

BIOGRAPHICAL INFORMATION

REENA, Ph.D. Entomology

Professor- cum-Chief Scientist

**Advanced Centre for Rainfed Agriculture (ACRA), Rakh Dhiansar,
Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu
(SKUAST-J), Chatha-180009, J&K
E-mail- bkreena12@gmail.com**

EDUCATIONAL QUALIFICATION

2004 Ph.D. Entomology, CCSHAU, Hisar, Haryana
2000 M.Sc., Agricultural Entomology, UAS, Dharwad, Karnataka
1998 B.Sc. Agriculture, BHU, Varanasi, U.P.

PROFESSIONAL CAREER

07/2019 Professor (Entomology), SKUAST-Jammu
07/2015 Associate Professor (Entomology), SKUAST-Jammu
7/2012 Assistant Professor (Entomology) – Senior Scale, SKUAST-Jammu
7/2004 Assistant Professor (Entomology), SKUAST-Jammu

RESEARCH INTERESTS & EXPERTISE **Biopesticides, Biorationals, Integrated Pest Management**

TEACHING EXPERIENCE (Courses Taught) At UG Agriculture level, taught 5 different courses At PG Agriculture level, taught 2 different courses

STUDENT GUIDANCE (UG/PG/PhD)

- Post-graduate (As Major Advisor) : 03
- Co-Advisor/member advisory committee : 10

PROJECTS / RESEARCH GRANTS - Externally Funded Projects

- Exploring floral diversity of Jammu region for pesticidal properties **(PI) - DST**
- All India Coordinated Research project on Biological Control **(PI) - ICAR**
- Establishment of Laboratory cum Guava Training Centre at SKUAST-Jammu **(PI) - NABARD**
- Transfer of technology for management of alternate bearing problem through hormonal intervention in mango varieties of Jammu region **(Co-PI) - NABARD**
- Development of Rainfed areas of J & K funded by UT of Jammu and Kashmir **(Co-PI) - HADP**

Alternate Agriculture Systems for Sustainability **(Co-PI) - HADP**

S. No	Project title and Funding agency	Budget (Rs.in Lakh)	Role	Duration
1.	• Exploring floral diversity of Jammu region for pesticidal properties - DST	11.95	PI	2008 - 2012
2.	• All India Coordinated Research project on pulses – IIPR, Kanpur, ICAR	-	PI	2004 - 2016
3.	• All India Coordinated Research project on Biological Control – NBAIR, Bengaluru, ICAR	-	PI	2019 onwards
4.	• Establishment of Laboratory cum Guava Training Centre at SKUAST-Jammu (PI) – NABARD (RIDF-XXVIII)	307.67	PI	2022 - 2026
5.	• Technological intervention for controlling mango malformation to Optimize mango (<i>Mangifera indica</i>) productivity - HTM (MM-1)	2.67	Co-PI	2021 - 2022
6.	• Transfer of technology for management of alternate bearing problem through hormonal intervention in mango varieties of Jammu region - NABARD	10.54	Co-PI	2022 - 2025
7.	• Development of Rainfed areas of J & K funded by UT of Jammu and Kashmir - HADP	-	Co-PI	2023 onwards
8.	• Alternate Agriculture Systems for Sustainability - HADP	-	Co-PI	2023 onwards



PUBLICATIONS

S.No.	Particulars	Number	S. No	Particulars	Number
1	Research Papers	79	6	Conference Abstracts	35
2	Review Papers	05	7	Technical Bulletins	40
3	Books	05	8	Research Reports	21
4	Book Chapters	22	9	Extension Articles	05
5	Annual Reports	10	10	Teaching Manuals	04

□ **SELECTED PUBLICATIONS**

First Reports

1. Reena, Anil Kumar and P.K. Rai (2018) Emerging risk of root weevil, *Acalymnavittatum* in muskmelon. *International Association for the Plant Protection Sciences (IAPPS Newsletter)* No. XII, December, 2018 3-4. – NAAS Rating – 7.83
2. SonikaJamwal, AnamikaJamwal, A.C. Jha, Anil Kumar and Reena (2018) Bakanae (foolish seedling), an emerging disease of rice. *International Association for the Plant Protection Sciences (IAPPS Newsletter)* No. II: 2-3. -NAAS Rating – 7.83
3. Reena, Anil Kumar and P.K. Rai. 2018. Huge earthworm populations damaging several important crop plants. *International Association for the Plant Protection Sciences (IAPPS) Newsletter*. No. I. January, 2018, pp. 3-4.- NAAS Rating – 7.83
4. Reena, Anil Kumar and P.K. Rai. 2018. Weeds acting as alternate hosts for mealy bugs vis-à-vis Mealy bugs acting as bioagents in weed management. *International Association for the Plant Protection Sciences (IAPPS) Newsletter*. No. IX. September, 2018, pp. 3-4. - NAAS Rating – 7.83

Research Publications

International Publications

1. Reena, Anil Kumar, Jai Kumar, B.K. Sinha, Sonika Jamwal and Vikas Gupta. 2021. Managing *Iceryapurchasi* and *Planococcuscitrinenace* in Aonla under rainfed conditions of Jammu subtropics. *International Journal of Tropical Insect Science*, <https://doi.org/10.1007/s42690-021-00712-3> Published online December 2021.
2. Reena, Sharma, M., Singh, S. K., Kumar, A., **Sinha, B. K.** and Singh, A. P. 2020. *Earias vittella* management by utilizing obnoxious weeds extracts of Jammu and Kashmir Himalayas, India. *International Journal of Tropical Insect Science*, <https://doi.org/10.1007/s42690-020-00297-3>. (NAAS 2020 Score: 6.85; Journal ID: I343; ISSN: 1742-7584).

3. Reena Sinha, B. Singh, P.K. Rai, A. Kumar, S. Jamwal and B.K. Sinha (2018) Soil fertility management and its impact on mustard aphid, *Lipaphis erysimi* (Kaltenbach) (Hemiptera: Aphididae). *Cogent Food and Agriculture*. 4: 1450941. – Taylor and Francis Group
<https://doi.org/10.1080/23311932.2018.1450941>
4. Reena and Ram Singh. 2007. Insecticidal potential of *Pongamia pinnata* seed fractions of methanol extract against *Earias vittella* (Lepidoptera: Noctuidae). *Entomologia Generalis*. 30(1): 051-062. NAAS Rating – 7.10
5. Anil Kumar and Reena. 2007. Assessment of grain yield potential of mungbean in shivalik foothills of India. *Journal of Agronomy*. 6(3): 476-479. NAAS Rating – 7.7

National Journals

1. Reena, Kaur, A., Singh, M., **Sinha, B. K.**, Kumar, A. and Ahmad, S. 2020. Impact of abiotic factors on population dynamics of *Bactrocera dorsalis* Hendel and *Bactrocera zonata* (Saunders) at different ecological zones in NW Plains of India. *Journal of Agrometeorology*, **22(3)**: 250-257. (NAAS 2020 Score: 6.64; Journal ID: J033; ISSN: 0972-1665).
2. Reena, M. Padha, S.K. Singh, Mahender Singh, A. Kumar and B.K. Sinha. 2018. Managing chickpea wilt; *Fusarium oxysporum* through use of Biorationals. *Legume Research* Vol. 41 (4): 1-6 DOI: 10.18805/LR-3987. On line first article NAAS Rating – 6.12

BOOKS AUTHORED

- Anil Kumar, Parveen Kumar, Reena, Brinder Singh, Jai Kumar. Rainfed Agriculture in Jammu region a perspective 2016 ISBN:978-1-73034-201-1
- Reena, Sonika Jamwal Anil Kumar Jai Kumar, P.K.Rai, Brinder Singh and R. Puniya (2018) A colour Handbook on rainfed *Rabi* crops – Protection constraints and Mitigation Strategies New India Publishing Agency, New Delhi ISBN: 978-93-86546-69-2.
- Reena, Sonika Jamwal Anil Kumar A.P.Singh, Vikas Abrol and R. Puniya and Jai Kumar (2018) A colour Handbook on rainfed *Kharif* crops – Protection constraints and Mitigation Strategies New India Publishing Agency, New Delhi ISBN: 978-93-85516-32-0.
- Bhav Kumar Sinha and Reena (2018) Abiotic and Biotic Stress Management in Plants: Volume 01: Abiotic Stress New India Publishing Agency, New Delhi ISBN: 9789386546579.
- Bhav Kumar Sinha, Reena and Surendra Prasad (2018) Abiotic and Biotic Stress Management in Plants: Volume 02: Abiotic Stress New India Publishing Agency, New Delhi ISBN: 9789386546586.

Academic Qualification:

Cleared NET held in October 2001 conducted by A.S.R.B., New Delhi.
Cleared NET conducted by CSIR, New Delhi held in December, 2003.

Honours and awards:

Recipient of full freeship during BSc. (Ag) degree program.

Recipient of **Junior Research Fellowship (ICAR)** during MSc. (Ag) degree program.

Recipient of Merit scholarship during Ph.D. (Ag) degree program.

Department of Science and Technology (DST), Government of India, **Young Scientist Project Award (2009-2012)** under fast track scheme for young scientists.



PATENT GRANTED

Plant disease identification device (Patent No.410348-001, dated: 13.03.2024)

Recommendations included in POP

- Basal application of MOP (40kg/ha) in addition to the recommended dose or neem cake @ 5q/ha reduced aphid incidence by 41.12%, thereby increasing the grain yield by 18.24% in mustard (DGS-1).
- When mustard aphid population crossed ETL (50-60 aphids per 10 cm twig), spraying of 2.5% castor seed extract reduced aphid population by 49.18% and *Cannabis* leaf extract reduced the aphid population by 39.29% in comparison to control and was at par with Thiamethoxam @ 0.33g/lit spray (38.04% reduction in aphid population) after seven days of spray.
- Seed treatment with Bavistin @ 2 gm/kg and spraying of *Trichoderma viride* @ 4g/kg after two months of sowing showed minimum wilt incidence and increased the grain yield of chickpea by 59.08%.
- MOP (80 kg/ha) or Neem cake @ 2 q/ha significantly reduced stem borer infestation by 84.28 and 72.08%, respectively and increased grain yield by 81.04 and 64.72%, respectively in Maize under rainfed conditions.
- Wild tobacco extract prepared in cow urine and sprayed @ 2.5%, recorded 78.68 and 78.89% reduction in citrus psylla population in improved and recommended practice, respectively in citrus.
- Seed treatment with carbendazim @ 2gm per kg of seed and application of *Trichoderma viride* @ 4g/litre of water after two months of sowing reduced disease incidence by 65.62% & 58.61% and increased seed yield by 65.1% & 16.12% in Urdbean over Farmer's and recommended practice respectively.

- IPM module (Bio-inoculant (*Azospirillum*) + Intercropping (with mungbean 3:2) + Mechanical control + Cow urine + Yellow sticky trap) is recommended for achieving higher sesame equivalent yield (483.10 kg/ha) over the recommended practice and reducing the insect pests and Phyllody incidence in sesame.
- No chemical insecticide spray as more than 50% of the insect pest population is managed by their predator and parasitoid. Application of biorationals like Neem only should be done for managing pea insect.
- Chickpea intercropped with linseed (1:1) and mustard taken as border crop is recommended for reducing pod borer damage by gram pod borer and achieving higher chickpea equivalent yield (1151.91 kg/ha) over the recommended practice.
- In lentil, the soil application with cow urine @ 20% reduced the incidence of collar rot 12.02% and increased the grain yield to 2.63 q/ha.
- The improved practice maize + cowpea (1:1) with napier / sorghum as border crop may be done to reduce stem borer infestation and higher equivalent yield.
- The Pearl millet hybrids namely GHB 732, HHB 223 and GHB 744 could be well grown under rainfed conditions of sub tropical areas of Jammu region and also well suited under crop contingent planning.
- The Pearl millet varieties, Pusa composite 701, Pusa composite 383 and Dhanshakti may be grown under rainfed conditions of sub tropical areas of Jammu region and are also well suited under crop contingent planning.

□ **TRAININGS ATTENDED**

- National Trainings: 10

□ **LECTURES DELIVERED AS RESOURCE PERSONS IN TRAININGS / CONFERENCES**

- National : 11 State Level: 250

□ **MEMBERSHIP IN PROFESSIONAL SOCIETIES— NATIONAL/INTERNATIONAL**

- Life member of 'The Indian Society of Dryland Agriculture' CRIDA, Hyderabad
- Life member of "Entomological Association of India" Udaipur
- Life member of "Indian Society of Pulses Research and Development" IIPR, Kanpur
- Life member of "RAU Journal of Research",

- Life member of “Journal of Hill Agriculture”
- Life member of "Entomological Society of India" , New Delhi
- Indian Ecological Society, Ludhiana, Punjab, India
- Gochar Educational & Welfare Society, Saharanpur, U.P., India

I hereby solemnly declare that all the statements made above are true and correct to the best of my knowledge.

Signature of the Applicant(s)

Place :

Dated :