

BIOGRAPHICAL INFORMATION

SONIKA JAMWAL, Ph.D. Plant Pathology

Permanent Position

Chief Scientist Cum Professor

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



Permanent Residential Address: House No. 217 A, Lane No. 15 Patel Nagar, Talab Tillo, UT-Jammu & Kashmir, India Mobile: +91 9419213393 (India No. /WhatsApp),

E-mail: sonikajamwal1@gmail.com

Educational Qualification

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|------|--|
| 2007 | Ph. D. Plant Pathology SHUATS- Allahabad |
| 2003 | M. Sc. Plant Pathology SHUATS- Allahabad |
| 2000 | B.Sc. Agriculture C.C.S. University, Meerut U.P. India |

PROFESSIONAL CAREER

- 06/2022-present Chief Scientist/Professor, Plant Pathology, ACRA- Dhiansar, SKUAST-Jammu
- 06/2019-06/2022 Sr. Scientist/ Associate Professor, Plant Pathology, ACRA- Dhiansar, SKUAST-Jammu
- 06/2007-06/2019 Junior Scientist/Assistant Professor (Plant Pathology), ACRA- Dhiansar, SKUAST-Jammu
- 6/2006-6/2007 Research Associate, Division of Plant Pathology, SKUAST-Jammu

RESEARCH INTERESTS & EXPERTISE BY KEYWORDS

Management of plant diseases of various crops with Bio-control Agents, Plant Extracts, Animal wastes and Chemical methods.

KEY SKILLS

Plant Diseases management with IDM (Fungal and Bacterial Bio control agents, Animal wastes viz. cow-urine, FYM and Plant extracts)

□ **TEACHING EXPERIENCE (Courses Taught)**

At PG Agriculture level, taught 03 different courses

At Diploma Courses in Agriculture and Horticulture

level, taught 04 different courses

□ **STUDENT GUIDANCE (UG/PG/PhD)**

- Post-graduate in Plant Pathology : 04 (As major advisor since 2014 to 2026)
- PhD in Vegetable Sciences (Co- Advisor) : 01 (As a Dean Nominee since 2025)
- Co-Advisor / member advisory committee :01 (Since 2023)

□ **PROJECTS/RESEARCH GRANTS-Externally Funded Projects**

S. No	Project title and Funding agency	Budget (Rs. in Lakh)	Role	Duration
1	Development of AI powered Agribot for precision input application in orchards and site-specific weed management in field crops, funded by Ministry of Electronics & Information Technology (MeitY), New Delhi	472.0	Co P.I.	2024-2027 (03 Years)
2.	All India Coordinated Research project on pulses – IIPR, Kanpur, ICAR	-	Co-PI	2004-2016
3.	All India Coordinated Research project on Biological Control – NBAIR, Bengaluru, ICAR	-	Co-PI	2019 (Onward)
5	Establishment of Laboratory cum Guava Training Centre at SKUAST-Jammu (PI) – NABARD (RIDF- XXVIII)	307.67	Co-PI	2022-2026 (03 Yrs)
6	Development of Rainfed areas of J & K funded by UT of Jammu and Kashmir - HADP	-	Co-PI	2023 Onward

□ **PUBLICATIONS**

S. No.	Particulars	Number	S. No	Particulars	Number
1	Research Papers	35	6	Conference Proceedings	10
2	Review Papers	03	7	Technical Bulletins	40
3	Books	04	8	Research Reports	10
4	Book Chapters	10	9	Extension Articles	05
5	University Annual Reports	10	10	Training Manuals	04

□ **SELECTED PUBLICATIONS**

First Reports

- **Sonika Jamwal**, Anamika Jamwal, 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 – 8.17
- **Sonika Jamwal, July (2018)** Fruit drop, an emerging disease of mandarin orange. *International Association for the Plant Protection Sciences (IAPPS Newsletter)* No. **VII**: 3-4. Rating-8.17
- A. C. Jha, Reena, A.P. Singh, B.K. Sinha and **Sonika Jamwal**. Feb. 2020. Number II. Turicum leaf blight- An emerging disease of maize in Jammu and Kashmir. *International Association for the Plant Protection Sciences (IAPPS Newsletter)* No. **II**: 3-4. NAAS Rating – 8.17
- Reena, **Sonika Jamwal**, A.P. Singh, B.K. Sinha and A.C. Jha. November. 2020. Number II. Mustard aphid and white rust devastating mustard crops. *International Association for the Plant Protection Sciences (IAPPS Newsletter)* No. **XI**: 2-3. NAAS Rating – 8.17

Research Publications

1. Reena, Gupta, V., Singh, A. P., Kumawat, P. K., Sinha, B. K., Jha, A. C., **Jamwal, S.**, Singh, P., Singh, B., Kumar, J., Sharma, R., Rai, A. P., Sharma, R. and Kumar, V. **(2022)** Succession of Pea Insect Pests and their Natural Enemies in Rainfed Sub Tropics of Jammu and Kashmir region of N-W Himalayas *Agricultural Mechanization in Asia and Latin America*, **53(08)**: 6061- 6017. (NAAS 2022 Score: 6.14; Journal ID: A093; ISSN: 0084-5841).

NAAS (6.14)

2. Permendra Singh, Dilip Kachroo, N.P. Thakur, R. Puniya, A. P. Singh, Brinder Singh, Shashank Shekar Singh, Jai Kumar, Vikas Gupta, Reena, **Sonika Jamwal**. **(2022)** Crop bio-intensification using different land configuration and nutrient management practices for profitable and sustainable production under foot hill plains of north-western Himalayas. *Agricultural Mechanization in Asia, Africa and Latin America*, **53(02)**: 5795 – 5808.

(NAAS 2022 Score: 6.14)

3. Sanjeev Kumar, Anil Kumar, **Sonika Jamwal**, Vikas Abrol, Brinder Singh and Jai Kumar (2022) Divergence studies of black gram (*Vigna mungo L.*) for selection of drought tolerant genotypes under rainfed conditions of North Western Himalayas in J and K, India. *Legume Research* LR-4083{1-6}, Print ISSN: 0250-5371/Online ISSN: 0976-0571. (NAAS-6.59)
4. Reena Sinha, Anil Kumar, Jai Kumar, B. K. Sinha, **Sonika Jamwal** and Vikas Gupta (2021) Managing *lcerya* purchase and *Planococcus citri* menace in Aonla under rainfed conditions of Jammu subtropics **International Journal of Tropical insect Sciences**. <https://doi.org/10.1007/s42690-021-00712-3>**African Association of Insect Scientists 2021. NAAS (6.54)**
5. Jai Kumar, A.P. Singh, Anil Kumar, Vikas Gupta, Brinder Singh, Mahender Singh, Permendra Singh, Reena and **Sonika Jamwal** (2021) Rainfall characteristics and probability analysis for crop planning of Samba district of Jammu and Kashmir (U.T.) India. *Agricultural Mechanization in Asia, Africa and Latin*

6. Reena, M. Sharma, S. **Jamwal**, A. Kumar, M. Singh, B. K. Sinha (2020) Managing chickpea wilt *Fusarium oxysporum* through use of biorationals Legume Research An International Journal, Vol. 43 Issue 3:452-457. (NAAS-6.59)

Book Authored

1. Reena, **Sonika Jamwal**, Anil Kumar, A. P. Singh, Vikas Abrol R. Puniya and Jai Kumar. (2020). A color Handbook on Rainfed Kharif crop Protection, Constrains and Mitigation Strategies. New India Publishing Agency, Pritam pura New Delhi.
2. Reena, **Sonika Jamwal**, Anil Kumar, A. P. Singh, Vikas Abrol R. Puniya and Jai Kumar. (2020). A color Handbook on Rainfed Kharif crop Protection, Constrains and Mitigation Strategies. New India Publishing Agency, Pritam pura New Delhi.
3. Anil Kumar, Sanjeev Kumar, Vikas Gupta, **Sonika Jamwal**, Jai Kumar. (2019). Package of practices for Rainfed Rabi crops. ACRA- Dhiansar SKUAST, Jammu.
4. Anil Kumar, Sanjeev Kumar, Vikas Gupta, Sonika Jamwal, Jai Kumar. (2019). Package of practices for Rainfed Kharif crops. ACRA- Dhiansar SKUAST, Jammu.

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.

□ **AWARDS / FELLOWSHIP / RECOGNITION**

- **Young Plant Pathologist** for significant and outstanding contribution in the field of Plant Pathology in recognition of awardee excellence presentation on the research on the research and presented the work during 3rd International Conference (Hybrid Mode) on Food, Agriculture and Innovations-(ICFAI) w.e.f.24-26 December-2021 United Lightning Vision Association.
- **Dr. Sonika Jamwal** as a reviewer excellence award by Legume Research (ARCC Journals) on 11-09-2020.
- 3. **Dr. Sonika Jamwal** as a reviewer excellence award by Agricultural Reviews (ARCC Journals) on 21-12-2020.
- 4 **Dr. Sonika Jamwal** as a reviewer excellence award by Legume Research (ARCC Journals) on 18-06-2021.
- 5. **Dr. Sonika Jamwal** as a reviewer excellence award by Legume Research (ARCC Journals) on 11-08-2021.
- 6. **Dr. Sonika Jamwal** as a reviewer excellence award by Agricultural Reviews Research (ARCC Journals) on 11-09-2020.

□ **TRAININGS ATTENDED**

- National Trainings: 10

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

- National :11 State Level: 250

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

- Indian Phytopathological Society (Life membership)
- Society for Biocontrol Advancement (Life membership)
- Society of Extension Education (Life membership)
- Society of Plant Protection Sciences (Life membership)
- The Indian Society of Dryland Agriculture (Life membership)
- Society for Integrated Development of Agriculture, Veterinary and Ecological Sciences (SIDAVES)
- Indian Journal of Entomology (Annual membership 2020)
- Mobilization Society for Community Mobilization for Sustainable Development
(Life Membership)

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 :