** Upadhya, D., and

Vernooy, R. (2016). 'Chapter IV : Interdependence on plant genetic resources in light of climate change', in Implementing the international treaty on plant genetic resources for food and agriculture in Nepal: Achievements and challenges, eds. B. K. Joshi, P. Chaudhary, D. Upadhya, and R. Vernooy (Local Initiatives for Biodiversity, Research and Development, Pokhara, Nepal; Nepal Agricultural Research Council and Ministry of Agricultural Development, Kathmandu, Nepal; and Bioversity International, Rome, Italy). Available at: https://www.bioversityinternational.org/e-library/publications/detail/implementing-the-international-treaty-on-plant-genetic-resources-for-food-and-agriculture-in-nepal/

Chaudhary, P., Devkota, R., Upadhya, D., and **Khadka, K.** (2015). Nepal: government policies and laws related to community seed banks. In: R. Vernooy, P. Shrestha, and B. R. Sthapit (eds.) Community seed banks: Origins, evolution and prospects (pp.243-246). New York: Routledge doi:10.4324/9781315886329

Khadka, K., Lama, L., Luitel, B. P., Giri, R. K., Chaudhary, P., Khatri, B. B., et al. (2014). Evaluation of bio-fortified potato genotypes in high hill using participatory variety selection (PVS) tool. in Proceedings of the national potato reserach workshop (31 March- 2 April) (National Potato Research Programme, Nepal Agricultural Research Council, Nepal), 67–73

Sthapit, B., **Khadka, K.,** Shrestha, P., Subedi, S., and Poudel, I. P. (2013). Grassroots breeding of local crops and varieties in support of community biodiversity management and resilience in Nepal. In: Community Biodiversity Management, Promoting Resilience and the Conservation of Plant Genetic Resources, eds. W. S. de Boef, A. Subedi, N. Peroni, M. Thijssen, and E. Okeeffe. New York: Earthscan Routledge. Pp: 233-239. doi:10.4324/9780203130599

Khadka, K., and Acharya, B. D. (2009). Cultivtion practices of ricebean. Pokhara: Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Nepal Available at: www.libird.org

Acharya, B. D. and **Khadka, k.** (2009). Cultivation practices of Ricebean (Nepali vesion). Pokhara: Local Initiatives for Biodiversity, Research and Development (LI-BIRD), Nepal Available at: www.libird.org

Rosyara, U.R., **Khadka K.** and Shrestha S.M. (2009). Development of wheat genotypes under heat and spot blotch stressed environments of south Asia In: S.M. Shrestha,U.R. Rosyara (eds.) Advances in helminthosporium leaf blight (spot blotch and tan spot) research, Tribhuvan University, Institute of Agriculture and Animal Science, Rampur, Chitwan, Nepal. pp 46-58

SERVICE:

Professional and Scholarly Organizations

Lifetime member, Agronomy Society of Nepal, Nepal.
Member, Canadian Society of Agronomy, Canada.
Member, American Society of Agronomy, USA.

Editorial services

Reviewer, *Canadian Journal of Plant Science*. 2022
Reviewer, *Sustainability*. 2022
Reviewer. *Agronomy*. 2020, 2021
Reviewer. *Plos ONE*. 2021
Reviewer, *Agriculture and Food Security*, 2017