

Rekha Sapkota

Assistant Professor of Entomology, Tribhuvan University (TU)
PhD candidate, Department of Entomology, IAAS, TU

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A. ACADEMIC BACKGROUNDS

Master (2006-08) : **M. Sc. Ag. Entomology (Distinction)**
TU/Institute of Agriculture and Animal Science (IAAS)
Rampur, Chitwan, Nepal. **Thesis title:** “Loss Assessment and Indigenous Management of Cucurbit Fruit Fly (*Bactrocera cucurbitae* (Coquillett)) at Field Condition in Squash during Spring Summer Season in Lamjung District, Nepal”

Bachelor (2002-06) : **B.Sc.Ag. 1st division**
TU/IAAS, Rampur, Chitwan, Nepal

Intermediate (2000-02) : **General agriculture, 1st division**
TU/IAAS, Lamjung Campus, Lamjung, Nepal

S.L.C. (1999) : **SLC board, HMG/Nepal**

B. AWARDS AND FELLOWSHIPS

Grantee, IFS (<http://www.ifs.se/about-ifs/>), Sweden (2019). A global competitive research grant for young scientist
Faculty Research Grants (2013 and 2019) team member – a competitive research grant by UGC, Nepal.
Mini-research grant 2013. Research Division, TU - a competitive research grant for young scientist.
Merit Scholarships (2002–2008) – financial support based on competitive academic performance.
Life member – Plant Protection Society, Nepal
Chairman, Plant protection subject matter committee, IAAS, TU

C. PROFESSIONAL BACKGROUND

a. Teaching

Assistant Professor, Entomology (2012 to date), TU/IAAS.

Head, Department of horticulture & plant protection (2015-2018), Lamjung campus, IAAS

Subject taught:

Undergraduate—Introductory entomology, Principle and practices of insect pest management, Economic entomology, Pesticide pollution and environment protection and Project works.

Postgraduate program – Insect morphology and Insect pathology

b. Program coordinator (October 2008 to Dec 2010):

Overall responsibilities of execution, implementation and reporting of the Poverty Alleviation Fund-Project in Chitwan, MADE-Nepal, Bharatpur, Nepal.

c. Research Associate (2007/7-2008/9):

Worked as research associate in Research and Development Centre, Lamjung Campus for the project “Indigenous pest management and composting technology” funded by WVInternational-Nepal, Lamjung ADP.

Major responsibilities: Project Execution, Data recording and analysis, monthly financial and technical report etc.

d. Researcher

SN	Researcher	Funding	Project type	Status	Project title
1	Principal investigator	IFS, Sweden	Research grant	Completed 2025	Fruit fly (<i>Bactrocera</i> spp.) species diversity and host plant preference within a community of the cucurbitaceous vegetables in Nepal (2018–2020), funded by IFS, Sweden. (USD 11,990).
2	Co-investigator	UGC	Faculty research grant	Completed 2023	Manipulating natural budburst timing in table grape cultivars using hydrogen cyanamide. Funded by UGC, Nepal FR-075/76
3	Co-investigator	UGC	Faculty research grant	Completed 2014	Improvement in fruit-set of cucumber through plant growth regulators application and pollination management, funded by university grant commission, Nepal FR-069/070-91.
4	Principal investigator	TU	Small grant	Completed	Loss assessment and eco-friendly managements of cucurbit fruit fly in off-season Jukuni
5	Co-investigator	USC-Asia	Research	Completed 2009	Assessment and documentation of agricultural research facts

D. TRAINING, SEMINARS AND CAPACITY DEVELOPMENT

Attended

Strengthening national capacity for invasive pest, prevention, preparedness and response organized by DOA, MoALD in collaboration with FAO, 23-26 Jul, 2024, Kathmandu, Nepal.

Asia-Oceania GEOSS network for capacity buildings and regional sustainable development: Agriculture and disaster monitoring in HKH, organized by ICOMOD, 17-21 Sep, 2018, Nepal.

Capacity building of faculties on crop simulation modeling in Agriculture, organized by Lamjung Campus in collaboration with WFO & USAID F2F program, 17-28 Aug., 2016, Lamjung, Nepal.

National standards of phytosanitary measures, organized by DoA, MoALD, 14-19 Jun, 2015, Nepal.

Pedagogical skills, organized by Lamjung Campus in collaboration with USAID F2F program, Feb 1-6 Feb, 2015, Lamjung, Nepal.

HOW TO BECOME A PLANT DOCTOR jointly organized by Global Plant Clinic, UK and WVIInternational-Nepal, Lamjung ADP, 7-11th Dec., 2008.

Project concept note covering Result Based Management (RBM) and Participatory Rural Appraisal (PRA) organized by FIPRED, 22-23 Dec. 2005, Rampur, Chitwan.

Attended and presented various seminars and case studies offered by postgraduate program as well as Department of Entomology, IAAS, Rampur.

Presented

SN	Country	Year	Type	Presented paper
1	Kathmandu, Nepal	26-27 April, 2024	Oral	Fruit fly species (Diptera: Tephritidae:Dacinae:Dacini) diversity in field infested fruits/flowers of cucurbits during summer-rainy and autumn-winter seasons in Nepal" Int'l Plant Prot. Symp., Kathmandu, Nepal
2	Khumaltar, Nepal	14-15 Nov., 2024	Oral	Species composition of fruit flies and their feeding preferences to cucurbitaceous crops in Nepal" Int'l Conf. FUTURISTIC HORTICULTURE ICFH'24, TNAU, Coimbatore, India
3	Lalitpur, Nepal	01 July, 2025	Oral	Oviposition host preference and survival rate of <i>Z. cucurbitae</i> (Coq.) and <i>Z. tau</i> (Walker) in cucurbit crops" National Plant Protection Workshop, Kathmandu, Nepal

Number of paper presented as co-authorship in national and international seminar, workshop, symposium etc.

E. PUBLICATIONS

a. Journal article (Scimago indexed)

SN	Authorship	Qrank	Type	Article detail
2	Co-author	Q3	Research	N. Ghimire, P. Sapkota, P. Poudel, R. Sapkota , KC Dahal. (2024). Pruning date and hydrogen cyanamide effects on growth and yield of grapevine var. Cabernet Sauvignon. <i>Adv. Hort. Sci.</i> 3: 273-279. [DOI: 10.36253/ahsc16128]
1	Co-author	Q1	Research	Dahal, KC, SP Bhattarai, David James Midmore, David Oag, Rekha Sapkota and Kerry Brian Walsh. In Situ Sucrose Injection for Alteration of Carbohydrate Reserve Dynamics in Grapevine. <i>Agronomy</i> 2024, 14(3), 425. [DOI: 10.3390/agronomy14030425]

b. Journal articles (National/International/Peer reviewed)

SN	Authorship	Category	Type	Article detail
17	First-author	Int'l 2024	Review	Sapkota, R , KC Dahal, G KC, A Bajracharya and R Thapa. (2024). Fruit Flies (Diptera: Tephritidae: Dacinae: Dacini) Species Diversity In Nepal: A Review. <i>SAARC Journal of Agriculture</i> , 22(1):1–15. [DOI: 10.3126/sja.v22i1.71560]
16	First-author	Int'l 2024	Research	Sapkota, R , RB Thapa, ASR Bajracharya, GB KC, MD Sharma and KC Dahal. (2024). Species Composition of Fruit Flies and Their Feeding Preferences to Cucurbitaceous Crops in Nepal. <i>Journal of Plant Protection Society</i> , 9 (2): 50–60.
15	First-author	National 2024	Review	Sapkota, R , RB Thapa, GB KC, ASR Bajracharya, MD Sharma and KC Dahal. (2024). Distribution, Damage Severity and Management of Dacine Fruit Flies in

				Nepal: A Review. <i>Nepalese Horticulture</i> 18:62-67. [DOI: 10.3126/nh.v18i1.72822].
14	Co-author	National 2024	Research	Sapkota, P, N Ghimire, R Sapkota , P Poudel and KC Dahal. (2024). Preponed Budburst in Grapevine 'Cabernet Sauvignon' Enables Berry Harvest Before Monsoon in Lower Hills of Nepal. <i>Nepalese Horticulture</i> 18:62-67. [DOI: 10.3126/nh.v18i1.72772].
13	Co-author	National 2024		Poudel, P., Dhakal, R., Atreya, P.N., Sapkota, R. , & Dahal K.C. (2023). Assessing the Dormant Bud Fruitfulness in Grapevines Spur for Yield Estimation. <i>Nepalese Horticulture</i> , 17 (1):17-21. 10.3126/nh.v17i1.60624
12	Co-author	National 2024	Review	Poudel, P, R Dhakal, PN Atreya, R Sapkota , and KC Dahal. 2024. Hydrogen Cyanamide: A Chemical to Prepone Natural Budburst Timing of Grapevine Cultivars in Nepalese Context. <i>Agriculture Development Journal</i> , 7: 91-104. [https://aitc.gov.np]
11	Co-author	Int'l 2023		Balchhaudi, A., Sunar, M. & Sapkota, R. (2023). Efficacy of plant extracts against Bihar hairy caterpillar on cabbage under laboratory condition. <i>Journal of Entomology and Zoology Studies</i> , 11(1):32-36. 10.22271/j.ento.2023.v11.i1a.9140
10	Co-author	National 2023	Research	Poudel, P, R Dhakal, PN Atreya, R Sapkota , and KC Dahal. 2023. Assessing the Dormant Bud Fruitfulness in Grapevines Spur for Yield Estimation. <i>Nepalese Horticulture</i> ,17(1):17-21. [DOI: 10.3126/nh.v17i1.60624]
9	Co-author	National 2023		Basyal, K., Sapkota, R. , Tiwari, K. & Bhandari, A. (2023). Screening of Maize Genotypes against Maize Weevil (<i>Sitophilus zeamais</i> Motsch.) in Laboratory Condition. <i>Journal of Institute of Agriculture and Animal Science</i> , 37: 41-48. 10.3126/jiaas.v37i1.56974
8	Co-author	National 2022		Basyal, K., Sapkota, R. , Bajracharya, A.S.R. & Bhattarai, S.S. (2022). Use of botanicals for management of weevil (<i>Sitophilus zeamais</i> motschulky) in maize storage. <i>The Journal of Agricultural and Environment</i> , 23:166-176.
7	Co-author	Int'l 2022	Research	Lamsal, K., R. Sapkota , KC Dahal, N. Upadhyaya, and D. Khanal. 2022. Farmers' management practices against tomato leaf miner <i>Tuta absoluta</i> (Myrick) (Lepidoptera: Gelechiidae) in Surkhet, Nepal. <i>Journal of the Plant Protection Society</i> , 7(01): 53-65. [DOI: 10.3126/jpps.v7i01.47289]
6	Co-author	National 2018		Shrestha, A., Pandey, A. & R. Sapkota . (2018). Damage assessment and management of Armyworm (<i>Mythimna separate</i> , Walter) in winter maize at Rampur, Chitwan. <i>Journal of Institute of Agriculture and Animal Science</i> , 35, 161 – 166. https://doi.org/10.3126/jiaas.v35i1.22535
5	Co-author	Int'l 2021	Research	Adhikari, B., R. Sapkota , RB Thapa, GS Bhandari and KC Dahal. 2021. Biorational Management of Maize Stem Borer <i>Chilo partellus</i> (Swinhoe). <i>Azarian Journal of Agriculture</i> , 8 (2): 38-44. [DOI: 10.29252/azarinj.051]
4	Co-author	Int'l 2019		Rawal, G., Kafle, K. & R. Sapkota . (2019). Rapid bioassay of pesticide residue (RBPR) analysis of vegetables in different districts of Nepal. <i>Agricultura</i> , 3-4,111–112. [DOI: 10.15835/agrisp.v11i1i3-4.13444]
3	Co-author	National 2015	Research	Dahal, KC, MD Sharma and R Sapkota . 2016. Fruit set, fruit retention and yield of Chilli genotypes under hot and dry condition of western terai of Nepal. <i>J. Inst. Agri. Sci.</i> 33, 229–236. [DOI:10.3126/jiaas.v33i0.20709].
2	First author	Int'l 2010	Research	Sapkota, R , KC Dahal and RB Thapa. 2010. Damage assessment and management of cucurbit fruit flies in Spring-summer Squash. <i>J. Ent. and Nem.</i> 2(1):007–012. Online [DOI: 10.5897/JEN.9000012]
1	First author	National 2009	Research	Sapkota, R , KC Dahal and RB Thapa. 2009. Farmer field survey and field management of cucurbit fruit fly in spring-summer squash. <i>J. Inst. Agri. Sci.</i> 30(1):167 – 172.

General articles

रेखा सापकोटा (२०२४). नेपालमा काँक्रो - फर्सीको फल कुहाउने औसाको अवस्था र व्यवस्थापन | अनुसन्धान व्यवस्थापन समिति, पक्लिहवा क्याम्पस, पक्लिहवा कृषि बुलेटिन, भाग- २

Dahal, K.C. & **Sapkota, R.** (2023). Destiny and status of Nepalese agri-graduates. First Graduate Conference 2023: Agricultural Transformation through Education and Research, Agriculture and Forestry, 23-25, November, 2023.

Basnet, S. & **Sapkota, R.** (2019). Effectiveness of different coloured pan traps to capture the insects of rapeseed field. 6th Symposium on Undergraduate Practicum Assessment. Abstract Book, P. 35. Research, Development, Training and Extension Center (RD-TEC), Lamjung Campus, IAAS, TU.

Proceeding articles

- Sapkota, R.**, Dahal, K.C., Bajracharya, A.R.S. & Thapa, R.B. (2025). Oviposition Preference and Survival Rate of *Zeugodacus cucurbitae* (Coq.) and *Zeugodacus tau* (Walker) in Cucurbit Crops. National Plant Protection Workshop 2025. Proceeding Book, p. 40. Plant Protection Society, Nepal.
- Sapkota, R.**, Dahal, K.C., Bajracharya, A.R.S. & Thapa, R.B. (2024). Fruit fly species (Diptera: Tephritidae:Dacinae:Dacini) Diversity in field infested fruits/flowers of cucurbits during summer-rainy and autumn-winter seasons in Nepal. Int'l Plant Protection Symp. Proceeding Book, p. 29. Plant Protection Society, Nepal.
- Sapkota, R.**, Thapa, R.B., Bajracharya, A.R.S., KC, G.B., Sharma, M.D. & Dahal, K.C. (2024). Species composition of fruit flies and their feeding preferences to cucurbitaceous crops in Nepal. International Conference: FUTURISTIC HORTICULTURE ICFH'24, TNAU, Coimbatore, 14-15, November, 2024.
- Adhikari, D., **Sapkota, R.**, Rai, S., Dhungana, A., Adhikari, S. and Joshi, S.L. (2024). Solanum fruit fly (*Bactrocera latifrons*): A Pest of Akabare Chili Production in Nepal. 15th Nat. Hort. Sem., 25-26 November, 2024, Kathmandu, Nepal.
- Adhikari, P., **Sapkota, R.** & Ramasamy, S. (2023). How do Bacillus thuringiensis Biopesticides Reduce Flea Beetle Damage on Leafy Brassicas? The IX International Conference on Management of the Diamondback Moth and other Crucifer Insect Pests. At: Phnom Penh, Cambodia.
- Dahal, K.C., Ghimire, N., Lamichanne, P. & **Sapkota, R.** (2022). Preponed Natural Timing Enables Successful Grapevine Cultivation in Nepal. 9th National Conference on Science and Technology, 2022, June 26-28, Lalitpur, Nepal
- Poudel, R. & **R. Sapkota.** (2015). Monitoring and Rearing of Fruit Flies in Summer Squash. Proceeding of UPA, IAAS Lamjung Campus. Pp. 90 – 93.
- Bhattarai, D. & **R. Sapkota.** (2015). Insect Pest Incidence in Maize in Relation to Climatic Factors in Lamjung. Proceeding of UPA, IAAS Lamjung Campus. Pp. 78 – 81.

Book

- Sapkota, R. (2009). Cucurbit Fruit Fly (*Bactrocera cucurbitae* Coq.) in Summer Squash: damage assessment and management options. LAP-Publishing House (ISBN 978-3-8443-9345-3).

F. THESIS SUPERVISION (POSTGRADUATE LEVELS ONLY)

SN	Advisory	NAME AND ID	Title of the thesis
1	Chair	BISHOW N. ADHIKARI R-2016-ENT-02 M	Biorational management of maize stem borer, <i>Chilo partellus</i> (swinhoe) in Manthali, Ramechhap
2	Chair	BINOD PRASAD BHATT R-2016-ENT-07M	Management of red pumpkin beetle (<i>Aulacophora foveicollis</i> , Lucas) in summer squash field, Doti, Nepal
3	Chair	PRABITA ADHIKARI R-2016-ENT-06M	Testing an integrated pest management strategy for managing striped flea beetle (<i>phyllostreta striolata</i>) in brassicas at world vegetable center, Taiwan
4	Chair	ANUSHA SHARMA R-2017-ENT-05M	Relative preference on pulses and efficacy of selected botanicals for the management of pulse beetle (<i>callosobruchus chinensis</i>)
5	Chair	KABITA BASYAL R-2017-ENT-03M	Farmer's survey, varietal screening and botanical management of maize weevil (<i>Sitophilus zeamais</i> motsch.) in maize storage in laboratory condition
6	Chair	HIRA POUDEL R-2017-ENT-01M	Efficacy of selected control measures against fall armyworm, (<i>spodoptera frugiperda</i> j.e. smith) in maize at Gaidakot, Nawalpur
7	Chair	BIPIN ARYAL R-2017-ENT-08M	Growth performance of japanese quail under different levels of grasshoppers (<i>Oxya hyla</i>) as an alternative protein source
8	Chair	PRASHAMSA PANDEY R-2019-ENT-01M	Identification of fruit fly species and its management in squash in Rupandehi district.
9	Chair	SABITA BASNET R-2019-ENT-05M	Bio-rational management and identification of fruit fly species in squash at kirtipur, kathmandu Nepal
10	Chair	MEENA SHRESTHA R-2020-ENT-06M	Diversity and eco-friendly management of fruit fly species in summer squash field, sindhupalchowk, Nepal
11	Chair	PAWAN DHAKAL R-2020-ENT-5M	Monitoring and management of fruit flies in summer squash during spring season in Lamjung, Nepal
12	Chair	GAURAV THAKUR R-2021-ENT-1M	Survey, biology and management of <i>Liriomyza huidobrensis</i> (Blanchard) on potato crop in the mid hills of Nepal
13	Chair	JEEVAN PARIYAT R-2021-ENT-7M	Bio-rational management of fall armyworm, <i>Spodoptera frugiperda</i> (J.E. SMITH) in maize, Baitadi
14	Chair	SURATA KAFLE R-2021-ENT-4M	Isolation, morphological characterization and pathogenicity assessment on native isolate of <i>Metarhizium anisopliae</i> (Metchnikoff) Sorokin in laboratory condition
15	Chair	ASMITA DHUNGANA R-2022-ENT-6M	Biology, host preference and management of <i>Zeugodacus tau</i> (Walker) in laboratory condition
16	Chair	SAMIKCHYA ADHIKARI R-2022-ENT-7M	Host preference, biology, morphometrics and management of <i>Zeugodacus cucurbitae</i> (Coq.) in laboratory condition
17	Chair	SUSAN SUBEDI R-2022-ENT-2M	Effect of temperature on growth, conidia production and virulence of <i>Metarhizium anisopliae</i> (Metchnikoff) Sorokin isolates in laboratory conditions.
18	Member	MSc	More than one dozens of MSc students at IAAS

G. TOURS AND VISITS

Australia (2014 – 2018): to pursue trainings, CQUniversity, Queensland, Australia

Canada (Jun 2010 to Feb. 2011): exposure visit to Toronto, Canada

India – various agricultural institutions during all India educational tour and project activities.

Nepal – visited more than 65 districts of Nepal during tours, trainings, surveys, research etc.

H. COMPUTER AND LANGUAGE PROFICIENCY

Endnote (X7→21) – advanced user and trainer of endnote referencing tool.

MS packages – proficient user of MS-Word, MS-Excel & MS-PowerPoint.

Statistical software – moderate user of Genstat (5.2→18th ed)

Good command in English and Nepali (native) both in written and spoken. A fair command in hindi.

I. SPECIAL AREAS OF INTEREST

Integrated pest management practices and strategies

Good agricultural practices for healthy production

Specific interest on tephritidae fruit fly species biology to management

Interested in problem solving research

J. REFEREES (UPON REQUEST)

Ramkumar Shrestha, Ph.D.

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