

CURRICULUM-VITAE

Personal:

Name : **Dr. Keshav Singh**
Professor

Residential address : P/7, Professor's Colony
University Campus
D.D.U.Gorakhpur University
Gorakhpur,- 273009.U.P. India

Address for communication : Department of Zoology
D.D.U.Gorakhpur University
Gorakhpur - 273009.U.P. India

Contact numbers : Mobile No.: (91) 9450433313
Email: keshav26singh@rediffmail.com

Nationality : Indian

Date of Birth : 26-01-1970

ACADEMIC QUALIFICATIONS:

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|-------|------|-------------------------|-----------------------------|
| B.Sc. | 1989 | University of Gorakhpur | Zoology, Botany, M. Science |
| M.Sc. | 1991 | University of Gorakhpur | Zoology |
| Ph.D. | 1997 | University of Gorakhpur | Zoology |

Title of the thesis: "Studies on molluscicidal activity of *Azadirachta indica* A. Juss (Neem) against harmful gastropods".

Fellowships:

- Senior Research Fellow in Project of ICAR, New Delhi (1995-1996).
- Senior Research Fellow in Project of DBT, New Delhi (1996-1999).
- Honorary Fellowship (F.S. L. Sc) Society of Life-Sciences Satana, MP;India2018.

Honours and awards:

- Recognition Award 2018 - The Society of Life Sciences, Satana, MP;India
- ABRF Excellence Award for Zoological Research (2019).Asian Biological Research Foundation, Prayagraj (India)
- Award for outstanding contribution in research and teaching in the field of higher education.(2021), D.D.U.Gorakhpur University Gorakhpur on the occasion of teacher's Day.
- Award for outstanding contribution in research and teaching in the field of higher education. (2022), D.D.U.Gorakhpur University Gorakhpur on the occasion of teacher's Day.

- Society of Life Sciences Satna MP. “SLS Best Scientist Award 2023” in recognition of outstanding academic contribution and achievements in the field of life sciences.

Teaching Experience:

Since last **twenty seven years**, I am actively engaged in teaching of old and CBCS theory and practical courses of Under Graduate and Post Graduate classes of Zoology, Environmental Science at University level.

Details of Employment:

| | | |
|-----------------------------|--------------------------------|--|
| 22 July 2006 - 21 July 2011 | Assistant Professor –Stage I | D.D.U. Gorakhpur University, Gorakhpur |
| 22 July 2011 - 21 July 2015 | Assistant Professor –Stage II | D.D.U. Gorakhpur University, Gorakhpur |
| 22 July 2015 - 07 May 2018 | Assistant Professor –Stage III | D.D.U. Gorakhpur University, Gorakhpur |
| 08 May2018 – 07/May 2021 | Associate Professor- | D.D.U. Gorakhpur University, Gorakhpur |
| 07 May2021 – Onwards | Professor - | D.D.U. Gorakhpur University, Gorakhpur |

Area of Research:

- Vermibiotechnology
- Earthworm Biodiversity
- Waste management
- Toxicology

Research Achievements:

I have been actively engaged in research activities since 1993 to date and worked for Ph.D. degree on the control of harmful gastropods by using the plant product biopesticides. The harmful gastropods *Lymnaea acuminata* and *Indoplanorbis exustus* are the intermediate hosts of *Fasciola hepatica* and *F. gigantica* and cause fascioliasis in cattle population. The use of natural molluscicides for the control of gastropods are safe for the environment, less expensive, easily available and easily biodegradable.

For the last seventeen years actively working on vermibiotechnology, waste management, earthworm biodiversity, toxicology and vermicomposting by using earthworm *Eisenia fetida*. Production and use of vermicomposts and vermivash with biopesticides which have a significant effect on the growth, productivity and pest infestation of crops.

During this period my laboratory has published **fifteen** review articles, **eleven** books, **four** book chapters and **eighty seven** research papers in journals of international repute like Journal of Ethno pharmacology, Biological Agriculture and Horticulture, Chemosphere, Acta Hydrochemica et Hydrobiologica, Journal of Central European Agriculture, Journal of Solid Wastes Technology and Management, Journal of Biology, Agriculture and Healthcare,

Environmental Processes (Springer) and Environment Development and Sustainability (Springer) etc. **Impact Factor** ranges from 0.77- 5.0). Nine students were awarded Ph.D. degree under my supervision. Two major research projects from UGC, New Delhi were successfully completed. The Rural Development Department, U.P. Govt. Lucknow has selected me as a trainer to adult members of BPL families for “Vermicomposting: As Self Employment”.

H-INDEX AND CITATION:

- Google Scholar I-Index: 16
- Google Scholar H-Index: 13
- Google Scholar Citation: 688

RESEARCH STUDENTS AWARDED Ph.D. DEGREE UNDER MY SUPERVISION

| S.No | Name of the student | Title of the thesis& Notification no. | Award year |
|------|----------------------------|--|------------|
| 1. | Dr. Gorakh Nath | Studies on effect of Vermiwash of different animal and agro wastes on the growth of certain plants. No. Res./ Ph.D./Result/Dec./2009/, Dated 14/12/2009 | 2009 |
| 2. | Dr. Rabish Chandra Shukla | Studies on Vermicompost of different animal and Agrowastes. No. Res./Ph.D./Result/Dec./2010/, Dated 16/12/2010 | 2010 |
| 3. | Dr. Abhilasha Sriwastva. | Biosystematics and Bioecology of <i>Sitobion miscanthi</i> TAKAHSHI in Eastern Uttar Pradesh. No.2: Res. Ph.D./Result/May./2012/, Dated 03/05/2012 | 2012 |
| 4. | Dr. Deepak Kumar Bhartiya | Studies on bioaccumulation of heavy metals by earthworm <i>Eisenia foetida</i> in different wastes and field soils. No.2: Res. Ph.D./Result/Dec./2013/, Dated 12/12/2013 | 2013 |
| 5. | Dr. Harendra Kumar Chauhan | Effect of different combination of animal dung and agro wastes on the reproduction and development of earthworm <i>Eisenia foetida</i> . No.2: Res. Ph.D./Result/Dec./2013/, Dated 20/December/2013 | 2013 |
| 6. | Dr. Rahul Rai | Studies on vermicomposts of distillery and cane sugar industry effluents and their effect on growth and productivity of certain vegetable crops. No.2: Res. Ph.D./Result/Dec./2013/, Dated 20/December/2013 | 2013 |
| 7. | Dr. Yogendra Kumar | Studies on diversity and ecology of Earthworm of Eastern Uttar Pradesh. | 2014 |

| | | | |
|----|------------------|---|------|
| | | No.2: Res. Ph.D./Result/Feb./2014, Dated 07/ February /2014 | |
| 8. | Dr.Vandana Singh | Studies on effect of herbicides on the reproduction and development of earthworm <i>Eutyphoeus waltoni</i> Michaelsen (Oligochaeta: Octochaetidae). No: Ph.D./Result/October/2016/32, Dated 19/ October /2016 | 2016 |
| 9. | Dr.Shesh Nath | Studies on the effect of vermiwash with biopesticides on the infestation of <i>Helicoverpa armigera</i> (Hübner) (Lepidoptera: Noctuidae) and productivity of pulse crops. No: Ph.D./Result/December/2016/36, Dated 08/December/2016 | 2016 |

RESEARCH STUDENTS REGISTERED FOR Ph.D. DEGREE UNDER MY SUPERVISION

| S.No | Name of the student | Title of the thesis | Registration no. |
|------|---------------------|---|------------------------------|
| 1. | Km. Anjali Singh | Effect of combinations of buffalo dung with cane sugar bagasse and distillery effluents on the reproductive potential of <i>Lampito mauritii</i> Kinberg (oligochaeta: megascolecidae) | RC/FSc/ZOO/201 9-20/17/22 |
| 2. | Nishat Fatima | Studies on bioaccumulation of heavy metals by earthworm <i>Lampito mauritii</i> Kinberg in different wastes and field soils | RC/FSc/ENV/201 9-20/05/22 |
| 3. | Pankaj Kumar Singh | Ecology and distribution of earthworms (Oligochaeta: Annelida) in North Eastern Uttar Pradesh | RC/FSc/ZOO/201 9-20/05/22 |
| 4. | Nazia Siddiqui | Effect of different combinations of animal dungs with kitchen waste on the reproductive potential of <i>Eutyphoeus waltoni</i> Michaelsen | RC/FSc/ZOO/201 9-20/25/22 |
| 5. | Zaveesha Saman | Effect of herbicides on the reproduction and development of earthworm <i>Lampito mauritii</i> Kinberg (Oligochaeta: Megascolecidae) | RC/FSc/ZOO/201 9-20/21/22 |
| 6. | Garima Yadav | Effect of different combinations of buffalo dung with vegetable waste and banana peels on the reproduction and development of earthworm <i>Lampito mauritii</i> Kinberg (Oligochaeta: Megascolecidae) | RC/FSc/ZOO/202 0-21/02/23 |

List of publications-

REVIEW ARTICLE: 15

1. Vandana Singh and **Keshav Singh** (2016). Herbicides and Earthworm population. **International Journal of Technology**. 6(1): 31-48, DOI: 10.5958/2231-3915.2016.00007.9. India, (ISSN: 2231-3915).
2. **Keshav Singh** and Shesh Nath (2016). The combination of vermiwash with biopesticides- A boon for crop productivity. **Research Journal of Pharmacognosy and Phytochemistry**, 2016; 8(3): 172-202.India, ISSN: 0975-4385.
3. Bhat SA, Singh J, **Singh K**, Vig AP (2017). Genotoxicity monitoring of industrial wastes using plant bioassays and management through vermitechnology: A Review, **Agriculture and Natural Resources**. 51 : 325-337,UK,ISSN: 2452-316X.
4. **Keshav Singh** and Deepak Kumar Bhartiya (2018). Review on therapeutic use of earthworms. *International Journal of Basic and Applied Research*. 8 (11):187-203.ISSN:-2249-3352/2278-0505.**IF-5.86**
5. **Keshav Singh** and Nishat Fatima (2019). Role of earthworms in heavy metal accumulation. **Biospectra**. ISSN: 0973-7057, Vol. 14(2), pp. 21-36
6. **Keshav Singh** and Deepak Kumar Bhartiya (2021). A review article on vermibiotechnology and waste management. *World Review of Science, Technology and Sustainable Development*, 17(1):81-97.ISSN:1741-2234.
7. **Keshav Singh** and Nishat Fatima. (2022). The efficiency of earthworms as a biomarker for environmental pollution. *International Journal of Biological Innovations*. 4(1): 104-112. ISSN: 2582-1032.
8. **Keshav Singh** and Nishat Fatima. (2022). Vermifiltration as a viable and sustainable wastewater treatment process: A novel biofilter technology. *International Journal of Biological Innovations*. 4(1): 213-220. ISSN: 2582-1032.
9. **Keshav Singh** and Nazia Siddiqui. (2023). Effect of kitchen wastes and animal dung on reproductive potential of *Eutyphoeus waltoni*. *International Journal of Biological Innovations*. 5(1): 83-90. ISSN: 2582-1032.
10. **Keshav Singh** and Anjali Singh. (2023). Potential utilization of industrial waste as feed material for the growth and reproduction of earthworms. *European Journal of Biological research*. 13(1): 71-80. ISSN: 2449-8955.
11. **Keshav Singh** and Pankaj Kumar Singh. (2023). Ecology and distribution of earthworms in India: A systematic review. *International Journal of Biological Innovations*. 5(1): 161-169. ISSN: 2582-1032.
12. **Singh P.K. and Singh K. (2023)**. Updated checklist of earthworm family Moniligastridae (Annelida: Clitellata: Oligochaeta) in India. *Munis Entomology & Zoology*. 18(2): 1617-1628. ISSN: 1306-3022.

13. **Singh P.K. and Singh K. (2023).** Updated checklist of earthworms belonging to the family Megascolecidae (Annelida: Clitellata: Oligochaeta) in India. *Munis Entomology & Zoology*. 18(2): 1423-1447. ISSN: 1306-3022.
14. **Nishat Fatima and Keshav Singh (2023).** Accumulation of heavy metals in soil, sources, toxicity, health impacts and remediation by earthworms. *European Journal of Biological Research*. 13(3): 129-143. ISSN: 2449-8955.
15. **Nishat Fatima, Anjali Singh, Pankaj Kumar Singh and Keshav Singh (2023).** Vermibiotechnology: A Tool for Environmental Balance, Human Health and Crop Productivity Enhancement Through The Use Of a Combination of Liquid Biofertilizer and Biopesticides. *Munis Entomology & Zoology*. 18 (suppl.): 1998-2016. ISSN: 1306-3022.

Research Papers: 81

1. **Keshav Singh, A. Singh and D.K. Singh (1996)** Molluscicidal activity of neem (*Azadirachta indica* A. Juss). *Journal of Ethnopharmacology*. 52:35-40, U.K. (ISSN: 0378-8741) **IF. 2.939.**
2. **Keshav Singh, A. Singh and D.K. Singh (1995),** Molluscicidal activity of different combinations of the plant products used in the molluscicide Pestoban. *Biological Agriculture and Horticulture*. 12:253-261, U.K (ISSN 2165-0616 online, 0144-8765 print). **IF. 0.514.**
3. **Keshav Singh and D.K. Singh (1995)** Effect of neem (*Azadirachta indica*) on fecundity, hatchability and survivality of snails *Lymnaea acuminata*. *Malaysian Applied Biology*. 24:19-22, Malaysia (ISSN 0126-8643).
4. **Keshav Singh and D.K. Singh (1995).** Effect of *Azadirachta indica* (neem) on biochemical parameters in the ovotestis of *Lymnaea acuminata*. *Malaysian Applied Biology*. 24:7-11, Malaysia (ISSN 0126-8643).
5. **Keshav Singh, A. Singh and D.K. Singh (1998).** Synergism of MGK-264 and Piperonyl butoxide on the toxicity of plant derived molluscicides, *Chemosphere*. 36:3055-3060, Great Britain (ISSN: 0045-6535). **IF. 3.499.**
6. **Keshav Singh, V.K. Singh and D.K. Singh (1999).** Effect of *Polianthus tuberosa* (Amaryllidaceae) on the reproduction and biochemical parameters in the ovotestis of snail *Lymanaea acuminata* (Mollusca, Pulmonata). *Acta Hydrochemicaet Hydrobiologica*. 27:32-37, Germany (ISSN: 1521-401X online, 0323-4320 print).
7. **Keshav Singh and D.K. Singh (2000).** Effect of different combinations of MGK-264 and Piperonyl butoxide with plant derived molluscicides on snail reproduction. *Archives of*

Environmental Contamination and Toxicology. 38:182-190, U.S.A. (ISSN: 1432-0703 on line, 0090-4341 print). **IF. 1.960**.

8. Gorakh Nath and **Keshav Singh** (2008). A protective supplement for *Cajanus cajan* against termite infestation. Proceeding of NSE-16, Department of Environmental Engineering, G. J. University, Hissar, Haryana pp52-56.
9. Gorakh. Nath, Anjali Tripathi, Anjali Mishra and **Keshav Singh** (2008). Effect of plant derived pesticide on *Epilachna vigintioctopunctata*; A vegetables pests, Proceedings U.G.C. Sponsored National Seminar F.C.C. College for Womens Hisar Haryana pp 75-79.
10. Gorakh. Nath, Anjali Tripathi and **Keshav Singh** (2008). Combined effect of vermiwash and biopesticide against Infestation of *Helicoverpa armigera* (Hub.) and Productivity of *Cajanus cajan*, Proceedings U.G.C. Sponsored National Seminar F.C.C. College for Womens Hisar Haryana pp 80-86.
11. Gorakh Nath and **Keshav Singh**, (2008). Utilization of Vermiwash Potential on certain summer vegetable crops. **Journal of Central European Agriculture**, 10(4), 417-426. **POLAND** (ISSN 1332-9049).**I.F. 0.41**
12. Gorakh Nath, **Keshav Singh** and D. K. Singh, (2009) Effect of different combinations of animal dung, and agro/kitchen wastes on growth and development of earthworm *Eisenia fetida* among. **Australian Journal of Basic and Applied Science**, 3(4)3672-3676 **Jordan**(ISSN 1991-8178).**I.F. 2.5**
13. GorakhNath, **Keshav Singh** and D. K. Singh, (2009) Chemical analysis of Vermicomposts/ Vermiwash of different combinations of animal, agro and kitchen wastes. **Australian Journal of Basic and Applied Science**, 3(4)3553-3556. **Jordan** (ISSN 1991-8178).**I.F. 2.5**
14. Rabish Chandra Shukla and **Keshav Singh** (2010). Effect of vermicomposts of different organic wastes on the germination, growth and productivity of certain. **Journal of Solid Wastes Technology and Management**, 36 (3), 170-181, **USA** (ISSN 1088-1697).**I.F. 0.16**
15. Gorakh Nath and **Keshav Singh** (2011) Combination of vermicomposts and biopesticides against nematode (*pratylenchus sp.*) and their effect on growth and yield of tomato (*lycopersicon esculentum*).**Journal of Institute of Integrative Omics and Applied Biotechnology**(IIOAB), 2(5)27–35.**India**(ISSN 0976-3104).**I.F. 0.55**
16. Gorakh Nath, D. K. Singh and **Keshav Singh** (2011) Productivity enhancement and nematode management through vermicompost and biopesticides in Brinjal (*Solanum melongena* L.).**World Applied Science Journal**, 12 (4), 404-412.**IDOSI**,Dubai, UAE (ISSN: 1991-6426 Online, 1818-4952 Print).**I.F. 0.47**

17. GorakhNath and **Keshav Singh** (2011) Role of Vermicompost as Biofertilizer for the productivity of Cauliflower (*Brassica oleracea*) and Biopesticides against Nematode (*Meloidogyne incognita*). **World Applied Science Journal**, 12 (10), 1676-1684. Dubai, UAE. (ISSN: 1991-6426 Online, 1818-4952 Print).**I.F. 0.47**
18. Deepak Kumar Bhartiya, Gorakh Nath and **Keshav Singh** (2011) Vermicomposting; A tool for management of different wastes and self-employment for youth of B.P.L. and weaker sections. Proceeding of National Seminar on ‘Challenges for Biosciences in 21st Century. Department of Zoology, S. P. P. G. College Shohratgarh, Siddharthnagar, 19-20 Febraury2011. Pp 71-73.
19. Gorakh Nath and **Keshav Singh** (2011). Effect of foliar spray of biopesticides and vermiwash of animal, agro and kitchen wastes on Soybean (*Glycine max*) crop. **Botany Research International**. 4 (3): 52-57. Dubai, UAE (ISSN 2221-3643online, 2221-3635 print).**I.F. 0.47**
20. Deepak Kumar Bhartiya and **Keshav Singh** (2011) Accumulation of Heavy Metals by *Eisenia fetida* from Different animal dung and Kitchen wastes during Vermicomposting. **International Journal of Life Science and Technology**. 2011, 4 (7): 47-52. India (ISSN 0974-5335).
21. Deepak Kumar Bhartiya and **Keshav Singh** (2012) Heavy Metals Accumulation from Municipal solid wastes with Different animal dung through Vermicomposting by Earthworm *Eisenia fetida*. **World Applied Sciences Journal**, 17 (1): 133-139. Dubai, UAE(ISSN: 1991-6426 Online, 1818-4952 Print).**I.F. 0.47**
22. **Keshav Singh** and Rabish Chandra Shukla (2012). Potential utilization different wastes through Vermicompost in agriculture. **Dynamic soil, Dynamic Plant, Global Science Books,Special issue: I: 6** (1), 65-72. Global Science Books Ltd. UK. (ISSN: 1749-6500).
23. Gorakh Nath and **Keshav Singh** (2012) Combination of Vermiwash and Biopesticides against aphid (*Lipaphis erysimi*) infestation and their effect on Growth and Yield of mustard (*Brassica campestris*). **Dynamic soil, Dynamic Plant, Global Science Books Special issue I:6** (1), 96-102. Global Science Books Ltd. UK (ISSN: 1749-6500).
24. Harendra Kumar Chauhan and **Keshav Singh** (2012). Effect of binary combinations of buffalo, cow and goat dung with different agro wastes on reproduction and development of earthworm *Eisenia fetida*. **World Journal of Zoology**, 7 (1): 23-29. Dubai, UAE (ISSN 1817-3098). DOI: 10.5829/idosi.wjz.2012.7.1.56439
25. Gorakh Nath and **Keshav Singh**, (2012). Effect of vermiwash of different vermicomposts on the Kharif crops. **Journal of Central European Agriculture**, 13(2), p.379-402.Hungary, (ISSN 1332-9049).**I.F. 0.41**
26. Harendra Kumar Chauhan and **Keshav Singh** (2012). Effects of different binary combinations of biological wastes on the reproduction and development of earthworm

Eisenia fetida. **International Journal of Environment Science and Engineering Research**, 3(2): 22-31. France (ISSN 0976-3708 Print).**I.F. 4.2**

27. Deepak Kumar Bhartiya and **Keshav Singh** (2012). Heavy metals remediation from Maize (*Zea mays*) crop by the use of vermicomposts through vermicomposting by *Eisenia fetida*. **American-Eurasian Journal of Agriculture & Environmental Sciences**, 12 (9): 1215-1222. Dubai, UAE (ISSN 1818-6769).
28. Yogendra Kumar and **Keshav Singh** (2013). Distribution of earthworm in different block of Gorakhpur district in eastern Uttar Pradesh. **World Applied Science Journal**, 21 (9): 1379-1385. Dubai, UAE (ISSN: 1991-6426 Online, 1818-4952 Print). **I.F. 0.47**
29. Rahul Rai and **Keshav Singh** (2012). Physico–chemical analysis and Management of different combinations of sugar mill and distillery effluents with different animal dung during vermicomposting by earthworm *Eisenia fetida*. **Journal of Biology, Agriculture and Healthcare**, 2:11, 21-28. India (ISSN 2225-093X online, 2224-3208 Print). **I. F. 5.09**
30. **K. Singh**, G. Nath, R. Rai and R.C. Shukla (2013). Food Preference of *Eisenia fetida* among Different Combinations of Animal Dung and Agro/Kitchen Wastes. **Botany Research International** 6 (1): 23-26. Dubai, UAE (ISSN : 2221-3635 :: EISSN : 2221-3643)**I.F. 0.47**
31. Harendra Kumar Chauhan and **Keshav Singh** (2013). Effect of tertiary combinations of animal dung on the growth and development of earthworm *Eisenia fetida* during organic wastes management. **International Journal of Recycling of Organic Waste in Agriculture**, Springer.**2:11**. Berlin Heidelberg, (ISSN2251-7715 online, 2195-3228 Print).**I.F. 1.185**
32. Rabish Chandra Shukla and **Keshav Singh** (2013). Vermicompost: A Alternative biofertilizers for Zayad crops. **Journal of Agricultural Technology**, 9(3): 711-726. Thailand (ISSN: 1686-9141).
33. Rahul Rai and **Keshav Singh** (2013). Physico–chemical analysis of soil before and after mixing with vermicompost of industrial effluents with different animal dung. **International Journal of Agriculture Innovations and Research**, 2(1), 112-116. **India (ISSN 2319-1473 Online).I.F. 1.12**
34. Kanchan Mishra, **Keshav Singh** and C. P. M. Tripathi (2013). Management of pod borer, *Helicoverpa armigera* infestation and productivity enhancement of gram crop, *Cicer aritenium* through vermiwash with biopesticides. **World Journal of Agricultural Sciences** 9(5): 401-408. Dubai, UAE (ISSN : 1817-3047::EISSN: 1817-5082)
35. Kanchan Mishra, **Keshav Singh** and C. P. M. Tripathi (2013). Management of infestation of pod borer, *Lucinodes orbonalis* (Guenee) and productivity enhancement of Brinjal (*Solanum melongena*) through vermiwash with biopesticides. **International Journal of Advanced Research**. 2(1): 780-789. UK (ISSN 2320-5460).**I.F. 6.1**

36. Ram Naryan Singh and **Keshav Singh** (2013). Effect of temperature on acute toxicity of dimethoate to common carp, *Cyprinus carpio* (Linn.). **Journal of Natural Resource and Development**, 8(2), 53-59. India (ISSN-0974-5033).I.F.
37. Kanchan Mishra, **Keshav Singh** and C. P. M. Tripathi (2014). Management of municipal solid wastes and production of liquid biofertilizer through vermiculture activity of epigeic earthworm *Eisenia fetida*. **International Journal of Recycling of Organic Wastes in Agriculture**, 3:56 (Springer). DOI 10.1007/s40093-014-0056-0. Berlin Heidelberg (ISSN 2251-7715 online, 2195-3228 Print).I.F. 1.185
38. Harendra Kumar Chauhan and **Keshav Singh** (2014). Potency of Vermiwash with *Azadirachta indica* A. Juss on Yield of Gram (*Cicer arietinum*) and Infestation of *Helicoverpa armigera* (Hübner). **American-Eurasian Journal of Toxicological Sciences** 6 (4): 87-93, Pakistan (ISSN 2079-2050).I.F. 0.31
39. Kanchan Mishra, **Keshav Singh** and C. P. M. Tripathi (2014). Combined Efficacy of Vermiwash with Different Biopesticides on Pigeon pea (*Cajanus cajan*) Productivity and Percentage of Infestation by *Helicoverpa armigera* (Hübner). **Academic Journal of Entomology** 7 (4): 115-121, Dubai, UAE (ISSN 1995-8994).I.F. 0.25
40. **Keshav Singh**, Deepak Kumar Bhartiya, Harendra Kumar Chauhan, Rahul Rai, and Ram Nayan Singh. (2014). Bioaccumulation of Cobalt and Lead by Earthworm *Eisenia fetida* from Sewage sludge with different cattle dung during Vermicomposting. **Research Journal of Science and Technology**, 6(4): 175-179. India (ISSN 0975-4393).
41. Vandana Singh and **Keshav Singh** (2014). Effects of Sublethal Exposure of LC₅₀ of 2,4-D on the Reproduction and Development of Earthworm *Eutyphoeus waltoni* Michaelsen (Oligochaeta: Octochaetidae). **Research Journal of Science and Technology**, 6(4): 203-210. India (ISSN 0975-4393).
42. Harendra Kumar Chauhan and **Keshav Singh** (2014). Estimation of Physico-chemical properties of vermiwash of different combinations of MSW with animal dung through vermicomposting by earthworm *Eisenia fetida*. **Global Journal of Biology, Agriculture & Health Sciences**. 3(4):98-105. India, ISSN: 2319 – 5584.
43. Vandana Singh and **Keshav Singh** (2015). Toxic effect of herbicide 2,4-D on the population of earthworm *Eutyphoeus waltoni* Michaelsen. **Environmental Processes, Springer**. 2:251-260 DOI 10.1007/s40710-015-0057-7. Switzerland (ISSN: 2198-7491 :: 2198-7505).I.F. 1.15
44. **Keshav Singh** and Harendra Kumar Chauhan (2015). Effect of Different Combinations of Feed Materials on the Reproduction and Development of Earthworm *Eisenia fetida* during Vermicomposting. **Research journal of Science and Technology**.7(1): January-March, 2015, 19-22. India, ISSN 0975-4393 (Print)

45. **Keshav Singh** and Harendra Kumar Chauhan (2015). Potency of Vermiwash with Neem plant parts on the Infestation of *Earias vittella* (Fabricius) and Productivity of Okra (*Abelmoschus esculentus*) (L.) Moench. **Asian Journal of Research in Pharmaceutical Sciences**. Vol. 5: (1): 36-40. India, ISSN- 2231–5659 (Online), ISSN- 2231–5640 (Print).
46. Deepak Kumar Bhartiya and **Keshav Singh** (2015). Co, Cr and Pb Accumulate by *Eisenia fetida* (Savigny) from Animal dung, Soil and Pea (*Pisum sativum* L.) through Vermic-activity. **Scholarly Journal of Agricultural Science**. 5(5), pp. 154-164. Nigeria, (ISSN 2276-7118). I.F. 1.37.
47. Gorakh Nath and **Keshav Singh** (2015). Combined effect of vermiwash with biopesticides against infestation of pod borer (*Helicoverpa armigera* Hub.). **International Journal of Zoological Investigations**. 1 (1), 40-51. ISSN: 2454-3055. India (ISSN: 2454-3055) I.F. 2.41.
48. Kanchan Mishra, **Keshav Singh** and C. P. M. Tripathi (2015). Combined Efficacy of Biofertilizer with Different Biopesticides on Aphid's Infestation (*Acyrtosiphon pisum*) and the Productivity of Pea Crop (*Pisum sativum*). **Academic Journal of Entomology**. 8 (3): 110-116, 2015. Dubai, UAE (ISSN 1995-8994). I.F. 0.25
49. Shashi Kant Tiwari and **Keshav Singh** (2015). Potency of combination of liquid biofertilizer with biopesticide on productivity of Brinjal and infestation of *Leucinodes orbonalis* (Pyraustidae: Lepidoptera), **International Journal of Pure & Applied Bioscience**. 3 (5): 62-72. Doi: 10.18782/2320-7051.2108. India, ISSN: 2320-7051.
50. Vandana Singh and Keshav Singh (2015). Lethal effect of herbicide sulfosulfuron on the earthworm *Eutyphoeus waltoni* Michaelsen. **International Journal of Zoological Investigations**. 1(2):128-136. ISSN: 2454-3055. India (ISSN: 2454-3055) I.F. 2.41.
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52. Shashi Kant. Tiwari and **Keshav Singh** (2016). Combined effect of liquid biofertilizer with biopesticide on yield of tomato (*Solanum lycopersicum* L.) and infestation of *Helicoverpa armigera* (Hubner). **Journal of BioInnovation**. 5(1), pp: 144-163, ISSN 2277-8330. I.F. 0.76.
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55. Shesh Nath and **Keshav Singh** (2016). Analysis of different nutrients status of liquid bio-fertilizer of different combinations of buffalo dung with gram bran and water hyacinth through vermicomposting by *Eisenia fetida*. **Environment, Development and Sustainability, Springer**.18 (3)645-656.DOI 10.1007/s10668-015-9666-6.Berlin, **ISSN:1573-2975. I.F. 1.379**
56. Shesh Nath and **Keshav Singh** (2016). Role of Vermiwash with Biopesticides on Growth, Flowering and Productivity of Gram Crop as well as Pest Infestation of *Helicoverpa armigera* (Hübner) (Noctuidae: Lepidoptera).**International Journal of Zoological Investigations**, Vol. 2(1): 115-132.India (ISSN: 2454-3055)**I.F. 2.41.**
57. **Keshav Singh** (2016).Need of effective communication for popularization of production and use of biofertilizers and biopesticides. Proceeding of Nation workshop on scientific paper writing and effective communication. Department of Biotechnology, D.D.U. Gorakhpur University, Gorakhpur. 17-18 September: 85-90.
58. Vandana Singh and **Keshav Singh** (2016). Effect of sublethal exposure of herbicides on the biochemical parameters of earthworm *Eutyphoeus waltoni* Michaelsen [Oligochaeta: Octochaetidae].**Journal of Institute of Integrative Omics and Applied Biotechnology (IIOAB)**, 7(10): 55-62.India, (ISSN 0976-3104).
59. Vandana Singh and **Keshav Singh** (2016). Effect of sub lethal exposure of LC₅₀ of butachlor on the population dynamics of earthworm *Eutyphoeus waltoni*. **Research Journal of Engineering and Technology**., 7(4):156-166.India,(ISSN:0976-2973).
60. Shesh Nath and **Keshav Singh** (2016). Combined effects of liquid biofertilizer with plant-derived biopesticides on growth, flowering and productivity of pigeon pea and pest infestation of *Helicoverpa armigera* (Hübner) (Noctuidae: Lepidoptera). **International Journal of Zoological Investigations**, 2(2):244-266India(ISSN: 2454-3055)**I.F. 2.41**
61. **Keshav Singh**, Vandana Singh and R.N. Singh (2017) .Effect of vermic-activity of earthworm *Eisenia fetida* on the physico-chemical texture of biological wastes. **Research Journal of Science and Technology**. 9(2): 277-284. India, (ISSN 2349-2988).
62. Ram Nayan Singh, Chhote Lal Yadav and **Keshav Singh** (2017). Dimethoated induced alterations in carbohydrate metabolism of common carp, *Cyprinus carpio* (LINN.). **Indian Journal of Science and Research**. 15 (1): 175-180.India, (ISSN:0976-2876)
63. **Keshav Singh** and Vandana **Singh** (2017). Sub-lethal effects of herbicide Sulfosulfuron on the clitellum development, cocoon production, hatchlings/cocoon and survival of hatchlings of earthworm *Eutyphoeus waltoni*. **International Journal of Zoological Investigations**, 3(1): 82-94.India(ISSN: 2454-3055)**I.F. 2.41.**
64. **Keshav Singh** (2019). Effect of Vermiwash with Garlic (*Allium sativum*) on the Infestation of *Earias vittella* (Fabricius) and Productivity of Okra (*Abelmoschus*

- esculentus*) (L.) Moench. **Journal of Advanced Zoology**. 40(2): 145-154. India (ISSN: 0253-7214).
65. **Keshav Singh** and Deepak Kumar Bhartiya (2020). Effect of liquid biofertilizer with Herbal Insecticide Garlic (*Allium sativum* L.) on productivity of Gram (*Cicer arietinum*) and Infestation of *Helicoverpa armigera* (Hübner). **Research Journal of Pharmacy and Technology**. 13(6): 2567-2572. India (ISSN: 0974-3618).
 66. **Keshav Singh** and Deepak Kumar Bhartiya (2020). Heavy metal accumulation by earthworm *Eisenia fetida* from animal waste, soil and wheat (*Triticum aestivum*) for protection of human health. **Research Journal of Pharmacy and Technology**. 13(7): 3205-3210. India (ISSN: 0974-3618).
 67. **Keshav Singh** and Deepak Kumar Bhartiya (2020). Minimization of health problem through Vermibiotechnology and accumulation of heavy metal from Biological Waste, Soil and Rice (*Oryza sativa* L.). **Research Journal of Pharmacy and Technology**. 13(8): 3580-3586. India (ISSN: 0974-3618).
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 70. Nazia Siddiqui, Zaveesha Saman and **Keshav Singh**. (2022). Effect of Foliar Application of Liquid Biofertilizer of buffalo dung and gram bran with combinations of biopesticides on the growth, flowering and productivity of Soyabean (*Glycine max* L.) Crop. **International Journal of Zoological Investigations**. 8(1): 357-364. ISSN: 2454-3055.
 71. Nishat Fatima and **Keshav Singh**. (2023). Accumulation of Heavy Metals from the Combination of Different Biological Wastes by Earthworm *Lampito mauritii* Kinberg. **International Journal of Zoological Investigations**. 9(1): 257-271. ISSN: 2454-3055.
 72. Nazia Siddiqui and **Keshav Singh**. (2023). Estimation of physic-chemical changes of different combinations of cow dung with vegetable waste and banana peels by the earthworm *Eutyphoeus waltoni*. **World journal of Pharmaceutical Research**. 12(5): 1527-1541. ISSN: 2277-7105.
 73. Anjali Singh and **Keshav Singh**. (2023). Estimation of Physico-Chemical Parameters of Different Combinations of Buffalo Dung with Cane Sugar Bagasse by Vermic Activity of Earthworm *Lampito Mauritii*. **International Journal of Zoology and Applied Biosciences**. 8(2): 40-48. ISSN: 2455-9571.

74. Nishat Fatima and **Keshav Singh**. (2023). Cobalt, Chromium and Lead Heavy Metals Accumulation from Animal Dung, Soil and Rice Grain Through Vermic activity by *Lampito Mauritii* Kinberg. **International Journal of Zoology and Applied Biosciences**. 8(3): 05-18. ISSN: 2455-9571.
75. Nazia Siddiqui and **Keshav Singh**.(2023). Estimation of Physico-Chemical Changes of Different Combinations of Animal Dung with Kitchen Wastes by Earthworm *Eutyphoeus waltoni*.**International International Journal of Zoological Investigations**. 9(1):873-888. ISSN: 2454-3055.
76. Singh Anjali and **Singh Keshav**: Estimation of physico-chemical changes of different combinations of buffalo dung with distillery effluents by vermic activity of earthworm *Lampito mauritii*. **International Journal of Zoological Investigations**. 9(2): 686-698, 2023. ISSN: 2454-3055.
77. Singh Pankaj Kumar and **Singh Keshav**. (2023). Biodiversity of Earthworm (Oligochaeta-Annelida) in Gorakhpur District of Northeast Uttar Pradesh, **International Journal of Zoological Investigations**. 9(2): 990-1000. ISSN: 2454-3055.
78. Mishra A., **Singh, K.** and Tiwari, S.K. (2023). Methoxyfenozide Induced Management of Stored Cereal Pest, *Corcyra cephalonica* (Stainton). **International Journal of Zoological Investigation**. 9(2): 1105-1113. ISSN: 2454-3055. ISSN: 2454-3055.
79. Singh Pankaj Kumar and **Singh Keshav**. (2023). Biodiversity of Earthworm (Oligochaeta-Annelida) in Kushinagar District of Uttar Pradesh, India. **International Journal of Zoology and Applied Biosciences**. 8(6): 7-14. ISSN: 2455-9571.
80. Mishra Anjali, **Singh Keshav** and Tiwari, S.K. (2023). Potential of Methoxyfenozide (an Ecdysone Hormone Analogue) on the Growth Duration and Longevity of Adults of Rice Moth, *Corcyra cephalonica* Staint. (Lepidoptera: Pyralidae) Exposed as First Instar Larvae. **International Journal of Zoological Investigations**. 9(2): 1396-1403. ISSN: 2454-3055.
81. Yadav Priyanka, **Singh Keshav** and Tiwari, S.K. (2023). Juvenile Hormone Analogue and Management of Rice Moth, *Corcyra cephalonica* Staint. (Lepidoptera: Pyralidae). **International Journal of Zoological Investigations**. 10(1): 10-17. ISSN: 2454-3055.

BOOKS: 11

1. **Keshav Singh**, Gorakh Nath, Deepak Kumar Bhartiya, Adarsh Pal Vig and Debmalya Barh (2010). Vermicomposting: A Boon for Soil, Plant and Environment. **LAP LAMBERT Academic Publishing**, ISBN: 978-3-8443-3442-5, Germany.
2. Anjali Mishra, **Keshav Singh**, Harendra Kumar Chauhan and Deepak Kumar Bhartiya. (2013). Text Book of Animal Physiology. **Biotech Books, New Delhi**, ISBN:- 978-81-7622-4.

3. **Keshav Singh**, Gorakh Nath, Rabish Chandra Shukla and Deepak Kumar Bhartiya (2014). A Text Book of Vermicompost, Vermiwash and Biopesticides. **Biotech Books, New Delhi**, ISBN: 978-81-7622-322-5.
4. **Keshav Singh** and Rahul Rai (2014). Management of Industrial Effluents through Vermicomposting. **Gene-Tech Books, New Delhi**, ISBN: 978-81-89749-32-2.
5. **Keshav Singh** and Yogendra Kumar (2014). Earthworm Diversity and Ecology. **Gene-Tech Books, New Delhi**, ISBN: 978-81-89729-33-0.
6. **Keshav Singh**, Deepak Kumar Bhartiya and Harendra Kumar Chauhan (2014). Earthworm Reproduction and Heavy metals Accumulation. **Gene-Tech Books, New Delhi**, ISBN: 978-81-89749-34-9.
7. **Keshav Singh** (2019). Vermicomposting: Waste management and self-employment. A & V Publications Raipur (C.G.), India. ISBN: 978-81-942242-2-8.
8. **Keshav Singh** (2019). Text book of Ecology. A & V Publications Raipur (C.G.), India. ISBN: 978-81-942242-3-5.
9. **Keshav Singh** (2020). Text book of Beneficial Insects. A & V Publications Raipur (C.G.), India. ISBN: 978-81-944112-1-5.
10. **Keshav Singh** (2020). Text Book of Genetics. A & V Publications Raipur (C.G.), India. ISBN: 978-81-944112-3-9.
11. **Keshav Singh** (2020). Text Book of Biofertilizers. A & V Publications Raipur (C.G.), India. ISBN: 978-81-944112-2-2.

BOOK CHAPTER: 04

1. Farindra Tiwari, **Keshav Singh** and D.K. Singh (2008). Enzyme inhibition by different bait formulation against the snail *Lymnaea acuminata*. Environmental pollution and toxicology Eds. (B.D. Joshi, P.C. Joshi and Namita Joshi) A. P. H. Publishing Corporation India (One chapter) ISBN: 978-81-313-0432-7.
2. Anjali Singh, Zaveesha Saman and **Keshav Singh**. (2022). Vermibiotechnology: A Promising Tool for Waste Management and Organic Farming. Earthworms and their ecological significance. Nova scientific publishers, USA. ISBN: 97-1-68507-567-5.
3. Nazia Siddiqui, Pankaj Kumar Singh and **Keshav Singh** (2022). Earthworms and Soil Fertility. Earthworms Engineering and Applications. Nova scientific publishers, USA. ISBN: 978-1-68507-566-8.

4. Nishat Fatima and **Keshav Singh**. (2022). The Combination of Liquid Biofertilizer Vermiwash with Biopesticides- Boon for Control of Pest Infestation and Crop Productivity. Earthworms Engineering and Applications. Nova scientific publishers, USA. ISBN: 978-1-68507-566-8.

Research projects successfully completed:

1. **Title of the project** “Studies on vermicomposts of different animal, agro and kitchen waste and their effect on growth of certain plants.”
 Funding Agency U.G.C. New Delhi Project F. No. 33-351/2007 (SR)
 Duration Three years (from 1.4.2008 to 31.3.2011)
 Sanctioned amount Rs. 6,95,800=00.

2. **Title of the project** “Production of organic liquid biofertilizers (Vermiwash) from municipal solid wastes and their effect in combination with biopesticides on the productivity of important crops of eastern Uttar Pradesh”,
 Funding Agency U.G.C. New Delhi Project F. No. 42-527/2013 (SR)
 Duration Three years from 1.4.2013 to 31.3.2017
 Sanctioned amount Rs. 10,35,800=00.

RAJEEV GANDHI NATIONAL FELLOWSHIP AWARDED TO MY RESEARCH STUDENTS

| S. No | Name of fellow | Fellowship No. |
|-------|-----------------------|--|
| 1. | Deepak Kumar Bhartiya | F.14-2(SC)/2010(SA-III) |
| 2. | Yogendra Kumar | F1-17.1/2011-12/RGNF-SC-UTT-791/(SA-III/Websites) |
| 3. | Shesh Nath | F1-17.1/2016-17/RGNF-2016-17-SC-UTT-5971/(SA-III/Websites) |

Invited lectures in Symposia/Seminar:

| S.No. | Title of the Invited lectures | Organized by | Year |
|-------|---|---|-----------------------|
| 1. | Vermicomposting: A tool for management of different wastes and self-employment for youth of B.P.L. and weaker sections. | National Seminar on Challenges for Biosciences in 21 st Century. Department of Zoology, S. P.P.G. College Shoharatgarh, Siddharthnagar, U.P., India, | 19-20 February, 2011. |
| 2. | Wastes management through vermicomposting. | DST Sponsored National conference on challenges of biological and Environmental Sciences in 21 st Century, S.V.M.M.V. Gorakhpur. U.P., India. | 19-20 December, 2014 |
| 3. | Waste management & vermicomposting. | National Conference on Impact of Environmental Xenobiotics on Human Health and Biodiversity, Department of Zoology, Shibli National Postgraduate College, Azamgarh, Utter Pradesh, India. | 02-03 November, 2014 |
| 4. | Environment and human welfare. One day satellite symposium. | Department of Zoology, Lucknow University Lucknow,U.P., India. | 17 January, 2015. |
| 5. | Biofertilizers. | Skill Development programme. U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 01 March, 2016. |
| 6. | Vermicomposting: Production and Use. | Skill Development programme. U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur | 03 March, 2016. |
| 7. | Soil analysis. | Skill Development programme. U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur | 04 March, 2016. |
| 8. | Biofertilizers: production and benifites. | Farmers training programme. U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur | 08 August, 2016. |
| 9. | Liquid Biofertilizers (Vermiwash). | Farmers training programme. U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur | 12 August, 2016. |
| 10. | Waste management | Department of Biotechnology, D.D.U. | 07 |

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| | through vermicomposting. | Gorakhpur University, Gorakhpur, | September, 2017. |
| 11. | Integrated Pest Management. | Department of Biotechnology, D.D.U. Gorakhpur University, Gorakhpur, | 14 September, 2017. |
| 12. | Vermicomposting and Self employment. | National seminar (PrithviParva).Department of Geography, D.D.U. Gorakhpur University, Gorakhpur. | 26-28, November, 2017. |
| 13. | Earthworm and Agriculture | National seminar. Department of Botany, D.D.U. Gorakhpur University, Gorakhpur. | 23-24 February, 2018. |
| 14. | National Mathematics Day | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 25 June 2018. |
| 15. | National Technology Day | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 7 July 2018. |
| 16. | Weather Climate Change Programme | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 16 July 2018. |
| 17. | Programme on control of items/substances useful in daily life for environmental protection. | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 29 July 2018. |
| 18. | Scientific awareness programme on water conservation | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 6 August 2018. |
| 19. | Sustainable Development | National seminar. DSW and Maha Yogi Guru Shri Goraksh Nath Sodhpith. D.D.U. Gorakhpur University, Gorakhpur. | 23-24 January, 2019. |
| 20. | Vermibiotechnology | National seminar. On Tools and Techniques in Life Sciences. Department of Zoology. D.D.U. Gorakhpur University, Gorakhpur. | 25-26 March, 2019. |
| 21. | Waste Management Through Vermicomposting | National seminar on Biodiversity and Development: Challenges of 21 st Century. IQAC & Faculty of Science, M.L.K. (P.G.) College, Balrampur (U.P.) – 271201. | 24-25 November, 2019. |
| 22. | Soil Pollutants and Diversity of Earthworm in | National seminar on “Biotechnological Interventions in Agriculture, Health and Industry” (BIAHI-2019). Department of | 23-24 February, 2019. |

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| | Eastern U.P. | Biotechnology. D.D.U. Gorakhpur University, Gorakhpur. | |
| 23. | National Science Day Programme | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 28 February 2019. |
| 24. | Entrepreneurship Promotion Programme | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 6 March 2019. |
| 25. | Innovation training programme | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 21 June 2019. |
| 26. | Circle level teacher training workshop | U.P.C.S.T. Regional Science and Technology Center, Taramandal, Gorakhpur. | 10 July 2019. |
| 27. | Vermicomposting, A Tool for Waste Management and Production of Biofertilizers | 1 st International Conference on Environment and Society (ICES 2019). DG PG College, Kanpur, U.P. and Asian Biological Research Foundation (ABRF), India. | 22-23 December, 2019. |
| 28. | Diverse Impacts of Covid-19 Pandemic on Human Beings | National webinar. Madan Mohan Malviya Post Graduate College, Bhatpar Rani, Deoria (UP), India. | 23-24 September, 2020. |
| 29. | Organic farming: Fight Against Pollution (Earthworms & Soil fertility) | Tree days International Seminar "Rashtra Chetna Utsav Vison-2047" on the occasion of 106 th Birth Anniversary of Pt. Deen Dayal Upadhyaya- | September 24-26, 2022 |
| 30. | Earthworm and soil fertility | National Conference (CCIBES-2023) on Climate change: Its impact on Biodiversity and Ecological Sustainability Organized by Department of Zoology Marwar Business School. | 17-18 April 2023 |
| 31. | Training of Dairy Farmers for Management of Cattle Dung through Vermicomposting (WOV)- | Workshop at Department of Botanical and Environmental Sciences Guru Nanak Dev University, Amritsar | 13-14 June 2023 |
| 32. | Biological waste and vermicomposting | National Conference on Innovation and Entrepreneurship: A Magic bullet to industrial revolution through advancement in biological, chemical, physical and mathematical sciences | 31-1 October 2023 |
| 33. | Vermiwash (Liquid Biofertilizer) and crop productivity | ICSSR Sponsored National Seminar on Environment, Technology and Sustainable Rural Development Organized by Department of Geography | 03-04 November 2023 |

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| | | Digvijai Nath Post Graduate College, Gorakhpur | |
| 34. | Waste Management through Vermicomposting | Saraswati Vidya Mandir Mahila Mahavidyalaya, Aryanagar Gorakhpur | 9 November 2023 |
| 35. | Waste Management and Vermibiotechnology | 13 th annual session of Society of Life Sciences, Satna and International Conference on “Advances and innovations in biotechnology for sustainable bioresources and bioeconomy (AI-BSBB2023)” organized by AKS University Satna, M.P. | 22-25 November 2023 |
| 36. | Sustainable Development and Organic Farming | 5 th International Conference on Environment and Society (ICES 2023) Theme: New Vistas in Waste Management and Sustainable Environment Organized by Department of Environmental Science, Dr. RML Avadh University, Ayodhya (U.P.), India | 29-30 December 2023 |

Papers presented in Conferences/Seminars/Symposia/ workshops:

1. A protective supplement for *Cajanus cajan* against termite infestation. Proceeding of NSE-16, Department of Environmental Engineering, G. J. University, Hisar, Haryana pp52-56. 16-18 July, 2008.
2. Effect of foliar spray of biopesticides and vermiwash of animal, agro and kitchen wastes on Soybean (*Glycine max*) crop. U.G.C. Sponsored National Seminar on Environment and Sustainable Development, Department of Botanical and Environmental Sciences G.N.D.U. Amritsar, Punjab. Nov 3-4, 2009.
3. Challenges of Communal Harmony, National conference on Communal Harmony- Challenges and Our Future. Home Ministry Govt. of India and N.S.S. , D.D.U. Gorakhpur University, Gorakhpur, 15-16 February 2010.
4. Vermicomposting: A tool for management of different wastes and self-employment for youth of B.P.L. and weaker sections. Proceeding of National Seminar on Challenges for Biosciences in 21st Century, Department of Zoology, S. P. P. G. College Shohratgarh, Siddharthnagar, U.P. 19-20 February 2011.
5. Effect of different combinations of wastes on growth and reproduction of epigeic earthworm *Eisenia fetida*. National Seminar on Climate change & biodiversity. Department of Botany, SVMMPG College, Arya Nagar, Gorakhpur, 21-22 January 2011.

6. Vermicomposting: A tool for waste management. International Conference, Hormony, 11-13, November, 2013, Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur.
7. Use of biofertilizer & soil health. 20th Annual National Seminar Institute for rural Eco-development, Gorakhpur U.P. India. Demographic change, employment security and environmental susceptibility. Department of Geography, D.D.U. Gorakhpur University, Gorakhpur, 29-30 January 2012.
8. Waste management and vermicomposting. National Conference on Impact of Environmental Xenobiotics on Human Health and Biodiversity, Department of Zoology, Shibli National Postgraduate College, Azamgarh, Uttar Pradesh, India. 02-03 November, 2014.
9. Combined effect of vermiwash on pod borer *H. armigera*. Challenges of biological and environmental Science in 21st Century, National Conference on 'S. V. M. M. P.G. College Gorakhpur. 19-20 December, 2014.
10. Accumulation of Pb and Cr from sewage sludge with cattle dung through vermicomposting by the use of *Eisenia fetida* National Seminar on 'Current Issues in Zoology & Environmental Sciences, Department of Zoology, Marwar Business School, Gorakhpur, UP India, 24-25 March, 2014.
11. Role of biofertilizers in soil fertility. National Seminar on Land use management in perspective of eco-development, Department of Geography, D.D.U. Gorakhpur University, 19-20 November, 2015.
12. Combined effect of vermiwash on crops and their pest infestation. National Conference on Climate change, medicinal plants and public health: Strategizing an ethno-biotechnology- Social resilience, Department of Botany, St. Andrew's P G College, Gorakhpur, 27-28 January, 2016.
13. Bioaccumulation of heavy metals through vermicomposting. National Seminar on 'Plant medicine ,Biodiversity- Climate Link, Department of Zoology, Marwar Business School, Gorakhpur, UP India. 2-3 February, 2016,
14. Effect of soil texture chemical fertilizers on soil texture in eastern UP. National Seminar on Man and Biosphere, Department of Zoology, Marwar Business School, Gorakhpur, UP India, 9-10 February, 2016.
15. Need of effective communication for popularization of production and use of biofertilizers and biopesticides. Proceeding of Nation workshop on scientific paper writing and effective communication. Department of Biotechnology, D.D.U. Gorakhpur University, Gorakhpur. 17-18 September, 2016
16. Biofertilizer. National Conference on 'Challenges of environmental Problems in 21st Century. Department of Zoology, Marwar Business School, Gorakhpur, UP India, 26-27 March, 2017.

17. Vermiwash : A biofertilizer for agriculture. National conference on Underutilized plants, food security & Climate link, Department of Botany, D.D.U. Gorakhpur University, Gorakhpur, 20-21 January, 2017.
18. Vermibiotechnology and waste management. National Conference on 'Plant –Our Life; A Medico-botanical View. Department of Zoology, Marwar Business School, Gorakhpur, UP India, 9-10 March, 2017.
19. Biological wastes & vermicomposting. National workshop on Intellectual property rights, Geographical identification and Innovation Management, Department of Botany, D.D.U. Gorakhpur University, Gorakhpur. 22-23, March, 2017.
20. Effect of physico-chemical texture of soil on earthworm distribution in eastern Uttar Pradesh. Silver jubilee I.R.E.D. National Seminar. Department of Geography, D.D.U. Gorakhpur University, Gorakhpur. 26-28, November, 2017.
21. Effect of physico-chemical property of soil on biodiversity of earthworm in U.P. International Conference on Advances in Biological and Environmental Research for Human Welfare (ICABERHW-2018). Department of Zoology D.D.U. Gorakhpur University Gorakhpur. 16-18 November 2018.
22. Effect of Soil Pollutants on the Diversity of Earthworm in Eastern Uttar Pradesh. Two days National Seminar on Emerging Trends in Science. Maharana Pratap P.G. College, Jungle Dhusan. Gorakhpur. 1-2 February 2019.
23. Vermicomposting and Waste Management. National Workshop on Environmental Hazards, Livelihood Issues and Resilience in Agrarian Societies: A Cross Disciplinary Analysis. Department of Geography, D.D.U. Gorakhpur University Gorakhpur. 2-3 February 2019.
24. Vermibiotechnology. Workshop on Tools and Techniques of Life Sciences. Department of Zoology D.D.U. Gorakhpur University Gorakhpur. 25-26 March, 2019.
25. Vermibiotechnology and Waste Management. 8-ACLA International Symposium. Environment, Sustainability, Law & Cultural Landscapes of Asia. Department of Geography and Department of Law. D.D.U. Gorakhpur University, Gorakhpur: 17-19 October 2019.
26. Vermiwash and Crop Productivity. 8-ACLA International Symposium. Environment, Sustainability, Law & Cultural Landscapes of Asia. Department of Geography and Department of Law. D.D.U. Gorakhpur University, Gorakhpur: 17-19 October 2019.
27. Youth and Self-employed. National seminar on Nathpanth Encyclopedia Construction: Various Dimensions of Planning and Implementation. D.D.U. Gorakhpur University Gorakhpur. 14-15 December 2019.
28. Production & Marketing of Cow Dung Biofertilizers- A Tool for Waste Management and Self Employment. International seminar on Integral Humanism: A Viable Pathway to Sustainable Development. , D.D.U. Gorakhpur University Gorakhpur. 12-14 February, 2021.

Conferences/Seminar/Symposia/Workshop Participated:

1. International Symposium on Current Issues in Zoology and Environmental Science. Department of Zoology, D.D.U. Gorakhpur University Gorakhpur, 11-13 November 2006.
2. National Symposium on Impact of Environmental Pollution on Climate Change and Biodiversity, Department of Zoology, D.D.U. Gorakhpur University Gorakhpur, 10 October, 2009.
3. U.G.C. Sponsored National Seminar, on Environmental and Sustainable Development, Department of Botanical and Environmental Sciences G.N.D.U. Amritsar, **Punjab**, 3-4 November 2009.
4. National Conference on “Climate Change, Biodiversity and Conservation. St. Andrews College, Gorakhpur 16-17 February 2011.
5. Workshop on Environment and Biodiversity, Department of Botany and Environmental Society Siddharth Nagar, D.D.U. Gorakhpur University Gorakhpur. 14 March, 2011.
6. Workshop on Action Research and Writing Research Paper. UGC Academic Staff College Deen Dayal Upadhyay Gorakhpur University, Gorakhpur, 26-27 May 2011.
7. Enhancing Quality in Higher Education Institutions-An IQAC Approach. Department of Zoology, D.D.U. Gorakhpur University Gorakhpur, 7th September 2011.
8. Xth State Conference of Uttar Pradesh Diabetes Association UPDAICON-2011 Gorakhpur, Syed Modi Railway Stadium, Gorakhpur (U.P.), 29-30 October 2011.
9. National Conference on Biodiversity: Changing Pattern and Conservation Strategies, Department of Botany, D.D.U. Gorakhpur University Gorakhpur. 26-28 November, 2011.
10. National Workshop on Sensitization of Women Scientists. Department of Botany, D.D.U. Gorakhpur University Gorakhpur. 13 August, 2012.
11. 1st Uttar Pradesh Science Congress. D.D.U. Gorakhpur University Gorakhpur, March 2nd- 4th, 2013
12. Bhabha Atomic Research officers’ Associations (BARCOA). 2nd National Symposium on Bark Technologies for Development of Rural India (BTDR-2013). Organized by BARCOA and DDU Gorakhpur University in association with BRNS Mumbai. March 12-13, 2013 at DDU Gorakhpur University Gorakhpur.
13. National Symposium on Advances Zoology and Environmental Science. Department of Zoology, D.D.U. Gorakhpur University Gorakhpur, 13-14 March, 2013.
14. DBT, New Delhi sponsored National conference on Biodiversity conservation & Sustainability Development, St. Andrew’s P.G. College Gorakhpur. 6-7 February, 2013.

15. International symposium on Frontiers of product research and human health & 2nd Annual meeting of Indian Society for Life Science, Department of Zoology, D.D.U. Gorakhpur University Gorakhpur & ISLA, 19-12-2015.
16. International Conference on Environmental Mutagenesis, Carcinogenesis and Health & 40th Annual meeting of EMSI. G.N.D.U. Amritsar, Punjab, 17-19 February, 2016.
17. National Conference on Organic/Inorganic Functional Materials: A current Perspective. Department of Chemistry, D.D.U. Gorakhpur University Gorakhpur, 1-2 March, 2014.
18. National seminar on Threats to biodiversity and ecosystems: Impacts of development projects and climate change and 25th All India Congress of Zoology. Department of Zoology and Environmental Science, Gurukula Kangri Vishwavidyalaya, Hridwar, 17-18 November, 2014.
19. National seminar on CST, UP in promotion of Science & Technology and facilitation of IPR Protection. Faculty of Science, D.D.U. Gorakhpur University Gorakhpur & CST, U.P., Lucknow. 15 March, 2015.
20. National Conference on “Omics for Food, Health and Environment” (OFHE-2020): Waste Management and Vermicomposting. Department of Biotechnology. D.D.U. Gorakhpur University Gorakhpur. 14-15 February 2020.

Orientation & Refresher courses attended:

| S. No. | Name of the Course/ Summer School | Place | Duration | Sponsoring Agency |
|---------------|--|---|--------------------------------|--------------------------|
| 1. | Orientation Course | D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 19-08-2006 to 15-09-2006 | U. G. C. New Delhi |
| 2. | Refresher Course | Department of Zoology, D.D.U. Gorakhpur | 08-11-2006 to | U. G. C. New Delhi |

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|-----|-----------------------------|--|--------------------------|--------------------|
| | | University, Gorakhpur- U.P., India | 28-11-2006 | |
| 3. | Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 07-11-2008 to 27-11-2008 | U. G. C. New Delhi |
| 4. | Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 29-09-2012 to 19-10-2012 | U. G. C. New Delhi |
| 5. | Short-term Refresher Course | Department of Botany, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 01-09-2012 to 07-09-2012 | U. G. C. New Delhi |
| 6. | Refresher Course Short-term | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 17-12-2013 to 23-12-2013 | U. G. C. New Delhi |
| 7. | Refresher Course Short-term | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 13-02-2014 to 19-02-2014 | U. G. C. New Delhi |
| 8. | Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 06-09-2014 to 26-09-2014 | U. G. C. New Delhi |
| 9. | Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 25-06-2015 to 15-07-2015 | U. G. C. New Delhi |
| 10 | Short term Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 25-06-2016 to 01-07-2016 | U. G. C. New Delhi |
| 11 | Short term Refresher Course | Department of Zoology, D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 12-11-2016 to 18-11-2016 | U. G. C. New Delhi |
| 12. | Online Refresher Course | Human Resource Development Centre. D.D.U. Gorakhpur University, Gorakhpur- U.P., India | 10-10-2020 to 23-10-2020 | U. G. C. New Delhi |

Affiliation with Scientific Societies:

1. Life member of Aphidological Society, India
2. Life member of the Academy of Environmental Biology, India
3. Life member of Asian Biological Research Foundation (ABRF) Prayagraj (India)
4. Life member of society of Life Sciences, Satana, M.P, India.

Member of editorial board of Journal:

1. Research Journal of Science and Technology.

Member of organizing committee:

1. International Symposium on Current Issues in Zoology and Environmental Science. Department of Zoology, D.D.U. Gorakhpur University Gorakhpur, 11-13 November 2006.
2. Member of organizing committee of one day Workshop on "Tiger Conservation in India". Department of Zoology, D.D.U. Gorakhpur University Gorakhpur. 5 March, 2011.
3. Organizing secretary of Farmer's Awareness Programme on Production and Use of Vermicomposts. (2008, 2011, 2014 and 2018).
4. Member of academic programme committee Utter Pradesh Science Congress on "Shaping and Future of Utter Pradesh Science. D.D.U. Gorakhpur University Gorakhpur. 2-4 March, 2013.
5. International Conference Harmony-2013, Harmony with Nature in Context of Ecotechnological Intervention and Climate Change, , Department of Zoology, Environmental Science & Biotechnology, D.D.U. Gorakhpur University Gorakhpur. 11-13 November 2013
6. Member of National Symposium on "Advances in Zoology and Environmental Science" March 12-13, 2013. Department of Zoology , D.D.U. Gorakhpur University Gorakhpur
7. International Conference. Department of Zoology , D.D.U. Gorakhpur University Gorakhpur & ISLS, Rajasthan on Frontiers of natural products research and human health & 2nd annual meeting of ISLS.(2015)

Administrative Experiences:

- Assistant Proctor, D.D.U. Gorakhpur University, Gorakhpur (2007- 2014).
- Assistant Dean Student Welfare, D.D.U. Gorakhpur University, Gorakhpur. (2007- 2014).
- Chair person of athletics, D.D.U. Gorakhpur University, Gorakhpur (2009- 2014).
- Member of admission committee (2006- 20117).
- Member of Board of Studies of the Department (2007- 2021).
- Programme officer in National Service Scheme (NSS) (2007- 2014).
- Programme Coordinator-NSS, D.D.U. Gorakhpur University Gorakhpur.(06.10.2018-07.10.2022)
- Director, Zero Waste Campus Centre, D.D.U. Gorakhpur University Gorakhpur (December 2022-November 2023).
- At present Member of Academic council, Member of Council of Science Faculty, member of Departmental purchase committee, Member of Board of Studies of the Department, Member of Council of Agriculture Faculty and Co- Coordinator, Environmental Science D.D.U. Gorakhpur University, Gorakhpur.

Reviewer of National and International Journals:

1. African Journal of Biotechnology
2. Ecological Engineering
3. Journal of Science, Technology and Development
4. International Journal of Agricultural Policy and Research
5. International Journal of Research in Bio-sciences
6. International Research Journal of Public and Environmental Health
7. Agricultural Science Research Journal
8. African Journal of Food Sciences
9. International Journal of Agricultural Policy and Research
10. Science Technology and Development
11. Biocatalysis and Agricultural Biotechnology
12. Journal of Agricultural Extension and Rural development
13. Journal of Agricultural and Biological Science
14. African Journal of Biotechnology
15. World Applied Science Journal
16. Journal of Crop Improvement
17. Advances in Bioscience and Biotechnology
18. Springer Plus
19. American Journal of Experimental Agriculture

RESEARCH ARTICLES PUBLISHED IN NATIONAL AND INTERNATIONAL JOURNALS

(78 FULL RESEARCH PAPERS IN 50 JOURNALS)

1. Academic Journal of Entomology
2. ActaHydrochemica et Hydrobiologica
3. Agriculture and Natural Resources, Elsevier
4. American-Eurasian Journal of Agriculture & Environmental Sciences
5. American-Eurasian Journal of Toxicological Sciences
6. Archives of environmental contamination and toxicology
7. Asian Journal of Research in Pharmaceutical Sciences
8. Australian Journal of Basic and Applied Science
9. Biological Agriculture and Horticulture
10. Biospectra
11. Botany Research International
12. Chemosphere
13. Dynamic soil, Dynamic Plant (Global Science Books)
14. Environment, Development and Sustainability, Springer
15. Environmental Processes, Springer
16. Global Journal of Biology, Agriculture & Health Sciences
17. Indian Journal of Science Research
18. International J. of Zoological Investigations

19. International Journal of Advanced Research
20. International Journal of Agriculture Innovations and Research
21. International Journal of Basic and Applied Research
22. International Journal of Biological Innovation
23. International Journal of Zoology and Applied Biosciences
24. International Journal of Environment Science and Engineering Research
25. International Journal of Life Science and Technology
26. International Journal of Pure Applied Biosciences.
27. International Journal of Recycling of Organic Waste in Agriculture
28. International Journal of Recycling of Organic Wastes in Agriculture, Springer
29. International Journal of Technology
30. Journal of Agricultural Technology
31. Journal of Biological Innovation
32. Journal of Biology, Agriculture and Healthcare
33. Journal of Advanced Zoology
34. Journal of Central European Agriculture
35. Journal of Central European Agriculture
36. Journal of Entomology
37. Journal of Ethnopharmacology
38. Journal of Institute of Integrative Omics and Applied Biotechnology (IIOAB)
39. Journal of Natural Resource and Development
40. Journal of Solid Wastes Technology and Management
41. Malaysian Applied Biology
42. Munis Entomology and Zoology Journal
43. Research Journal of Engineering and Technology
44. Research J. Pharmacognosy and Phytochemistry
45. Research Journal of Pharmacy and Technology
46. Research Journal of Science and Technology
47. Scholarly Journal of Agricultural Science
48. World Applied Science Journal
49. World Applied Sciences Journal
50. World Journal of Agricultural
51. World Journal of Zoology
52. World Review of Science, Technology and Sustainable Development
53. World Journal of Pharmaceutical Research

(DR. KESHAV SINGH)