

# DR. MUHAMMAD ARSHAD

## *Professor (TTS)*

Department of Entomology  
University of Agriculture, Faisalabad, Pakistan



**Research Interest:** Microbial Control, Insect Biodiversity Management, Insect Systematics, Insect Toxicology, IPM of field and vegetable crops,  
**HEC approved supervisor for Ph.D Program**

### Personal Information

**Name :** Muhammad Arshad  
**Father's Name :** Muhammad Aslam  
**Date of Birth :** November 10, 1979.  
**Domicile :** Bahawalpur  
**N.I.C. No. :** 31201-4890257-7  
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### Academic Qualification

#### Postdoc Research Fellowship (2016)

Department of Entomology and Nematology, University of California, Davis, USA

#### Ph.D. (2009) Entomology

Department of Entomology, University of Agriculture Faisalabad, Pakistan

Department of Life Sciences, Imperial College London, UK

#### M.Sc. (Hons.) Agri. Entomology (2004)

Department of Entomology University of Agriculture Faisalabad, Pakistan

✓ Two years course with major in **Agri. Entomology**

✓ Securing CGPA 3.86/4.00 (81.33 %, 1<sup>st</sup> division)

#### B.Sc. (Hons.) Agriculture 2002

Department of Agri. Entomology University of Agriculture Faisalabad, Pakistan

✓ Four years course with major in **Agri. Entomology**

✓ Securing CGPA 3.66/4.00 (76 %, 1<sup>st</sup> division)

**F.Sc. (1998):** Govt. Degree College Dera Nawab Sahib, Ahmad Pur East

(Board of Intermediate and Secondary Education, Bahawalpur)

**Special subjects: Pre-Medical, Securing**

**Matriculation (1995):** Govt. Sadiq Abbas High School, Ahmad Pur East (Board of Intermediate and Secondary Education, Bahawalpur)

#### Research Fellowship (IRSIP)

➤ **United Kingdom:** Department of Life Sciences, Imperial College London

**Supervisor:** Prof. Dr. Denis J Wright

### ***International conference/ congress attended***

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#### **Tokyo, Japan:**

Presented country paper in Conference on Smart Agriculture for Sustainable, Inclusive Productivity; 5-7 September 2017, Tokyo, Japan.

#### **Poland:**

Viith International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental Aspects, 18-23 September 2011, Bialka Tatrzańska, Poland.

#### **South Korea:**

Presented oral presentation of two research papers in the International Congress of Insect Biotechnology & Industry (**ICIBI**) held on 19<sup>th</sup>-24<sup>th</sup> August, 2007 in **Daegu, Korea**.

#### **India:**

Presented oral presentation of a research paper in 2<sup>nd</sup> Congress on Insect Science held on February, 21-22, 2008 in Punjab Agriculture University **Ludhiana, India**.

### ***Teaching (Courses)***

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Ent-301	Introductory Agricultural Entomology	3(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-402	Applied Entomology	3(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-404:	Apiculture and Sericulture	3(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-503:	Principles of Insect Taxonomy	4(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-504:	Insect Biodiversity and Evolution	3(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-510:	Beneficial Insects	3(2-1)	B.Sc.(Hons) Agri. Sci,
Ent-513:	Insect Biodiversity Management	2(1-1)	B.Sc.(Hons) Agri. Sci,
Ent-611:	Preparation of Research Project and Scientific Writing	2(1-1)	B.Sc.(Hons) Agri. Sci,
Ent-612:	Internship and External Evaluation	6(0-6)	B.Sc.(Hons) Agri. Sci,
Ent-703	Environmental Entomology	2(2-0)	M.Sc.(Hons)/ Ph.D
Ent-719	Special Problem	1(1-0)	M.Sc.(Hons)/ Ph.D
Ent-720	Seminar	1(1-0)	M.Sc.(Hons)/ Ph.D

### ***Number of M.Sc. and Ph.D Students Supervised/under supervision***

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- As a major supervisor M.Sc. (Hons.): 104
- As a major supervisor Ph.D : 8
- As a member of supervisory committee M.Sc. (Hons.): 90
- As a member of supervisor committee Ph.D : 12

### ***Awards and Scholarships***

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- *Awarded International Research training fellowship/Post-doc at University of California, Davis, USA by United States Pakistan Center for Advanced Studies in Agriculture and Food Security (USPCAS-AFS).*
- *Awarded travel grant by HEC for Viith International Conference on Arthropods: Chemical, Physiological, Biotechnological and Environmental Aspects, 18-23 September 2011, Bialka Tatrzańska, Poland.*
- *Awarded six months Fellowship at Imperial College London, UK under International Research Support Initiative Program by Higher Education Commission of Pakistan*

- *Awarded Indigenous PhD Fellowship by Higher Education Commission of Pakistan Batch II, PIN: 042-160259-LS2-317.*
- *Awarded Travel grant of Rs.142, 940 by Higher Education Commission of Pakistan for International Congress of Insect Biotechnology & Industry (ICIBI) held on 19<sup>th</sup> – 24<sup>th</sup> August 2007 in Daegu, Korea.*

#### **Computer Qualification**

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- *Qualified MCSE (Microsoft Certified System Engineer) professional exam.*
- *Six-months short course in Basic computer, Networking, Installation and Assembling.*

#### **Membership**

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- *Member of Pakistan Entomological Society.*
- *Member of Royal Entomological Society, UK.*

#### **List of Publications**

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#### **IMPACT FACTOR PUBLICATIONS**

1. Bukhari, S.A.A., Z.U. Abidin, U.A. Chughtai, H.A. Khan, W. Akram, M. Arshad, and S.E.T. Razia. 2024. In vitro studies on the effects of plant-based bioinsecticide azadirachtin on the hemocyte-mediated immunity and various life history traits of *Plutella xylostella*. *Bulletin of Insectology*, 77(1), 39-43. **(IF= 1.2)**
2. Hina, A., M.K. Razzaq, A. Abbasi, M.B. Shehzad, M. Arshad, T. Sanaullah, and N.R. Abdelsalam. 2024. Genomic blueprints of soybean (*Glycine max*) pathogen resistance: revealing the key genes for sustainable agriculture a review. *Functional Plant Biology*, 51(5). **(IF=2.6)**
3. Riaz, M., M. Arshad, M. Saqib, R.R Khan, A. Aslam, M.I. Akbar. 2024. Pathogenicity of Entomopathogenic Nematodes, *Steinernema feltiae* Against Different Life Stages of Mole Crickets. *J. Xi'an Shiyu Uni., Nat. Sci. Edit.* 20:412-217. **(IF= 5.6)**
4. Abbas, A., C.R. Zhao, M. Arshad, X. Han, A. Iftikhar, F. Hafeez and F. Ullah. 2023. Sublethal effects of spinetoram and emamectin benzoate on key demographic parameters of fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae) under laboratory conditions. *Environ. Sci. Pollu. Res.*, 1-14. **(IF = 5.80)**
5. Aslam, A., D.F. Chi, A. Abbasi, M. Arshad, F. Hafeez, A.A. Hatamleh, and M.A. Al-Dosary. 2023. Time dependent mortality and behavioral response of *Odontotermes obesus* (Blattodea: Termitidae) against different dose rates of pesticides for sustainable forest management. *Frontiers in Forests and Global Change*, 6, 1257418. **(IF = 3.20)**
6. Ullah, U.N. F., Hafeez, S. Ali, M. Arshad, W. Akram, A. Ali, and B.M. AlMunqedhi. 2023. Distribution of mosquito species in various agro-ecological zones of Punjab. *J. King Saud Uni-Sci.*, 35(8), 102874. **(IF = 3.80)**
7. Iqbal, M., M.S. Nazir Javed, S. Ali and M. Arshad. 2023. Effects of fungicide application timings and genetic resistance of rice varieties on the reduction of percent severity of narrow brown leaf spot disease. *Pak. J. Agri. Sci*, 60(3), 337-343. **(IF = 0.856)**
8. Aslam, A., D.F. Chi, A. Abbasi, A. and M. Arshad. 2023. Biocontrol Potential of Entomopathogenic Nematodes against *Odontotermes obesus* (Blattodea: Termitidae) under Laboratory and Field Conditions. *Forests*, 14(3):580. **(IF: 3.282)**
9. Bhatti, F., F. Hussain, Zain ul Abidin, M. Arshad., S.K. Abbas and M.Z. Shabbir. 2022. Effects of Envenomation on Survival and Development of the Host-Parasitoid System of *Galleria mellonella* (Lepidoptera: Pyralidae) and *Bracon hebetor* (Hymenoptera: Braconidae). *Pakistan J. Zool.* 1-9. <https://dx.doi.org/10.17582/journal.pjz/20210722>. **(IF = 0.687)**
10. Saeed, S., S.T. Sahi, M. Atiq, M. Shahid and M. Arshad. 2022. Exploration of Resistance and Susceptibility in Chilli Varieties/Advanced Lines against Fusarium Wilt Caused by *Fusarium oxysporum* f. sp. *capsici* (FOC). *International Journal of Phytopathology*, 11(1): 59-64. **(IF = 0.18)**

11. Ali, S., M. Atiq, S.T. Sahi and M. Arshad. 2021. Mineral profiling of resistant and susceptible tomato varieties against *Alternaria solani* causing early blight. *Pakistan Journal of Agricultural Sciences*, 58(4). *Pak. J. Agri. Sci.*, Vol. 58(4): 1315-1321. (IF = 0.856)
12. Hafeez, F., U. Naeem-Ullah, W. Akram, M. Arshad, A. Iftikhar, A., Naeem and M.J. Saleem. 2022. Habitat characterization of *Aedes albopictus*. *International Journal of Tropical Insect Science*, 1-6. <https://doi.org/10.1007/s42690-021-00676-4>. (IF = 0.824)
13. Khan, R.R., M. Arshad, A. Aslam and M. Arshad, 2021. Additive interactions of some reduced-risk biocides and two entomopathogenic nematodes suggest implications for integrated control of *Spodoptera litura* (Lepidoptera: Noctuidae). **Scientific Reports**. 11:1268. | <https://doi.org/10.1038/s41598-020-79725-w>. (IF = 4.6)
14. Hafeez, F., M. Akram, M. Farooq, M. Saghir, M. Arshad, A. Iftikhar and U. Naeem-Ullah. 2021. Dusky cotton bug *Oxycarenus hyalinipennis* Costa (Lygaeidae: Hemiptera) loss assessment in cotton. *International Journal of Tropical Insect Science*, 41: 1163-1167. (IF = 1.2)
15. Hafeez, F., M. Abbas, K. Zia, S. Ali, M. Farooq, M. Arshad and M.J. Ansari. 2021. Prevalence and management of aphids (Hemiptera: Aphididae) in different wheat genotypes and their impact on yield and related traits. *Plos one*, 16(10): e0257952. (IF = 3.752)
16. Saleem, M.J., F. Hafeez, Q. Ali, A. Aslam, M. Arshad, D. Hussain and M. Saleem. 2021. Susceptibility of *Helicoverpa armigera* Hübner (Lepidoptera: Noctuidae) on detached plant parts of transgenic and non-transgenic cotton. *International Journal of Tropical Insect Science*, 1-6. (IF = 1.2)
17. Gogi, MD., A.H. Syed, B. Atta, M. Sufyan, M.J. Arif, M. Arshad, A. Nawaz, M.A. Khan, A. Mukhtar and O.E. Liburd, 2021. Efficacy of biorational insecticides against *Bemisia tabaci* (Genn.) and their selectivity for its parasitoid *Encarsia formosa* Gahan on Bt cotton. **Scientific Reports**. 11:2101. <https://doi.org/10.1038/s41598-021-81585-x>. (IF = 4.6)
18. Mushtaq, M.N., M. Arshad, S. Majeed and S.A. Khan. 2020. Demographic and morphometric features of pink bollworm, *Pectinophora gossypiella* (Saunders) (Lepidoptera: Gelechiidae) on four host plants. *International Journal of Tropical Insect Science*. <https://doi.org/10.1007/s42690-020-00185>. (IF = 1.2)
19. Afzal, H., S. Ahmed, R.R. Khan, M. Sufyan, M. Arshad and M. Qasim. 2020. Management of house fly, *Musca domestica* L. (Muscidae: Diptera), through botanical baits. *Revista Brasileira de Entomologia*. 64(1):e201968. (IF = 0.825)
20. Nawaz, A., M.D. Gogi, M. Naveed, M. Arshad et al., 2020. In vivo and in vitro assessment of *Trichoderma* species and *Bacillus thuringiensis* integration to mitigate insect pests of brinjal (*Solanum melongena* L.). *Egyptian Journal of Biological Pest Control*. 30:60 <https://doi.org/10.1186/s41938-020-00258-5>. (IF = 2.4)
21. Zulfiqar, S., S. Ahmed, M. Sufyan, M. Arshad, A. Nawaz and B. Hassan. 2020. Termiticide activities of wood extractives of *Ziziphus mauritiana* (Rhamnaceae) against subterranean termites under field conditions. *Revista Brasileira de Entomologia* 64(1):e201998. (IF = 0.825)
22. Abbas, S.K., Zain Ul Abidin, M. Arshad, F. Hussain, A. Jamil. 2020. In Vitro Studies for the Evaluation of Insecticidal Potential of the Venom of Endoparasitic Wasp *Aenasius arizonensis* (Girault) (Hymenoptera, Encyrtidae). *International Journal of Peptide Research and Therapeutics* <https://doi.org/10.1007/s10989-020-10062-2>. (IF = 1.931)
23. Asghar, M., Talfoor-ul-Hassan, M. Arshad, A. Aziz, M.T. Latif and A.M. Sabir. 2020. Effect of plant spacing on incidence of rice planthoppers in transplanted rice crop. *International Journal of Tropical Insect Science*. <https://doi.org/10.1007/s42690-020-00242-4>. (IF = 1.2)
24. Shahid, M.I., M. Arshad, Mansoor ul Hasan and M.A. Khan, 2019. Efficacy of Cry1Ac toxin from *Bacillus thuringiensis* against the beet armyworm, *Spodoptera exigua* (Hübner) (Lepidoptera: Noctuidae). *Egyptian J. Biol. Pest Control.*, 29-55. (IF = 0.763)
25. Saleem, M.J., M. Arshad, S. Ahmed and S.T. Sahi, 2019. Variation in susceptibility of *Helicoverpa armigera* (Lepidoptera: Noctuidae) to Cry1Ac toxin. *Pak. J. Agri. Sci.*, 56(2): 415-420. (IF = 0.8)
26. Nawaz, A., H. Ali, M. Sufyan, M.D. Gogi, M.J. Arif, M.H. Ranjha, M. Arshad et al. 2019. Comparative bio-efficacy of nuclear polyhedrosis virus (NPV) and Spinosad against American

- bollwormmm, *Helicoverpa armigera* (Hubner). Revista Brasileira de Entomologia 63: 277–282. (IF = 0.825)
27. Sufyan, M., A. Abbasi, W. Wakil, M.D. Gogi, M. Arshad, A. Nawaz and Z. Shabbir, 2019. Efficacy of *Beauveria bassiana* and *Bacillus thuringiensis* against maize stem borer *Chilo partellus* (Swinhoe) (Lepidoptera: Pyralidae). *Gesunde Pflanzen*.71:197–204. (IF = 1.102)
  28. Arshad, M., S. Ahmad, M. Sufyan, Zain-ul Abdin and S. Maqsood, 2018. Population dynamics of aphids and their natural enemies associated with strip-Intercropping in wheat crop. *Pakistan Journal of Zoology*, 50(4):1225-1230. (IF = 0.6)
  29. Khan, R.R., R.A. Ali, A. Ali, M. Arshad, S. Majeed, S. Ahmed, S.A. Khan and M. Arshad, 2018. Compatibility of Entomopathogenic nematodes (Nematoda: Rhabditida) and the biocide, spinosad for mitigation of the armyworm, *Spodoptera litura* (F.) (Lepidoptera: Noctuidae). *Egyptian Journal of Biological Pest Control*. 28(58):1-6. (IF = 2.4)
  30. Safdar, H., N. Javed, S.A. Khan and M. Arshad, 2018. Reproduction potential of entomopathogenic nematodes on armyworm (*Spodoptera litura*). *Pakistan J. Zool.*, 50(2):771-774. (IF = 0.6)
  31. Sufyan, M., A. Abbasi, M.D. Gogi, M. Arshad, A. Nawaz, D. Neuhoff, 2017. Efficacy of *Beauveria Bassiana* for the Management of Economically Important Wireworm Species (Coleoptera: Elateridae) in Organic Farming. *Gesunde Pflanzen* (2017) 69:197–202. (IF= 0.639)
  32. Arshad, M., H.A.A. Khan, F. Hafeez, R. Sherazi and N. Iqbal, 2017. Predatory potential of *Coccinella septempunctata* L. against four aphid species. *Pakistan Journal of Zoology*. 49(2): 623-627. (IF= 0.6)
  33. Farooqi, M.A., Mansoor-ul-Hasan, S. Akhtar, M. Arshad, M.N. Aslam and M. Rafay, 2017. Detection of insecticide residues in honey of *Apis dorsata* F. from Southern Punjab, Pakistan. *Pakistan Journal of Zoology*. 49(5):1761-1766. (IF = 0.6)
  34. Khan, H.A.A, W. Akram, T. Khan, M. Arshad, S. Ali, R. Mahmood and F. Hafeez, 2017. Correlation of biochemical leaf traits and gall formation in six cultivars of mango, *Mangifera indica* L. *Pakistan Journal of Agricultural Sciences*. 54(1):91-96. (IF = 0.690)
  35. Farooqi, M.A. Mansoor-ul-Hasan and M. Arshad, 2016. Toxicity of three commonly used Nicotinoids and Spinosad to *Apis mellifera* L. (Hymenoptera: Apidae) using surface residual bioassays. *Pakistan Journal of Zoology*. 48(6): 1983-1987. (IF = 0.6)
  36. Chaudhry, M.T. Ataul-Mohsin, F.A. Shaheen, M. Arshad and A. Zia, 2016. Dragonflies (Odonata: Anisoptera) of Pakistan. *Pakistan Journal of Zoology*. 48(6): 1957-1962. (IF = 0.6)
  37. Zeshan, M.A., M.A. Khan, S. Ali, M. Arshad and N. Ahmed, 2016. Epidemiological studies of tomato leaf curl virus disease based upon environmental variables. *International Journal of Agriculture and Biology*. 18: 1061–1066. (IF = 0.869)
  38. Safdar, H., N. Javed, S.A. Khan and M. Arshad, 2016. Potential of *Xenorabdus* spp., *Photorhabdus* spp. and its metabolites against *Spodoptera litura* F. *Transylvanian Review*. 8:1038-1044. (IF = 0.10).
  39. Iqbal, M.S., Zain-ul-Abdin, M. Arshad, S.K. Abbas, M.Tahir, A. Jamil and A. Manzoor, 2016. The role of parasitoid age on the fecundity and sex ratio of the parasitoid, *Aenasius bambawalei* (Hayat) (Hymenoptera: Encyrtidae). *Pakistan Journal of Zoology*, 48(1): 67-72. (IF = 0.6).
  40. Arshad, M., H.A.A. Khan, M. Abdul ur Rehman and N.A. Saeed, 2015. Incidence of insect predators and parasitoids on transgenic Bt cotton in comparison to non-Bt cotton varieties. *Pakistan Journal of Zoology*, 47(3): 823-829. (IF = 0.6).
  41. Fatima, R., S. Ahmed, M. Arshad and S.T. Sahi, 2015. Effect of seasoning of different woods on resistance against *Odontotermes obesus* (Tamb.) under laboratory and field choice and no-choice tests. *BioResources*. 10(4): 6363-6377. (IF = 1.425).
  42. Khan, H.A.A.K., W. Akram, M. Arshad and F. Hafeez, 2015. Toxicity and resistance of field collected *Musca domestica* (Diptera: Muscidae) against insect growth regulator insecticides. *Parasitology Research*, DOI 10.1007/s00436-015-4872-6. (IF = 2.558).
  43. Zeshan, M.A., M.A. Khan, S. Ali and M. Arshad, 2015. Correlation of conducive environmental conditions for the development of whitefly, *Bemisia tabaci* population in different tomato genotypes. *Pakistan Journal of Zoology*, 47(6):1511-1515. (IF = 0.6).

44. Karar, H., M.J. Arif, M. Arshad, A. Ali and Q. Abbas, 2015. Resistance/ susceptibility of different mango cultivars against mango mealybug (*Drosicha mangiferae* G.). Pakistan Journal of Agricultural Sciences. 52(2):367-377. **(Impact Factor = 0.690)**.
45. Arshad, M., Zain-ul-Abdin, M.D. Gogi, M.J. Arif and R.R. Khan, 2015. Seasonal pattern of infestation by spotted bollworm, *Earias insulana* (Boisd.) and Pink Bollworm, *Pectinophora gossypiella* (Saund.) in field plots of transgenic Bt and non-Bt cottons. Pakistan Journal of Zoology, 47(1):177-186. **(IF = 0.6)**
46. Jamil, A., Zain ul Abdin, M. Arshad, P. Falabella, S.K. Abbas, M. Tahir, A. Jamil, A. Manzoor and H. Shaina, 2015. Multiple effects of host density on egg density and the sex ratio of progeny of *Bracon hebetor* (Say.) (Hymenoptera: Braconidae). Pakistan Journal of Zoology, 47(2): 455-460. **(IF = 0.6)**
47. Nasir, S., W.A. R.R. Khan, M. Arshad and I. Nasir, 2015. Paederus beetles: the agent of human dermatitis. Journal of Venomous Animals and Toxins including Tropical Diseases. 21:5 DOI 10.1186/s40409-015-0004-0. **(IF = 1.782)**
48. Gogi, M.D., M.J. Arif, M. Arshad, M.A. Khan, M.H. Bashir, K. Zia and Z.U. Abdin, 2014. Impact of sowing times, plant-to-plant distances, sowing methods and sanitation on infestation of melon fruit fly (*Bactrocera cucurbitae*) and yield components of bitter gourd (*Momordica charantia*). International Journal of Agriculture and Biology. 16: 521–528. **(IF =0.869)**
49. Nazir, S., F. Sharif, M. Arshad and A.H. Khan, 2014. Diversity analysis of insects of the thorn forest community at Harappa Archaeological site, Pakistan. Pakistan Journal of Zoology. 46(3):1091-1099. **(IF =0.547)**
50. Shabir, M.Z., M. Arshad, B. Hussain, I. Nadeem, S. Ali, A. Abbasi and Q. Ali, 2014. Genotypic response of chickpea (*Cicer arietinum* L.) for resistance against gram pod borer (*Helicoverpa armigera*). Advancement in Life Sciences, 2(1):23-30. IF 0.9
51. Akram, M., F. Hafeez, M. Farooq, M. Arshad, M. Hussain, S. Ahmed, K. Zia and H. A.A. Khan, 2013. A case to study population dynamics of *Bemisia tabaci* and *Thrips tabaci* on Bt and non-Bt cotton genotypes. Pakistan Journal of Agricultural Sciences. 50(4): 617-623. **(IF =0.690)**
52. Bilal, H., W. Akram, S. Din, I.A. Khan, S.A. Hassan and M. Arshad, 2012. Larvicidal activity of selected plant extracts against *Aedes albopictus* Skuse (Diptera: Culicidae). African Entomology. 20(1):8-12. **(IF =0.969)**
53. Hafeez, F., W. Akram, A. Suhail and M. Arshad. 2012. Knowledge and attitude of the public towards dengue control in urban and rural areas of Punjab. Pakistan Journal of Zoology. 44(1): 15-21. **(IF =0.6)**
54. Arshad, M. and A. Suhail, 2011. Field and laboratory performance of transgenic Bt cotton containing Cry1Ac against beet armyworm larvae (Lepidoptera: Noctuidae). Pakistan Journal of Zoology. 43(3):529-535. **(IF =0.6)**
55. Arshad, M and A. Suhail, 2010. Studying the sucking insect pests community in transgenic Bt cotton. International Journal of Agriculture and Biology. 12:764-768. **(IF =0.869)**
56. Arshad, M., A. Suhail, M.J. Arif and M.A. Khan, 2009. Transgenic Bt and non-transgenic cotton effects on survival and growth of *Helicoverpa armigera*. International Journal of Agriculture and Biology. 11(4):473-476. **(IF =0.869)**
57. Arshad, M., A. Suhail, M. D. Gogi, M. Yaseen, M. Asghar, M. Tayyib, H. Karar, F. Hafeez and U. N. Ullah, 2009. Farmers perceptions of insect pests and pest management practices in Bt cotton in the Punjab, Pakistan. International Journal of Pest Management. 55(1): 1-10. **(IF = 1.5)**
58. Karar, H., M.J. Arif, H.A. Sayyed, S. Saeed, G. Abbas and M. Arshad, 2009. Integrated pest management of mango mealy bug (*Drosicha: Mangiferae*) in mango orchards. International Journal of Agriculture and Biology. 11: 81–84. **(IF =0.869)**
59. Shah, S.A.A., A. Suhail and M. Arshad, 2008. Comparative studies on the external morphology of three species of the genus *Acrotylus* Fieber (Orthoptera: Acrididae). International Journal of Agriculture and Biology. 10(3): 267-272. **(IF = 0.869)**
60. Raza, M.M., M.A. Khan, M. Arshad, et al., 2014. Impact of global warming on insects. Archives of Phytopathology and Plant Protection, 1-11.

61. Arif, M.J., M.R. Shahid, M.D. Gogi, M. Arshad and M.A. Khan, 2013. Studies on biological parameters of an invasive mealy bug, *Phenacoccus solenopsis* Tinsely (Pseudococcidae: Hemiptera) on different host plants under laboratory conditions. Academic Journal of Entomology, 6 (2): 55-60.

#### **NON-IMPACT FACTOR PUBLICATIONS**

1. Hira, H., Z. ul Abidin, M. Tayyib, M. Arshad, F. Hussain, and S.K. Abbas. 2023. Effects of varying temperature on the reproduction and survival of mealybug parasitoid, *Aenasius arizonensis* (hymenoptera: encyrtidae). J. Animal Plant Sci., 33(3), 553-561. **(International Journal)**.
2. Saeed, S., S.T. Sahi, M. Atiq, M. Shahid and M. Arshad. 2022. Mineral profiling of resistance and susceptibility in chilli pepper (*Capsicum annum* L.) Against fusarium wilt disease. Plant Cell Biotechnology and Molecular Biology, 13-23. **(International journal)**.
3. Asghar, M.N., S.A. Khan, N. Javed and M. Arshad. 2021. Exploring Citrus Nematodes and its Antagonists in Citrus Growing Areas of Punjab, Pakistan. Journal of Plant and Environment, 3(2):91-101. (Y-category). HEC)
4. Ahmad, J.N., D. Majeed, M. Arshad, M.A. Malik, A. Ali, S. Nadeem and S.J.N. Ahmad. 2021. Effect of methyl jasmonate on Bt cotton (*Gossipium hirsutam*. L) gene expression and mortality of pink boll worm (*Pectinophora gossypiella*). JAPS: Journal of Animal & Plant Sciences, 31(6): 1728-1738.
5. Khan, R.R., T. Shaheen, S. Majeed, A. Ali, M. Arshad, I.S.S. AlMazidi and T.H.A. AlGhafri. 2019. Appraisal of biocidal effectivity of some selected biochemical and chemical formulations against *Helicoverpa armigera* (Hubner) in tomato crop. Int. J. Zoo Animal Biol. 2(2): 000138. **(International journal)**
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  27. Gogi, M.D., M.H. Bashir, M. Arshad, Zain-ul-Abdin and M.A. Khan, 2012. Evaluation of some botanical extracts, adult food-baits, oviposition-baits, coloured egg-receptacles and cultural practices and their possible integration for IPM of melon fruit flies. XXIV International Congress of Entomology, August 19-25, 2012, Daegu, Korea.
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  29. Zain Ulabdin, M.J. Arif, A. Suhail, M.A. Khan, W. Wakil, M.D. Gogi, M. Arshad and F. Hussain, 2012. Biological characteristics, host stage preference and reproductive fitness of mealybug parasitoid *Aenasius bambawalei* Hayat (Hymenoptera: Encyrtidae). XXIV International Congress of Entomology, August 19-25, 2012, Daegu, Korea.

30. Khan, R.R., M. Ashfaq, S. Ahmed, K. Zia, M. Arshad and M.D. Gogi, 2012. Effect of different temperature regimes on the development of *Bracon hebetor* (Say) (Hymenoptera: Braconidae) and its parasitism. XXIV International Congress of Entomology, August 19-25, 2012, Daegu, Korea.
31. Arshad, M., A. Suhail, M.D. Gogi and M.H. Bashir, 2012. Field evaluation of Bt cotton against *Helicoverpa armigera* (Lepidoptera: Noctuidae), 32nd Pak. Cong. Zool. March 6-8, 2012. GC University, Lahore. pp.146-147.
32. Bashir, M.H., M.A. Khan, M.D. Gogi, M. Arshad and N. Ilyas, 2012. Biological activity of methanolic extracts of some locally available plants against stored grain mite *Rhizoglyphus tritici* (Acari: Acaridae), 32nd Pak. Cong. Zool. (International). March 6-8, 2012. GC University, Lahore. Pp. 147-148.
33. Gogi, M.D., M.J. Arif, M.H. Bashir, M.A. Khan and M. Arshad, 2012. Evaluation of different IPM-models for their performance in bittergourd (*Momordica charantia*) crop against melon fruit fly (*Bactrocera Cucurbitae* Coquillett) pest. 32nd Pak. Cong. Zool. (International). March 6-8, 2012. GC University, Lahore. Pp.144-145.
34. Gogi, M.D., M.H. Bashir, M.A. Khan and M. Arshad, 2012. Evaluation of some botanical extracts for their deterrence towards Melon fruit fly under laboratory and field condition. 32nd Pak. Cong. Zool. March 6-8, 2012. GC University, Lahore. Pp.145-146.
35. Asghar, M., M.M. Fiaz, A.M. Sabir, M. Arshad and A. Suhail, 2012. Future of Rice Crop In The Punjab, Pakistan. 32nd Pak. Cong. Zool. (International). March 6-8, 2012. GC University, Lahore. Pp.158.
36. Ullah, M.A., A. Suhail, A.H. Khan and M. Arshad, 2012. Efficacy of Mechanical insect pest control using LEPIK (Light Equipped Power Sucker, Insect Killer) in Maize. Post Graduate Entomological Research Conference. June 22-23, 2012 organized by Department of Agri. Entomology, University of Agric. Faisalabad, Pakistan. pp. 3.
37. Farooqi, M.A., A. Suhail, M.A. Sabri and M. Arshad, 2012. Comparative Toxicity of Some Insecticides to *Apis florea* (Hymenoptera: Apidae) in the Laboratory. Post Graduate Entomological Research Conference. June 22-23, 2012 organized by Department of Agri. Entomology, University of Agriculture Faisalabad, Pakistan. pp. 6.
38. Shahzad, M., A. Suhail and M. Arshad, 2012. Biodiversity of Aphids and Their Predators on Different Wheat Genotypes. Post Graduate Entomological Research Conference. June 22-23, 2012 organized by Department of Agri. Entomology, University of Agriculture Faisalabad, Pakistan. pp. 9.
39. Arshad, A., A. Suhail, M. Dildar Gogi and Zain ul Abidin. 2011. Seasonal pattern of infestation by spotted bollworm *Earias insulana* (Boisd.) and pink bollworm *Pectinophora gossypiella* (Saund.) in field plots of transgenic Bt and non-Bt cotton. 31<sup>st</sup> Pakistan congress of Zoology, April 19-21. pp. 86.
40. Arshad, A., A. Suhail, Zain ul Abidin and M. Dildar Gogi. 2011. Efficacy of transgenic Bt cotton against *Helicoverpa armigera* (Lepidoptera: Noctuidae) in the Punjab, Pakistan. 31<sup>st</sup> Pakistan congress of Zoology, April 19-21. pp. 87.
41. Gogi, M.D., M.J. Arif, Z. Abidin, M. Arshad, S. Ahmed and M. Mujtaba, 2014. Evaluation of synergism/ antagonism in the toxicity of insecticides against cotton mealybug through coadministration with silicon dioxide under laboratory condition. 31<sup>st</sup> Pakistan congress of Zoology, April 19-21. pp. 93.
42. Sabir, A.M., A. Suhail, A. Qadir, M.A. Rafi, M. Arshad and M. Asghar, 2011. Floral resource utilization by bumblebees in agricultural ecosystem of northern Pakistan. 31<sup>st</sup> Pakistan congress of Zoology, April 19-21. pp. 139.
43. Arshad, A., A. Suhail, M. Asghar and M. Dildar Gogi, 2008. Fate of Bt cotton in Punjab, Pakistan with reference to farmers' perception, 2<sup>nd</sup> Congress on Insect Science February, 21-22, 2008, PAU Ludhiana (Oral presentation).

44. Arshad, A., A. Suhail, F. Shahzad, M. Asghar and M. Dildar Gogi, 2007. Biodiversity of sucking insect fauna in cotton in District Multan, Punjab Pakistan. ICIBI 2007, Daegu, Korea on August 19-24 (Oral presentation).
45. Arshad, A., A. Suhail, M. Asghar, M. Dildar Gogi and U. N. Ullah, 2007. Farm appraisal and farmer's perception of insect pests incidence and their management practices in Bt cotton in Punjab Pakistan., ICIBI 2007, Daegu, Korea on August 19-24 (Oral presentation).
46. Arshad, M. A. Suhail, S. A. A. Shah, U. Naeem and A. M. Sabir, 2006. External morphology of some species of the genus *Aiolopus* (Fieber): A comparative study. Accepted for 26th Pak. Conger. Zool to be held at Univ. of the Punjab, Lahore on April 4-6. Ent. 40: 82.
47. Suhail, A., A. M. Sabir, M. Arshad, and M. Asghar, 2008. Bumblebees' floral association in Northern Pakistan., 2<sup>nd</sup> Congress on Insect Science February 21-22, 2008, PAU Ludhiana (Oral presentation).
48. Suhail, A., M. Arshad and S. A. A. Shah, 2007. Comparative studies on the external morphology of three species of the genus *Acrotylus* Fieber. (Arcidae: Orthoptera) . ICIBI 2007. Daegu, Korea on August 19-24. (Oral presentation).
49. Suhail, A., M. Arshad, M. J. Arif and M. D. Gogi, 2006. Conservation of beneficial insects for sustainable agriculture. Intern. Conf. Envir. Surv. Sust., Nicosia Northern Cyprus on February, 19-24. pp. 691 (Oral presentation)..
50. Suhail, A., M. Arshad, Z. Abdin and M. Asghar, 2007. Taxonomic studies on Microgasterinae (Braconidae: Hymenoptera) of the Punjab, Pakistan. Accepted for X European Workshop on insect parasitoids at Univ. of Palermo on September 17-21. SB10. pp. 79.
51. Suhail, A., A.M. Sabir and M. Arshad, 2007. Floral association of Bumblebees for pollination in Northern Pakistan., ICIBI 2007, Daegu, Korea on August 19-24. (Oral presentation).
52. Jamil, M., A. Suhail, M. Arshad, F. Hafeez and S.A.A. Shah, 2006. Biodiversity of insect fauna associated with summer vegetables in district Bahawalpur. Accepted for 26th Pak. Conger. Zool. To be held at Univ. of the Punjab, Lahore on April, 4-6. Ent. 39: 81.
53. Suhail, A., A. M. Sabir, M. Tayyib, M. Arshad, and U.N.Ullah and Z. Abdin, 2006. Insects in relation to forensic science. Proceeding of National workshop on: Role of insect taxonomy and systematics in sustainable agriculture, February, 13-14, 2006, at NARC, Islamabad.
54. Suhail, A., A. M. Sabir, Z. Abdin, M. Arshad and U. N. Ullah, 2005. Pakistan Insect Biodiversity Profile. Proceeding of the National Consultative Workshop on the Implementation of CBD, CMS and Ramsar Convention In Pak. Islamabad, on September, 22-23. pp. 91-93.

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#### ***Research Project Completed and Ongoing as PI/Team Leader***

- **As Principle Investigator:** On-going research project titled" Population dynamics studies and management of fall armyworm on maize crop". **Funding Agency:** Punjab Agricultural Research Board (PARB), **Amount:** Rs. 14.489 millions.
- **As Principle Investigator:** on-going research project titled" Quality seed production and supply to the farming community for ensuring food security in Pakistan". Domain-5 (Seed Insect Management) **Funding Agency:** Government of Pakistan Ministry of Science and Technology. **Amount:** Rs. 54.926 millions.
- **As Principle Investigator:** Completed a research project titled" Field and Laboratory evaluation of transgenic cotton cultivars containing single and double toxic genes derived from *Bacillus thuringiensis* var. Kurstaki against armyworm

(Lepidoptera: Noctuidae). **Funding Agency:** Higher Education Commission (HEC), **Amount:** Rs. 0.5 millions.

- **As Principle Investigator:** Completed a research project “Measuring baseline susceptibility of *Helicoverpa armigera* field populations to Bt Cry toxins for resistance monitoring” **Funding Agency:** Higher Education Commission (HEC), **NRPU Amount:** Rs. 4,967,873/- for a period of 36 months

#### **Research Project Ongoing and completed as Co-PI/Team member**

- **As CO-PI** ongoing research project title “Integrated pest management approach to mitigate the fruit flies’ issues in vegetables and fruits through biocontrol agents” **Funded by:** Punjab Agricultural Research Board (PARB). 32.36 million.
- **As CO-PI** completed research project title “Integrated application of silicon and new chemistry insecticides against sucking insect pests complex of cotton” **Funded by:** Industrial Project. 1.538 million.
- **As Team Scientist** completed research project title “A comprehensive integrated scientific approach for the development of sustainable management strategies of Pink Bollworm (*Pectinophora gossypiella*)” **Funded by:** Punjab Agricultural Research Board (PARB). 36.178422 million.
- **As Team Scientist** completed research project title “Microbial based pest management program for tephritid fruit fly” **Funded by:** Punjab Agricultural Research Board (PARB). Rs. 4,420,000/

#### **Popular national/ international articles**

1. Asif, K., M. Arshad and M. Naeem, 2018. Ecological Services of Insects. The Business 13(209), 29 August
2. Suhail, A., M. Shehzad and M. Arshad. 2011. Hishrat- ul-arz ki Ghizai Ahmiat. Lyal Pur Newspaper, 30-June.
3. Arshad, M. and A. Suhail. 2011. Bt Kapas: Ik Jaiza. Zari Digest, U.A.F, Page 50, July to September.
4. Arshad, M. and A. Suhail. 2011. Field and Laboratory performance of Bt cotton containing Cry1Ac against beet armyworm larvae. Crop Biotech Update.
5. Insect Winter Ecology; Technology Times, Vol.5 Issue4, dated 20-26 January 2014.
6. Arshad, M. and S. Rasool, 2016. Life without you” The Insect”. Technology Times. 7(25): pp.2.

#### **Editorial work for Scholarly Journals**

Acting as Associate Editor of a HEC recognized, peer reviewed journal “**Pakistan Entomologist**” Published by Pakistan Entomological Society, Department of Entomology, University of Agriculture Faisalabad. <http://www.pakentomol.com>

#### **Diploma, Training, conferences, workshops**

- Qualified (72.40%, A-Grade) a Special Diploma Course in English Language from National University of Modern Languages (NUML), Faisalabad Pakistan.
- Ten weeks practical training in Insect Pest Identification, Pest Scouting, Pesticides Recommendation and Pesticide Sampling at Pest Warning and Quality Control of Pesticide Department, Bahawalpur.
- On-Farm skill training on “Integrated Honeybee management for production of honey and other beekeeping products”, February 22-26, 2010 Organized by the Department of Zoology, the University of Punjab Lahore..
- One day training workshop on Sharing Biodiversity Data on Internet conducted by Global Biodiversity Information Facility (GBIF).
- Training workshop on “Integrated management of armyworm with special reference to its biological control with *Bracon hebetor* and *Chrysoperla carnea*” held on 27-29, 2010 organized by the Department of Agri. Entomology, U.A.F.



- Training workshop on Sustainable management of insect pests of fruits with special reference to citrus through modern protection and postharvest-losses reduction techniques” held on 01-04 September, 2010 organized by the Department of Agri. Entomology, U.A.F.
- Received Certificate of Appreciation on contributions for organizing the Entomological week, 3-8 April in the Department of Entomology, UAF on the eve of “Golden Jubilee Celebrations Year, 2011.
- Received Certificate of Appreciation on contributions for organizing “One day training workshop on rearing and Bioassay techniques for armyworm, February 24, 2012. Department of Entomology, University of Agriculture, Faisalabad.
- Participated in a national seminar on “GM-Crops: A Gateway to Successful Agriculture”, held on October-15, 2011, organized by Centre of Agricultural Biochemistry and Biotechnology (CABB) at University of Agriculture, Faisalabad.
- Participated in the symposium on “Building Effective Coordination between R&D and Industry for Enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies” held on 12<sup>th</sup> February, 2011 by Pakistan Scientific and Technological Information Centre (PASTIC), Islamabad and Institute of Research Promotion (IRP), Lahore at Faisalabad Chamber of Commerce and Industry.
- Participated in a one day seminar on “How to write a winning research proposal” held on May-07, 2011 in the new senate Hall, University of Agriculture, Faisalabad.
- Participated in one day workshop on “Counseling and Communication Skills”, held on March, 2011, organized by the Department of Social Sciences and Humanities, University of Agriculture, Faisalabad.
- Participated in national conference on “Forestry and Climate Change” held on 25-26 July, 2011 by the Department of Forestry, Range Management and Wild Life, UAF at the eve of Golden Jubilee Celebrations.
- Participated in a training workshop on “Identification of Plant Pathogenic Fungi and Identification and Demonstration of Plant Parasitic and Beneficial Nematodes” held on 08-11 February, 2011 by the Department of Plant Pathology, UAF.
- Nominated for a training course on “Sufficiency Economy in Agriculture” by the Government of Punjab, Pakistan from 2 May to 1 June, 2013 in Thailand
- Nominated for one day “Capacity Building Workshop” to be held on May 23, 2012 organized by Directorate of Finance Assistance and University Advancement (DFA & UA) University of Agriculture Faisalabad with the cooperation of International Finance Corporation (IFC) World Bank Group.
- Organized a training workshop on “Termite Management for Stakeholders as community service” held on
  - April 25-27, 2012 (Session-I)
  - May 28-30, 2012 (Session-II)
  - June 21-23, 2012 (Session-III)
- Organized a one-day workshop on “The Introduction to “Plantwise” a new innovatory approach linking of diagnostic labs with plant clinic” held on 18 Feb, 2013 in University of Agriculture Faisalabad.
- Participated in a Post Graduate Entomological Research Conference on June 22-23, 2012 organized by Department of Entomology, University of Agriculture Faisalabad.
- Received a Certificate of Appreciation on one day training workshop on “Effective Communication Skills” held on May 23, 2012 organized by the Directorate of Finance Assistance & University of Agriculture, Faisalabad.

- Participated in an international seminar on “Transgenic crops: A key to food security”, held on 16-03-2012, organized by Centre of Agricultural Biochemistry and Biotechnology (CABB), University of Agriculture, Faisalabad.
- Participated in one day workshop on “Biological Management of root knot nematodes on vegetables” held on October 10, 2012, organized by Punjab Agriculture Research Board and Department of Plant Pathology, University of Agriculture, Faisalabad.
- Participated in national conference on “New Challenges of Insects on Citrus Plant” held on 13-14 July, 2012 organized by the Department of Entomology, University of Agriculture Faisalabad.
- Participated in a training workshop on “Prevention & Management of Dengue Fever” held on March 17, 2012 by Punjab Medical College, Faisalabad.
- Received Certificate of Appreciation on contributions for organizing “One day training workshop on rearing and Bioassay techniques for armyworm, February 24, 2012. Department of Agri. Entomology, University of Agriculture, Faisalabad.
- Participated in a training workshop on “Sericulture Industry in Pakistan” held on October 06, 2012 organized by the Department of Entomology, University of Agriculture Faisalabad.
- Nominated for a training course “On Farm Skill Training on Integrated Honeybee management for production of Honey and other beekeeping products” to be held on March 17-21, 2014 by the Department of Zoology, University of the Punjab, Lahore.
- Organized a one-day conference on “Integrated Pest Management of Fruits and Vegetables” on November 30, 2013 in Department of Entomology, UAF.
- Participated in one day International conference on “Using IPM techniques to manage the Invasive Spotted Winged Drosophila” on November 25, 2013 to be held in Department of Entomology, UAF.
- Participated in one day International conference on “Biological Control of Asian Citrus Psylla” organized by Department of Entomology, UAF.
- 2nd Postgraduate Entomological Research Conference, June 08-09, 2013. Department of Entomology, UAF.
- Learning by Doing: Tools & Techniques for Working as a Team, May ,2,3,6 & 7, 2013. Office of Senior Tutor, UAF.
- Participated in 2<sup>nd</sup> Post Graduate Entomological Research Conference on July 08-09, 2013 organized by Department of Entomology, University of Agriculture Faisalabad.
- Received a Certificate of Participation on short term training Program “ An Introduction to R- Programming Language for statistical computing” held from 24<sup>th</sup> May to 14<sup>th</sup> June 2013 organized by the Department of Mathematics and Statistics, University of Agriculture, Faisalabad.
- Received a certificate of Appreciation during Spring Festival to be held on 26-31 March, 2013 organized by University of Agriculture, Faisalabad.
- Participated in one day International workshop on “Enquiry Based Learning” held on 1<sup>st</sup> March, 2014, sponsored by INSPIRE Transnational Education Program British Council at University of Agriculture, Faisalabad.
- Participated in Three days AIT Cascading Workshop on “Ensuring Training Effectiveness” held on 20-22 August, 2013 organized by Learning Innovation Division (HEC) and Department of Plant Pathology, U.A.F.
- Participated in one day workshop “HND Curriculum Review Workshop” held on April 09, 2014 organized by National Institute of Food Science and Technology & Endowment Secretariat, UAF.
- Participated in two days symposium on “Dengue Fever, Virology and Vector Control” held on 31<sup>st</sup> January- 1<sup>st</sup> February, 2013 organized by NIBGE, Faisalabad.

- Project formulation Workshop, December 3-4, 2013. Pakistan Science foundation Islamabad.
- Nominated/attended a training workshop “11th National Honeybee Farming and Management Training” to be held on March 9-13, 2015 by the Department of Zoology, University of the Punjab, Lahore.
- Organized a one day stakeholder’s meeting on “Development of national action plan for fruit fly management” on January 21, 2015 in Department of Entomology, UAF.
- Nominated by the Warden Office for “Indigenous on Campus Training (IOT) at UAF” on August 25-29, 2014 to be held by ORIC, UAF.
- Participated in one day International workshop on “Grand Writing” organized by ORIC, UAF and UC Davis, University of California.

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***Advisory, administrative and community services***

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- Worked as Principal Officer ECD (M&P)
- Worked as a Superintendent of Qazzafi Hall
- Tutor of group “RAHMAT ALI-138”
- Ex-Member Syndicate, University of Agriculture Faisalabad
- Life member of Pakistan Entomologist.
- Member Board of study (BOS), Department of Entomology, UAF
- Member Board of study (BOS), Department of Entomology, Muhammad Nawaz Sharif University, Multan
- Member Board of study (BOS), Department of Entomology, University of Sargodha.
- Act as member of selection Board, Department of Entomology, College of Agriculture and Environmental Sciences, Islamia University Bahawalpur
- Act as member of selection Board, Department of Entomology, Gomal University, Dera Ismail Khan
- Conducted pesticide trials in order to provide data for the approval of different pesticides.
- Member of Board of Examination for Ph.D. comprehensive and Oral Part
- Member stall display and advisory committee of department of Agri. Entomology for farmers in annual festival arrange by UAF in March, 2011.
- Team member to facilitate the national/international delegates during departmental visits.
- Managed study tours of 8<sup>th</sup> semester B.Sc (Hons) Agri. Sciences in different parts of the country for a week.
- Performed duties of receiving, verification of applications in Admission Committee for admissions in B.Sc (Hons) Agri. Sciences.
- Performed the duties for the guidance to admission seekers in under graduates.
- Attended one day seminar on “How to write a winning research Proposal”.
- Worked as coordinators of group for pre-agriculture visit to faculty of agriculture on 04-05 October, 2011.
- Acted as member of the Comprehensive examination/tour and tour report committee for the internship program of B.Sc (Hons) Agri. 8<sup>th</sup> semester major Entomology, Spring semester.
- Member of Agrarian Society
- Co-In-charge Departmental Seminar Committee.
- Member of committee for the guidance to new admission
- Member of exhibition and hall arrangement committee at the eve of annual university festival.
- Coordinator of group for Pre-Agriculture visit to Faculty of Agriculture.