

# Curriculum vitae

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**Prof. Sunil Kumar**

## Personal Details

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**Citizenship** India

## Professional Qualifications

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S.No	Degree	Subject/Title of Thesis	University	Year of Passing
1	Ph.D.	Entomology and Apiculture <u>Thesis Title: “Faunistic studies on cultivated edible mushrooms and biomanagement of their nematode pests”</u>	Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.)	2007
2	M.Sc.	Entomology and Apiculture <u>Thesis Title: “Eco-friendly approaches of nematode management in tomato (<i>Lycopersicon esculentum</i> Mill.)”</u>	Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.)	2003
3	B.Sc.	B Sc. Horticulture	Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.)	2001
4	NET	Agricultural Nematology	ICAR	2003

## Areas of Specialization

- Entomology / Plant Nematology
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## Employment History

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- **Professor**, Department of Animal Science, School of Life Sciences, Central University, Himachal Pradesh since 04<sup>th</sup> Sept. 2022.
- **Associate Professor**, Department of Animal Science, School of Life Sciences, Central University, Himachal Pradesh w.e.f. 04<sup>th</sup> Sept. 2019 to 03<sup>rd</sup> September 2022.
- **Assistant Professor (Entomology & Apiculture)** at COH&F, Neri, Hamirpur (H.P.) India -177001 w.e.f 05<sup>th</sup> April 2010 to 03<sup>rd</sup> September 2019.
- **Assistant Nematologist** under “All India Coordinated Research Project on Plant Parasitic Nematodes and Integrated Approach of their Management” in the Department of Entomology, CSK HPKV, Palampur (HP)- India from 24<sup>th</sup> Nov. 2008 to 05<sup>th</sup> April 2010.
- **Research Associate** under “All India Coordinated Research Project on Plant Parasitic Nematodes and Integrated Approach of their Management” from 03<sup>rd</sup> Jan. 2007 to 23<sup>rd</sup> Nov.08.
- **Senior Research Fellow** under “Planned honey bee pollination for the improvement in horticultural crops” from 02.11.2006 to 02.01.2007.
- **Junior Research Fellow** under “Scope and potential of plant resources yielding bio-pesticides in Punjab (FMS-22-41)” from 28<sup>th</sup> Nov. 2005 to 31<sup>st</sup> March 2006.

## Personal Distinctions

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- Best Researcher Award of the Central University of Himachal Pradesh for the session 2021-22.
- M. Sc. and Ph. D. merit scholarship
- Second achiever in “**Top Two Achiever Award**” for 1994-1995 (PSSCIVE Foundation Day Award)
- Stood first in school in plus two with distinction in three subjects (1995)

### Invited Seminars and Invited Conference Presentations (last 5 years)

- ✓ Deliver a lecture on “Use of insecticides in different crops and their effects on the environment” at Swami Vivekanand P.G. College of Education, Tarkwari, Distt. Hamirpur (HP) on 01 April 2017.
- ✓ Delivered two lectures on (i) Identification of different species of nematodes prevalent under protected environment and (ii) Eco-friendly technologies for management of nematodes in polyhouses in a model training course on “*Advances in protected cultivation of high value vegetable crops*” at CSKHPKV, Palampur (HP) w.e.f. 16<sup>th</sup> to 23<sup>rd</sup> Sept. 2019.
- ✓ Deliver a lecture on “Nematode problem in fruits and vegetables nurseries” on 06.03.2020 in a 200 hours skill development training on ‘Nursery Workers’ job role under ASCI w.e.f. 24.02.2020 to 19.03.2020 at KVK Sundernagar (Mandi).
- ✓ Delivered a lecture entitled “Human values and Professional Ethics” in short term training program on “Human values and Professional Ethics: Values orientation of faculty and administrators of Technical Institute (18<sup>th</sup> to 23<sup>rd</sup> December 2022) under the banner of All India Council for Technical Education (AICTE), New Delhi at Laureate Institute Of Pharmacy, Jawalamukhi, Kangra (HP) on 21<sup>st</sup> December 2021.
- ✓ Delivered a lecture in Online Brain Storming session on “Necessity for Judicious Use of Pesticides in Mushroom and Other Minor Crops” on the topic Impact of pesticides on Environment Management” organized by Mushroom Society of India on 25<sup>th</sup> March 2022

### Teaching

<b>M Sc Zoology</b>	
1. Agricultural Entomology	11. Applied Zoology
2. Entomology Lab.-I	12. Basics of Wildlife Studies
3. Pesticides Hazards and Environment	13. Functional Anatomy of chordates and Fundamentals in Microbiology-LAB
4. Insect Control and IPM	14. Evolution
5. Apiculture	15. Comparative Physiology
6. Invertebrate Biology	16. Sericulture and Apiculture
7. Biostatistics	17. M Sc Dissertation
8. Bioinformatics	18. Medical Entomology
9. Parasitology	19. Animal Behaviour
10. Traditional uses of animals for sustainable social and health welfare	
<b>Ph D Zoology</b>	
1. Advanced Research Tools and Techniques	3. Advances in Entomology and management of Insect Pest
2. Research and Publication Ethics	4. Indian traditional knowledge and practices

### Master/Doctoral Thesis Supervision

Programme	Completed	Ongoing
M Sc	24	05
Ph D	01	06

### University Administration

- Director, Research Development Cell of the University.
- Head, Department of Animal Science since October, 2019.

- Proctor of the University since March, 2021.
- Member of Executive Council of University (2020-2021).
- Acted as Dean SoLS, Head Department of Plant Science, Director CCBB and Member of AC.
- Member/VC Nominee of various BoS, academic reform and IQAC committee, University building committee, Research advisory committee of Shoolini University.
- Chairman/Member of various Tender opening/purchase committee etc.
- Member of E- Waste Management cell of the University.
- Internship activity coordinator of institution innovative council CUHP.
- Chairman, Monal Club Department of Animal Science, School of Life Sciences CUHP.
- Institutional member secretary of institutional bio-safety committee CUHP.

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## Research Projects and Income

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PI/Co-PI	Completed	Ongoing
	07	02

## Publications

### Refereed Journal Articles

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1. Khanna, A.S. and **Kumar, S.** 2003. Assessment of avoidable yield losses in *Momordica charantia* due to *Meloidogyne incognita* race 2. *Indian Journal of Hill Farming*. **16** (1&2):111-112.
2. Khanna, A.S. and **Kumar, S.** 2005. Role of *Caenorhabditis elegans* (Maupas) Dougherty in the cultivation of White button mushroom *Agaricus bisporus* (Lange) Imbach. *Indian Journal of Mushrooms*. **23**(1&2): 29-33.
3. Khanna, A.S. and **Kumar, S.** 2005. Effect of myceliophagous nematodes on flush pattern and yield of *Agaricus bisporus* (Lange) Imbach. *Indian Journal of Mushrooms*. **23**(1&2): 34-36.
4. Khanna, A.S. and **Kumar, S.** 2006. *In vitro* evaluation of neem based pesticides against *Meloidogyne incognita*. *Nematologia Mediterranea*. **34**(1): 49-54.
5. **Kumar, S.** and Khanna, A.S. 2006. Influence of transplant spacing and planting date on fruit yield, plant status of tomato and population development of *Meloidogyne incognita*. *Nematologia Mediterranea*. **34**(2): 133-138.
6. **Kumar, S.** and Khanna, A.S. 2006. Role of *Trichoderma harzianum* and Neem Cake Separately and in Combination against Root-knot Nematode on Tomato. *Indian Journal of Nematology*. **32**(2):264-266.
7. Khanna, A.S.; Chandran, R.A. and **Kumar, S.** 2006. Sources of Nematode Inoculum/ in White Button and Milky Mushroom. *Indian Journal of Nematology*. **32**(2):267-269.
8. **Kumar, S.** and Khanna, A.S. 2006. Effect of neem-based products on root-knot nematode population and growth parameters of tomato. *Nematologia Mediterranea*. **34**(2): 139-144.
9. **Kumar, S.** and Khanna, A.S. 2006. Efficacy of *Trichoderma viride* and neem cake against root-knot nematode on tomato. *Pest Management and Economic Zoology*. **14**(1): 103-106.
10. **Kumar, S.**; Khanna, A.S. and Chandel, Y.S. 2007. Effect of population levels of *Aphelenchoides swarupi* and *Aphelenchus avenae* inoculated at spawning on mycelial growth of mushrooms and nematode multiplication *Nematologia Mediterranea*. **35**(2): 155-163.
11. **Kumar, S.**; Khanna, A.S. and Chandel, Y.S. 2007. Susceptibility of mushrooms to *Aphelenchoides swarupi* and *Aphelenchus avenae*. *Nematologia Mediterranea*. **35**(2): 205-211.
12. Kapoor, S.; Chandel, Y.S. and **Kumar, S.** 2008. Pathogenic effects of entomopathogenic nematode, *Heterorhabditis bacteriophora* against some insect-pests of agricultural importance. **In:** Proceedings of 2<sup>nd</sup> Congress on Insect Science held at Punjab Agricultural University, Ludhiana, India from 21-22 Feb. 2008, pp. 344-345 (Extended Abstract).

13. **Kumar, S.**; Khanna, A.S.; Verma, A.K. and Chandel, Y.S. 2008. Effect of inoculation time on damage potential of *Aphelenchoides swarupi* and *Aphelenchus avenae* to Rodman's *Agaricus*, *Agaricus bitorquis*. *Nematologia Mediterranea*. **36**(2): 171-178.
14. **Kumar, S.**; Khanna, A.S. and Chandel, Y.S. 2008. Damage potential of *Aphelenchoides swarupi* and *Aphelenchus avenae* in white button mushroom, *Agaricus bisporus*. *Indian Journal of Nematology*. **38**(2):146-153.
15. Pradeep Kumar; Chandel, Y.S. and **Kumar, S.** 2009. Evaluation of some insecticides for the management of *Agrotis segetum* Dennis and Schiff. *Indian Journal of Agricultural Sciences*. **79**(3): 235-239.
16. **Kumar, S.**; Khanna, A.S.; Verma, A.K.; Chandel, Y.S and Jandaik, S. 2009. Effect of population levels of *Aphelenchoides swarupi* and *Aphelenchus avenae* on mycelial growth of mushrooms and nematode population. *Indian Journal of Nematology*. **39**(1):14-24. .
17. Chandel, Y.S.; Kapoor, S. and **Kumar, S.** 2009. Virulence of *Heterorhabditis bacteriophora* (Poinar) against cutworm (*Agrotis segetum* Denis and Schiff). *Journal of Biological Control*. **23**(4): 409–415.
18. **Kumar, S.** and Chandel, Y.S. 2009. Community analysis of myceliophagous nematodes associated with commercially cultivated mushrooms in Himachal Pradesh. *Plant Disease Research*. **24**(2): 178-181.
19. **Kumar, S.**; Chandel, Y.S. and Sharma, P.K. 2010. Community analysis of major plant parasitic nematodes associated with rice in Himachal Pradesh. *Oryza*. **47**(3): 231-236.
20. **Kumar, S.**; Khanna, A.S.; Chandel, Y.S.; Rana, V.K and Jandaik, S. 2010. Damage potential of *Aphelenchoides swarupi* and *Aphelenchus avenae* in Milky mushroom, *Calocybe indica*. *Nematologia Mediterranea*. **38**(1) 7-12.
21. Khanna, A.S.; Sharma, A. and **Kumar, S.** 2010. Effect of nursery treatment and neem based bare root dips in formulations of plant extract on *Meloidogyne incognita* in tomato. *Nematologia Mediterranea*. **38**(2): 129-133.
22. Chandel, Y.S.; **Kumar, S.**; Jain, R.K. and Vashisth, S. 2010. An analysis of nematode problems in greenhouse cultivation in Himachal Pradesh and avoidable losses due to *Meloidogyne incognita* in tomato. *Indian Journal of Nematology*. **40**(2): 198-203.
23. Jarial, K.; Dogra, B.; Mandradia, R.K.; **Kumar, S.**; Sharma, D. And Gupta, A.K. 2011. Investigations on a new bacterial disease of bottle gourd in sub-tropical zone of Himachal Pradesh. *Plant Disease Research*. **26**(1): 68-75.
24. Rana, V.K. and **Kumar, S.** 2011. Performance of *Apis mellifera* L. colonies in high hills of Himachal Pradesh. *Indian Journal of Entomology*. **73**(3): 241-243.
25. **Kumar, S.**; Khanna, A.S. and Rana,V.K. 2012. Insect fauna associated with cultivated edible mushrooms in Himachal Pradesh. *Journal of insect Science*. **25**(1): 29-38.
26. Vashisth, S.; Chandel, Y.S. and **Kumar, S.** 2012. An biology and damage potential of *Spodoptera litura* Fabricius on some important greenhouse crops. *Journal of insect Science*. **25**(2): 150-154.
27. Khanna, A.S.; Sharma, A. and **Kumar, S.** 2012. Biomangement of *Sciara* sp. in white button mushroom, *Agaricus bisporus* (Lange) Imbach. *Journal of Insect Science*. **25**(4): 333-341.
28. Vashisth, S.; Chandel, Y.S. and **Kumar, S.** 2013. Observations on insect pest problems of polyhouse crops in Himchal Pradesh. *Journal of Entomological Research*. **37**(3): 253-258.
29. Negi, R.; **Kumar, S.** and Dhiman, S.R. 2014. Evaluation of liliun (*Lilium* spp.) cultivars for low hills of Himachal Pradesh. *Indian Journal of Scientific Research and technology*. **2**(4): 8-10.
30. Negi, R.; **Kumar, S.** and Dhiman, S.R. 2014. Evaluation of different cultivars of gladiolus (*Gladiolus grandiflorus* L.) suitable for low hills of Himachal Pradesh. *Indian Journal of Scientific Research and technology*. **2**(6): 6-11.

31. Sharma, Prianka; **Thakur, Sunil** and Awasthi, Pamita. 2015. Synthesis, Characterization, Biological Evaluation and Docking Study of Heterocyclic Pesticide against *G. melonella*. *Applied Biochemistry and Biotechnology*. DOI 10.1007/s12010-015-1562-x. (NAAS 7.69)
32. Khanna, A.S.; Sharma, A.; Singh Pallavi, K.R. and **Kumar, S.** 2015. Collembolan fauna associated with cultivated edible mushrooms in Himachal Pradesh. *Agric-INTERNATIONAL*. **1**(1&2): 69-72.
33. Negi, R.; Jarial, K; **Kumar, S.** and Dhiman, S.R. 2015. Evaluation of different cultivars of chrysanthemum suitable for low hill conditions of Himachal Pradesh. *Journal of Hill Agriculture*. **6**(2): 144-146.
34. Jarial, K.; Jarial, R.; Sharma, D; **Kumar, S.** and Dogra, B. 2015. Strategy for the Management of Bacterial Spot of Bottle Gourd Caused by *Xanthomonas cucurbitae* under Low Hill Conditions of Himachal Pradesh. *International Journal of Bio-resource and Stress Management*. **6**(6): 744-748.
35. Sharma, Prianka; **Thakur, Sunil** and Awasthi, Pamita. 2016. In silico and bio assay of juvenile hormone analogs as an insect growth regulator against *Galleria mellonella* (wax moth) – Part I. *Journal of Biomolecular Structure and Dynamics*. DOI: <http://dx.doi.org/10.1080/07391102.2015.1056549>.
36. **Kumar, S.**; Khanna, A.S. 2016. Biomangement of *Aphelenchoides swarupi* in *Agaricus bisporus* with bacterial bioagents. *Journal of Insect Science*. **29**(1): 131-135. (NAAS 3.44)
37. Thakur, R; **Kumar, S.** and Awasthi, C.P. 2016. Biochemical evaluation of tartary buckwheat (*Fagopyrum tataricum* Gaertn.) genotypes of cold dry desert of Himachal Pradesh. *Journal of Hill Agriculture*. **7**(1): 125-128.
38. Negi, R.; Jarial, K.; Jarial, R.S.; **Kumar, S.** and Dhiman, S.R. 2016. Evaluation of liliium cultivars for suitability under low hill conditions of Himachal Pradesh. *Journal of Hill Agriculture*. **7**(2): 201-203.
39. Thakur, R; **Kumar, S.** and Awasthi, C.P. 2017. Biochemical evaluation of some promising varieties/genotypes of underutilized food legumes of Himachal Pradesh. *International Journal of Farm Sciences* **7**(1): 1-6.
40. Thakur, R; **Kumar, S.**; Chander P.; Awasthi, C.P. and Verma, M.L. 2017. Biochemical Evaluation of Tartary Buckwheat (*Fagopyrum tataricum* Gaertn.) Genotypes of cold desert of Himachal Pradesh. *Bioscience Biotechnology Research Asia*. **14**(2): 821-825.
41. Khanna, A S; Sharma, A and **Kumar, S.** 2017. Life stages, longevity, seasonal abundance and nature of damage of *Cyllodes indicus* Grouvelle (Coleoptera: Nitidulidae) on oyster mushroom, *Pleurotus sajor-caju*. *International Journal of Farm Sciences*. **7**(3): 141-145.
42. Singh, K P; Khanna, A S and **Kumar, S.** 2018. Incidence of root-knot nematode (*Meloidogyne* species) on various hosts in different agro-climatic ranges of Himachal Pradesh, India. *Indian Journal of Nematology*. **48**(1): 96-102
43. Sharma, A; Rana, V K and **Kumar, S.** 2018. New record of harar (*Terminalia chebula*) fruit borer *Dichocrocis* sp. (Lepidoptera: Crambidae). *Indian Journal of Entomology*. **80**(4): 1703-1704.
44. Gupta, H; **Kumar, S\***. and Sharma, R. 2020. Eco-friendly management of root-knot nematode, *Meloidogyne incognita* (Kofoid & White) Chitwood using seed kernel extracts, cow urine and agniastra. *Journal of Entomology and Zoology Studies*. **8**(2): 1115-1118.
45. Meenakshi; **Kumar, S\***. and Sharma, R. 2020. Biology of diamond back moth *Plutella xylostella* on different crucifers. *Indian Journal of Entomology*. **82**(2): 226-227. DoI No.: 10.5958/0974-8172.2020.00050.4.
46. Gupta, H; **Kumar, S\***. and Sharma, R. 2020. *In-vitro* efficacy of plant extracts on root-knot nematode, *Meloidogyne incognita*. *Indian Journal of Nematology*. **49**(2): 211-212.
47. Sharma, A; **Kumar, S\***; Sharma, D. and Kumar, R. 2021. Identification and morphometry of mushroom fly *Sciara orientalis* on *Agaricus bisporus* in sub-tropical areas of Himachal Pradesh. *Journal of Food, Agriculture & Environment*. **19** (1): 59-60.

48. Sinha, S; Kumar, B; Kumar, A; **Kumar, S.** and Kumar R. 2021. To study haematological restoration potential of *Mentha arvensis* and *Myristica fragrans* against arsenic induced toxicity. *European Journal of Pharmaceutical and Medical Research.* 8(3):324-328.
49. Sinha, S; Kumar, B; Kumar, A; Ghosh, A; Shanker, P; **Kumar, S.** and Kumar R. 2021. Comparative hepatoprotective effect of *Mentha arvensis* and *Myristica fragrans* against arsenic induced toxicity in rat. *World Journal of Pharmaceutical Research.* 10(2):1319-1328.
50. Mahajan, K; **Kumar, S\***; Rao, A; and Mahajan A K. 2021. Microbial diversity and their role in *Agaricus bisporus* production. *International Journal of Current Microbiology and Applied Sciences.* 10(7):xx-xx ISSN: 2319-7706.
51. Kumar, D, Shubham, Dogra B S, **Thakur S,** Kumar S, Kumari S, Chandel VGS, Kaler R, Guleria V and Chauhan A. 2021. Genetic evaluation of garden pea (*Pisum sativum* L.) for pod yield and its contributing traits. *Biological Forum – An International Journal* 13(1): 768-775.
52. Sharma, A; Rana, VK; Kuma, R and **Kumar, S\***. 2021. Eco-friendly management of *Sciara orientalis* in *Agaricus bisporus* with agniastra, seed kernel extracts of *Melia azedarach* and different colored sticky traps and light traps. *Research and Reviews Journal of Agriculture and Allied Sciences.* 10(2): e-ISSN: E 2347-226X p-ISSN: 2319-9857.
53. Pathania, D; Sharma,M; Sonu; **Kumar, S;** Thakur, P; Torino, E; Janas, D and Thakur, S. 2021. Essential oil derived biosynthesis of metallic nano-particles: Implementations above essence. *Sustainable Materials and Technologies* 30 (2021) e00352. <https://doi.org/10.1016/j.susmat.2021.e00352>
54. Kumari, P; Raina, K; **Thakur, S;** Sharma, R; Natália Cruz-Martins; Kumar, P; Barman, K; Sharma, S; Kumar, D; Prajapati, P K; Sharma, R and Chaudhary, A. 2022. Ethnobotany, Phytochemistry and Pharmacology of Palash (*Butea monosperma* (Lam.) Taub.): a Systematic Review [NATURAL PRODUCTS: FROM CHEMISTRY TO PHARMACOLOGY (C HO, SECTION EDITOR)]. *Current Pharmacology Reports.* <https://doi.org/10.1007/s40495-022-00286-9>
55. Sharma, D; **Kumar, S;** Sharma, A; Kumar, R; Kumar, R; Kulharia, M and Kumar, M. 2022. Functional assignment to hypothetical proteins in *Orientia tsutsugamushi* strain Ikeda. *Bioinformatics* 18(3): 188-195
56. Chauhan, D; Saini, G; **Kumar, S** and Kumar, R. 2022. Combined interaction of cellular and extracellular components causes genetic cascade activation in breast cancer metastasis. *Oncology.* <https://doi.org/10.1159/000524302>
57. Tarkeshwar; Das, A; **Thakur, S\***; Kumari, R; Choudhary, K and Kapinder. 2022. Nanoparticles: applications in medicine and agriculture. *International Journal of Scientific and Research Publications.* 12 (3). ISSN 2250-3153 DOI:10.29322/IJSRP.12.03.2022.p12306, <http://dx.doi.org/10.29322/IJSRP.12.03.2022.p12306>
58. Kumari, R; **Kumar, S\***; Choudhary, K; Yangchan, J and Sharma, D. 2022. Ecofriendly Management of Mushroom Flies in edible cultivated Mushroom: A Review. *Journal of Emerging Technologies and Innovative Research.* 8 (12) (ISSN-2349-5162).
59. Saini, G; Chauhan, D; **Kumar, S** and Kumar, R. 2022. Endocrine-disrupting potential of arsenic on reproductive and other metabolic hormones *Journal of Food, Agriculture & Environment.* 19 (2):43-51.
60. Pathania, D; **Kumar, S;** Thakur, P; Chaudhary, V; Kaushik, A; Varma, R S; Furukawa, H; Sharma, M and Khosla, A. 2022. Essential oil-mediated biocompatible magnesium nanoparticles with enhanced antibacterial, antifungal, and photocatalytic efficacies. *Scientific Reports.* 12:11431 | <https://doi.org/10.1038/s41598-022-14984-3>
61. Kumar, R; Chauhan, D; Saini, G; Kumar,R; Kumar, S; Sharma, D; Sharma, M; Bharti, VK; Kumar, A; Ghosh, A. 2022. Down-regulation of RdRp complex and activated immune response due to increased arsenic level leads to decreased corona virus replication. *Current Research in Microbial Sciences.* 3(2022) 100162. <https://doi.org/10.1016/j.crmicr.2022.100162>
62. Pathania, H; Chauhan, P; Chaudhary, V; Khosla, A; Neetika; **Kumar, S;** Gaurav and Sharma, M. 2022. Engineering core-shell mesoporous silica and Fe<sub>3</sub>O<sub>4</sub>@ Au nanosystems for targeted cancer therapeutics: A review. *Biotechnology and Genetic Engineering Reviews.*

63. Mahajan, K; Rao, A; **Kumar, S**; Kumari, V; Mahajan, A K and Kurmi, A. Organization of *Mycogone pernicioso* triggering Wet Bubble Disease (WBD) of White Button Mushroom. Ecology, Environment and Conservation. 29 (1) : 389-399 ISSN 0971-765X.
64. Thakur, K; Sharma, A; Sharma, D; Brar, B; Choudhary, K; Sharma, AK; Mahajan, D; Kumar, R and **Kumar, S**. 2022. An insight into the interaction between *Argulus siamensis* and *Labeo rohita* offers future therapeutic strategy to combat argulosis. *Aquaculture International (Online)*.
65. Sharma, D; Sharma, A; Singh, B; **Kumar, S** and Verma, SK. 2022. Neglected scrub typhus: An updated review with a focus on omics technologies. *Asian Pacific Journal of Tropical Medicine* 15(12): 531-541

#### **RESEARCH PAPERS PRESENTED IN SYMPOSIA :**

1. **Kumar, S.** and Khanna, A.S. 2005. Efficacy of bare root dip treatments of various neem based pesticides and *Trichoderma* spp. against *Meloidogyne incognita* (Kofoid and White) Chitwood population and plant status of tomato. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
2. **Kumar, S.** and Khanna, A.S. 2005. Evaluation of neem based pesticides against *Meloidogyne incognita* (Kofoid and White) Chitwood in *Lycopersicon esculentum* Mill. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
3. Khanna, A. S; Chandran, R.A.; **Kumar, S.** and Ganguly, S. 2005. Effect of *Panagrolaimus fuchsi* Ruhm on mycelial growth, flush pattern and sporophore yield of *Agaricus bisporus* (Lange) Imbach and nematode multiplication. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
4. Khanna, A.S. and **Kumar, S.** 2005. Role of *Caenorhabditis elegans* (Maupas) Dougherty in the cultivation of White button mushroom *Agaricus bisporus* (Lange) Imbach. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
5. Khanna, A. S; Singh, P. and **Kumar, S.** 2013. Efficacy of nursery treatment and bare root dips in plant based nematicidal formulations on *Meloidogyne incognita* in aubergine. National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 61.
6. **Kumar, S.**; Khanna, A. S. and Jarial, K. and 2013. Effect of bare root dip treatments of neem-based formulations and *Trichoderma* spp. against *Meloidogyne incognita* infesting tomato (*Solanum lycopersicum*). National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 129.
7. **Kumar, S.** and Khanna, A. S. 2013. Evaluation of bacterial bioagents against *Aphelenchoides swarupi* in white button mushroom, *Agaricus bisporus*. National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 152.
8. **Kumar, S.**; Khanna, A. S. and Rana, V.K. 2013. Population analysis of myceliophagous nematodes associated with mushrooms in Himachal Pradesh. National Symposium on Mushrooms for medicinal value and nutritional security under changing climatic conditions held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 27-28 December 2013, pp. 13.

#### **BOOK PUBLISHED:**

1. Kumar, R; Sharma, A; **Kumar, S** and Sharma, A K. 2022. Methods of Fishing and Fishing Gears Volume-I. Publisher JPS Scientific Publications, India. p 117. ISBN:978-96-91342-68-5.
2. Kumar, P; Sharma, P; Thakur, V; Vats, B and **Kumar S.** 2022. Principles and Techniques in Vegetable Grafting. Narendra Publishing House C-21, Varun Apartment, Sector 9, Rohini, Delhi - 110085

#### **BOOK CHAPTER:**



1. Khanna, A.S. and **Kumar, S.** 2004. Nematode management in white button mushroom: Prophylactic and control measures. **In:** Biological diversity: Current trends (Gautam S.P.; Bansal Y.K. and Pandey A.K. Eds.). Shree Publishers & Distributors New Delhi. pp. 193-199.
2. Khanna, A.S. and **Kumar, S.** 2004. Integrated management of *Meloidogyne incognita* (Kofoid and White) Chitwood in tomato (*Lycopersicon esculentum* Mill.). **In:** Integrated Disease Management (eds., Sharma, R.C. and Sharma, J.N.). Scientific Publishers (India) Jodhpur. pp. 147-149.
3. **Kumar, S.;** Rana, V.K. and Jarial, K. 2011. Suter krimi: Samsya evam nidhan. Bagvani faslon ki sranksht kheti. (Bhardwaj, S; Chandel, R. and Shapiya, R.S. Editors). Directorate of Extension Education, Dr Y S Parmar UHF Nauni, Solan, Himachal Pradesh, India. 173230. Pp. 126-133.
4. Kumar, R. and **Kumar, S** and Ghosh, A. 2021. Current Scenario of groundwater arsenic contamination in West Bengal and its mitigation approach. Arsenic toxicity: Challenges and solutions (Springer) pp. 193-216.
5. **Kumar, S.** and Kumar, R. and Sood, P. 2021. Role of microbial enriched vermicompost in plant-parasitic nematode management: Nematodes - Recent Advances, Management and New Perspectives (Intech open). Pp 1-16.
6. Sharma, R.; Chaudhary, A.; Sharma, Y.P. and **Kumar, S.** 2022. Plant secondary metabolites physico-chemical properties and therapeutic application. **In:** Plant Secondary Metabolite Determination Through Analytical Chromatographic Techniques: Recent Trends and Advancement (Eds: Anil Kumar Sharma Ajay Sharma). Pp.: 77-96. ISBN 978-981-16-4778-9, ISBN 978-981-16-4779-6 (eBook) <https://doi.org/10.1007/978-981-16-4779-6>
7. Malik, DS; Sharma, AK; **Kumar, S;** Kumar, R; Kumar, R; Kamboj, V and Sharma, AK. 2022. Anthropogenic Impact on Fish Faunal Diversity and Their Habitat Ecology in the Ganga River and Its Tributaries, Uttarakhand. **In:** Environmental Pollution and Natural Resource Management (Springer Proceedings in Earth and Environmental Sciences) (Bahukhandi, KD; Kamboj, N & Kamboj, V, Eds) pp. 53-72. ISSN 2524-342X ISSN 2524-3438 (electronic) Springer Proceedings in Earth and Environmental Sciences ISBN 978-3-031-05334-4 ISBN 978-3-031-05335-1 (eBook) <https://doi.org/10.1007/978-3-031-05335-1>

## EXTENSION PUBLICATIONS

### a. Leaflets:

1. **Kumar, S.** and Chandel, Y.S. 2008. Suterkrimi: Samsya evam nidhan. Deptt. of Entomology, Dept. of Entomology, CSK HPKV, Palampur India – 176062. 6 p.
2. **Kumar, S.** and Chandel, Y.S. 2008. Khumb main suterkrimion ka prakop evam roktham. Deptt. of Entomology, Dept. of Entomology, CSK HPKV, Palampur India – 176062. 4 p.
3. Sharma, D.; Dogra, B. S. and **Kumar, S.** 2012. Bagan ki unat kheti. Institute of Biotechnology & Environmental Science, Neri, Hamirpur (HP)-177001. 4p.

### b. Popular Articles:

1. Chandel, Y.S. and **Kumar, S.** 2008. Polyhouse amin suterkrimi (nematode): Samsya evam nidhan. *Parvatia Kheti Badi*. **29**: 29-30.
2. Rana, V.K.; **Kumar, S.;** Dhiman, M.S. and Mandradia, R. 2010. Psylla- A key pest of mango orchards in Himachal Pradesh, India. *SAARC Agrinews*. 4 (1): 6 & 8.
3. Chandel, Y.S.; **Kumar, S.** and Anil Kumar. 2011. Polyhouse amin suterkrimi (nematode): Samsya evam nidhan. *Parvatia Kheti Badi*. 31(2): 23-25.
4. Negi, R.; Jarial, K. and **Kumar, S.** 2014. Gainda ugeyin banderon se nijaat payein. *Giriraj Weekly*. 1 October 2014, 5 p.
5. **Kumar, S.;** Negi, R. and Rana, V.K. 2014. Himachal main suterkrimi samshya evam nidhan. *Giriraj Weekly*. 5 November 2014, 5 p.



6. **Kumar, S.**; Khanna, A.S. and Negi, R. 2015. Khumb ko kidon se bachayo, adheek fasal paayo. Giriraj Weekly. 13 May 2015, 5 p.
7. Rana, V K.; **Kumar, S.** and Thakur, R. 2015. Gramin khestron main rojgar ka shaskat madhyam reshmi utpadan. Giriraj Weekly. 7 Oct. 2015, 5 p.
8. Sharma, A.; Shilpa and **Kumar, S.** 2016. Kisano vah bagwano ke liye sankhiyiki taknikon ka mahatav. Giriraj Weekly. 10 August 2016, 5 p.
9. Dogra, B S.; **Kumar, S.**; Dogra, R and Sharma, D. 2017. Vaigyanik dhang se broccoli ki kheti. Giriraj Weekly. 4 Jan. 2017, 5 p.
10. **Kumar, S.**; Sharma, A. and Rana, V.K. 2017. Keetnasakon ke dusprabhon se bachayo. Giriraj Weekly. 09 August 2017, 5 p.
11. **Kumar, S.**; Himanshi and Meenakshi. 2019. Sweat button khumb ki makhinyon se rokthaam. Giriraj Weekly. 16 Jan. 2019, 5 p.
12. Himanshi and **Kumar, S.** 2019. Sarankshit kheti main suterkrimi ki badati samshya evam prabhandhan. Giriraj Weekly. 19 June 2019, 5 p.

### C. TECHNICAL BULLETIN

1. **Sharma, B.M.; Jandaik, S. and Kumar, S.** 2009. Khumb ke rogakarak fafund, suterkrimion va keet evam unka prabandhan. Deptt. of Plant Pathology, CSK HPKV, Palampur India – 176062. 12 p.

### Abstracts published

1. **Kumar, S.** and Khanna, A.S. 2005. Efficacy of bare root dip treatments of various neem based pesticides and *Trichoderma* spp. against *Meloidogyne incognita* (Kofoid and White) Chitwood population and plant status of tomato. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
2. **Kumar, S.** and Khanna, A.S. 2005. Evaluation of neem based pesticides against *Meloidogyne incognita* (Kofoid and White) Chitwood in *Lycopersicon esculentum* Mill. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
3. Khanna, A. S.; Chandran, R.A.; **Kumar, S.** and Ganguly, S. 2005. Effect of *Panagrolaimus fuchsi* Ruhm on mycelial growth, flush pattern and sporophore yield of *Agaricus bisporus* (Lange) Imbach and nematode multiplication. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
4. Khanna, A.S. and **Kumar, S.** 2005. Role of *Caenorhabditis elegans* (Maupas) Dougherty in the cultivation of White button mushroom *Agaricus bisporus* (Lange) Imbach. National Symposium on Recent advances and Research Priorities in Indian Nematology held at IARI, New Delhi, w.e.f. 9-10 Dec. 2005.
5. Kapoor, S.; Chandel, Y.S. and **Kumar, S.** 2008. Pathogenic effects of entomopathogenic nematode, *Heterorhabditis bacteriophora* against some insect-pests of agricultural importance. In: Proceedings of 2<sup>nd</sup> Congress on Insect Science held at Punjab Agricultural University, Ludhiana, India from 21-22 Feb. 2008, pp. 344-345 (Extended Abstract).
6. Rana, V.K.; Mandradia, R.; Gupta, B.; Sharma, R. and **Kumar, S.** 2011. Status of insect-pests, diseases and deficiencies in apple orchards and their management in cold desert and dry temperate zone of Himachal Pradesh. 3<sup>rd</sup> Congress on Insect Science (April 18-20, 2011). PAU, Ludhiana (Pb). Pp18.
7. Rana, V.K.; Mandradia, R.; Gupta, B.; Sharma, R. and **Kumar, S.** 2010. Status of insect-pests, diseases and deficiencies in apple orchards and their management in cold desert and dry temperate zone of Himachal Pradesh. National symposium on “Perspective and Challenges of Integrated Pest Management for Sustainable Agriculture” Nov 19-21, 2010, Dr YS Parmar Univ. Hort & Fty. Nauni, Solan (HP). 7 pp.

8. Vashisth, S.; Chandel, Y.S. and **Kumar, S.** 2010. An analysis of insect-pest problems in greenhouse crops in Himachal Pradesh. National symposium on “Perspective and Challenges of Integrated Pest Management for Sustainable Agriculture” Nov 19-21, 2010, Dr YS Parmar Univ. Hort & Fty Nauni, Solan (HP). 22 pp.
9. Khanna, A. S; Singh, P. and **Kumar, S.** 2013. Efficacy of nursery treatment and bare root dips in plant based nematicidal formulations on *Meloidogyne incognita* in aubergine. National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 61.
10. **Kumar, S.**; Khanna, A. S. and Jarial, K. and 2013. Effect of bare root dip treatments of neem-based formulations and *Tricoderma* spp. against *Meloidogyne incognita* infesting tomato (*Solanum lycopersicum*). National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 129.
11. **Kumar, S.** and Khanna, A. S. 2013. Evaluation of bacterial bioagents against *Aphelenchoides swarupi* in white button mushroom, *Agaricus bisporus*. National Symposium on Nematode: A Friend and Foe of Agri-Horticultural Crops held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 21-23 November 2013, pp. 152.
12. **Kumar, S.**; Khanna, A. S. and Rana, V.K. 2013. Population analysis of myceliophagous nematodes associated with mushrooms in Himachal Pradesh. National Symposium on Mushrooms for medicinal value and nutritional security under changing climatic conditions held at Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), w.e.f. 27-28 December 2013, pp. 13.

#### E. TV/RADIO TALKS

1. **Sunil Kumar**, Nematode management in polyhouse crops. Doordarsan Shimla. 19.06.2009.
2. **Sunil Kumar**, Sanrkshit kheta mein suterkrimi samasya. All India Radio, Shimla. 15.01.2013.
3. **Sunil Kumar**, Aam mein lagne wale keet patange evam prabandhan. All India Radio, Hamirpur. 20.04.2015.
4. **Sunil Kumar**, Kadu vargiya sabjiyon mein lagne wale keet patange evam prabandhan ke kaarye. All India Radio, Shimla. 22.06.2015.
5. **Sunil Kumar**, Tamatar mein lagne wale keet patange. All India Radio, Hamirpur. 08.02.2016.
6. **Sunil Kumar**, Nichle parvta khesthon mein baeldar sabjiyon mein lagne wale rog vah keet. In (STUDIO BASED) at PRASAR BHARTI, DOORDARSHAN KENDRA, Shimla (HP) on 2<sup>nd</sup> March 2016 (5:30 PM).
7. **Sunil Kumar**, Aam ke bagichhon ka rakh rakhav. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 17.05.2016 (06:30 PM).
8. **Sunil Kumar**, Mushroom mein keet vah suterkrimi prabandhan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 13.09.2016 (06:30 PM).
9. **Sunil Kumar**, Garmion ke mausam mein sabjiyon mein lagne wale keet evam prabandhan kaise karanhe. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 18.04.2017 (06:30 PM).
10. **Sunil Kumar**, Keetnasakon ke dusprabhav evam savhadhaniyan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 25.07.2017 (06:30 PM).
11. **Sunil Kumar**, Grisamkaleen sabjiyon mein keet prabandhan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 13.02.2018 (06:30 PM).
12. **Sunil Kumar**, Phalon aur sabjiyon mein phal makkhi se bachaav aur prabandhan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 22.05.2018 (06:30 PM).

13. **Sunil Kumar**, Javik vidhi se sabjiyon main keet prabandhan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 19.09.2018 (06:30 PM).
14. **Sunil Kumar**, Gobhi vargiye sabzion mein keet prabandhan kaise Karen. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 12.02.2019 (06:30 PM).
15. **Sunil Kumar**, Ekikrit keet prabandhan (Integrated pest management). LIVE PHONE-IN programme in Kisanvani at All India Radio, Dharamshala on 27.07.2020 (06:30-7:00 PM & 07:10-7:40 PM).
16. **Sunil Kumar**, Gobhiwargiye sabzion main lagne wale keet aur unka prabandhan. LIVE PHONE-IN programme in Kisanvani at All India Radio, Hamirpur on 22.12.2020 (06:30 PM).

**ORGANIZATION OF SEMINAR/CONFERENCE/SYMPOSIA etc:**

- Organized (Convener) a “National Conference on Frontiers in Chemical Sciences (NCFCS- 2022)” by CUHP in collaboration Indian Society of Analytical Scientists- Delhi Chapter with w.e.f. 04-05 Nov, 2022 at CUHP, Shahpur (HP).

***TRAININGS/WORKSHOPS ATTENDED***

- “**Role of Computers in Bioinformatics**” organized by Bioinformatics Centre (DISC), Advanced Centre of Hill Bioresources & Biotechnology, CSKHPKV, Palampur (HP) from 17.03.07 to 18.03.07.
- “**Awareness of e-courses for B. Sc. (Hort.) on Moodle platform delivered on-line and off-line**” organized by Dr YS Parmar Univ. Hort & Fty Nauni, Solan (HP) under NAIP component-I, Subject: “Development of e-courses project for B. Sc. (Hort.) degree programme (ICAR)” on 25<sup>th</sup> Oct. 2013.
- ICAR-Winter School on “**Recent Advances in Crops Management under Protected Cultivation**” at CPCT, IARI, New Delhi w.e.f. 26<sup>th</sup> December, 2014 to 15<sup>th</sup> January, 2015
- ICAR-Summer School on “**Current Techniques and Advances in Mass Culturing of Microbials for the Production of Biopesticides**” at ICAR- National Bureau of Agricultural Insect Resources, Bengaluru w.e.f. 5<sup>th</sup> - 25<sup>th</sup> September, 2017.
- Five days training on “**Pest Surveillance**” at National Institute of Plant Health Management, Hydrabad w.e.f. 20<sup>th</sup> - 24<sup>th</sup> November, 2017.
- Attended **Two Days National Workshop on Sociology in the light of NEP 2020 & Indian Knowledge System** w.e.f. 7-8 May 2022 at CUHP, Dharamshala.