

## Curriculum Vitae

### **Prof. Firas Ahmad Khalef Al-Zyoud**



Professor of Biological Control and Integrated Pest Management  
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#### **Google Scholar:**

<https://scholar.google.com/citations?user=gtn5UjUAAAAJ&hl=en>

h-index	10
Publications	54
Citations	272

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h-index	6
Publications	16
Citations	101 citations by 58 documents

#### **Research Gate**

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## Personal Information

Family name: Al-Zyoud  
First name: Firas Ahmad Khalaf  
Date of birth: January 1<sup>st</sup>, 1971  
Place of birth: Mafraq - Jordan  
Nationality: Jordanian  
Gender: Male  
Marital status: Married

Name of spouse: Dr. Amani Al-Dawood, Assistant Professor of Animal Physiology, Department of Applied Biology, College of Sciences, Tafila Technical University, Tafila, 66110 Jordan, E-Mail: amani623@yahoo.com

Languages: Arabic: Mother tongue  
English: Excellent  
German: Very good

## Education

**1989: General Secondary School Certificate**, Scientific Stream, Rehab Secondary School, Mafraq, Jordan.

**1994: Bachelor Degree in Plant Protection**, Department of Plant Protection, Faculty of Agriculture, the University of Jordan, Amman, Jordan.

**1997: Master Science Degree in Entomology**, Department of Plant Protection, Faculty of Agriculture, the University of Jordan, Amman, Jordan. The master thesis entitled "Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its parasites in Jerash Area". **The master study has been conducted with a partial scholarship from GTZ (German Agency for Technical Cooperation) and a teaching assistantship from the Deanship of Scientific Research, the University of Jordan, Amman, Jordan.**

**2005: Philosophy Degree in Biological Control and Integrated Pest Management**, Department of Entomology and Plant Protection, Faculty of Agriculture, University of Bonn, Germany. The Ph.D. thesis entitled "Biological and ecological studies on the oligophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) as an efficient predator of the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae)". **The PhD Study has been conducted with a full scholarship from KAAD, Germany.**

## **Professional Experience**

- 1996-1997:** **Teaching Assistant**, Department of Plant Protection, Faculty of Agriculture, the University of Jordan, Amman, Jordan.
- 1997-2001:** **Teaching and Research Assistant**, Department of Plant Production, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2001-2005:** **Research and Teaching Assistant**, Department of Entomology and Plant Protection, Faculty of Agriculture, University of Bonn, Bonn, Germany. Involved in different research fields on developing biological control and IPM methods for Agricultural pests. In addition, I taught the practical part of the Biological Control Course.
- 2006-2011:** **Assistant Professor** of Biological Control and Integrated Pest Management, Department of Plant Protection and IPM, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2011-2016:** **Associate Professor** of Biological Control and Integrated Pest Management, Department of Plant Protection and IPM, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2016-Present:****Full Professor** of Biological Control and Integrated Pest Management, Department of Plant Protection and IPM, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2008/2009:** **Dean Assistant of Faculty of Agriculture**, Mutah University, Karak, Jordan.
- 2009/2010:** **Manager of the Agricultural Research Station**, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2016/2017:** **Chairman of the Department of Plant Protection** and Integrated Pest Management, Faculty of Agriculture, Mutah University, Karak, Jordan.
- 2009/2010, 2013/2014 and 2018/2019:** **Member of Mutah University Council.**

## **Taught Courses**

1. Integrated Pest Management
2. Principles of IPM
3. Biological Control
4. Pesticides
5. Entomology
6. Economic Insects
7. Economic Pests
8. Principles of Plant Protection
9. Experimental Design and Analysis
10. Beekeeping
11. Agricultural Statistics
12. Beneficial Insects
13. Medical, Veterinary and Stored Insects
14. Applications in IPM
15. Applications in Agricultural Experiments
16. Applications in Plant Protection
17. Seminar Course

## Publications

### Referred Papers:

1. Al-Abbadi, S. and **F. Al-Zyoud**. **2000**. Population trends of grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its parasitoids in Rakeen Area, Karak, Jordan. Mutah Lil-Buhuth Wad-Dirasat, 15: 9-21.
2. **Al-Zyoud, F.** and H. Elmosa. **2001**. Population dynamics of the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its parasites in Jerash Area, Jordan. Dirasat, Agric. Sci., 28: 6-13.
3. Al-Abbadi, S. and **F. Al-Zyoud**. **2001**. Survey of apple arthropod pests in Al-Shawbak Area, Jordan. Sci. J. Quadesiah Univ., 6: 106-116.
4. **Al-Zyoud, F.** and C. Sengonca. **2004**. Development, longevity and fecundity of *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) on different host plants at two temperatures. Mitt. Dtsch. Ges. Allg. Angew. Ent., 14: 375-378.
5. **Al-Zyoud, F.** and C. Sengonca. **2004**. Prey consumption preferences of *Serangium parcesetosum* Sicard (Col., Coccinellidae) for different prey stages, species and parasitized prey. J. Pest Sci., 77: 197-204.
6. Sengonca, C.; **F. Al-Zyoud** and P. Blaeser. **2004**. Life table of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) by feeding on *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey at two different temperatures and plant species. J. Pl. Dis. Prot., 111: 598-609.
7. **Al-Zyoud, F.**; N. Tort and C. Sengonca. **2004**. Influence of host plant species of *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) on some of the biological and ecological characteristics of the entomophagous *Serangium parcesetosum* Sicard (Col., Coccinellidae). J. Pest Sci., 78: 25-30.
8. **Al-Zyoud, F.**; N. Tort and C. Sengonca. **2005**. Influence of leaf portion and plant species on the egg-laying behaviour of the predatory ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) in the presence of a natural enemy. J. Pest Sci., 78: 167-174.
9. Sengonca, C.; **F. Al-Zyoud** and P. Blaeser. **2005**. Prey consumption by larval and adult stages of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) of the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) at two different temperatures. J. Pest Sci., 78: 179-186.
10. **Al-Zyoud, F.**; P. Blaeser and C. Sengonca, C. **2005**. Investigations on the biology and prey consumption of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) by feeding on *Trialeurodes vaporariorum* Westwood (Hom., Aleyrodidae) as prey. J. Pl. Dis. Prot., 112: 485-496.
11. **Al-Zyoud, F.**; P. Blaeser and C. Sengonca. **2006**. Longevity of the ladybird predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) on natural and artificial nutritional sources. Mitt. Dtsch. Ges. Allg. Angew. Ent., 15: 251-256.
12. **Al-Zyoud, F.**; C. Sengonca and S. Abbadi. **2007**. Evaluation of *Serangium parcesetosum* (Col., Coccinellidae) for biological control of *Bemisia tabaci* under greenhouse conditions. J. Pest Sci., 80: 85-92.
13. **Al-Zyoud, F.** and H. Elmosa. **2007**. Population dynamics of arthropod pests on grapevine and chemical control of the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) in Jerash Area, Jordan. Jor. J. Agric. Sci., 3: 136-147.
14. **Al-Zyoud, F.** **2007**. Investigations on certain biological and ecological parameters of the cereal leafminer *Syringopias temperatella* Led. (Lep., Scythrididae). Bull. Fac. Agric., Cairo Univ., 58: 164-172.

15. **Al-Zyoud, F. 2007.** Prey species preference of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) and its interaction with another natural enemy. Pak. J. Biol. Sci., 10: 2159-2165.
16. **Al-Zyoud, F. 2008.** Effects of direct spray and residual exposure of different insecticides on the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under laboratory conditions. Jor. J. Agric. Sci., 4: 1-11.
17. **Al-Zyoud, F. 2008.** Biology and predation potential of the Indian ladybird *Serangium montazerii* on *Bemisia tabaci*. Jor. J. Agric. Sci., 4: 26-40.
18. Ghabeish, I.; A. Saleh and **F. Al-Zyoud. 2008.** *Dicyphus tamaninii*: Establishment and efficiency in the control of *Aphis gossypii* on greenhouse cucumber. J. Food Agric. Environ., 6: 346-349.
19. **Al-Zyoud, F.;** N. Salameh; I. Ghabeish and A. Saleh. **2009.** Susceptibility of different varieties of wheat and barley to cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under laboratory conditions. J. Food Agric. Environ., 7: 235-238.
20. Saleh, A.; I. Ghabeish; **F. Al-Zyoud;** M. Ateyyat and M. Swais. **2010.** Functional response of the predator *Hippodamia variegata* (Goeze) (Col., Coccinellidae) feeding on the aphid *Brachycaudus helichrysi* (Kaltenbach) infesting chrysanthemum in the laboratory. Jor. J. Biol. Sci., 3: 17-20.
21. **Al-Zyoud, F.;** N. Al-Emiri and A. Al-Omari. **2011.** Efficacy of the insecticidal bacterium *Bacillus thuringiensis* (Berliner) (*Bt*) against the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under laboratory conditions. Jor. J. Agric. Sci., 7: 83-92.
22. **Al-Zyoud, F. 2012.** Effect of field history on the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) and its preference to different wheat and barley cultivars. Pak. J. Biol. Sci., 15: 177-185.
23. **Al-Zyoud, F. 2012.** The ladybird predator *Serangium parcesetosum* Sicard (Col., Coccinellidae): Current status and future perspectives. J. Biol. Cont., 26: 297-313.
24. Madanat, H.; **F. Al-Zyoud;** A. Abdel-Ghani and N. Al-Majali. **2012.** Sources of tolerance in wheat and barley against the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under semi-arid climate of Southern Jordan. Jor. J. Agric. Sci., 8: 367-379.
25. Mannaa, S.; **Al-Zyoud, F.** and A. Saleh. **2012.** Effect of certain abiotic and biotic factors on population dynamics of *Retithrips syriacus* Mayet (Thripidae: Thysan.) and *Panonychus ulmi* Koch (Tetranychidae: Prostigmata) infesting grapevine. Bull. Fac. Agric., Cairo Univ., 63: 201-211.
26. **Al-Zyoud, F. 2013.** Evaluation of the predatory beetle *Serangium parcesetosum* Sicard (Col., Coccinellidae) release rate and time on the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae). Jor. J. Agric. Sci., 9: 321-335.
27. **Al-Zyoud, F. 2013.** Efficacy of insecticides' applications against the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) on barley under field conditions in Karak, Jordan. Dirasat, Agric. Sci., 39: 65-74.
28. **Al-Zyoud, F.;** I. Ghabeish and S. Al-Araj. **2013.** Positive density-dependent prey mortality of *Bemisia tabaci* puparia due to the predatory coccinellid *Serangium parcesetosum* Sicard. J. Food Agric. Environ., 11: 417-420.
29. **Al-Zyoud, F. 2013.** Towards integrated pest management of the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae): Status, current and future control options. Amer.-Eur. J. Agric. Environ. Sci., 13: 1582-1594.

30. Al-Ameiri, N. and **F. Al-Zyoud**. 2013. Evaluation of *Bacillus thuringiensis* (Berliner) (*Bt*) as an alternative control of the cereal leafminer on barley under laboratory and field conditions. Amer.-Eur. J. Agric. Environ. Sci., 13: 857-865.
31. **Al-Zyoud, F.** 2014. Adoption range of integrated pest management (IPM) techniques by greenhouse vegetable growers in Jordan. Jor. J. Agric. Sci., 10: 504-525.
32. **Al-Zyoud, F.** 2014. The most common predators of *Bemisia tabaci*: Biology, predation, preferences, releases, alternative food resources, combined use, current efforts and future perspectives. J. Biol. Cont., 28: 1-16.
33. **Al-Zyoud, F.** 2014. Indiscriminate use and improper application of pesticides by Jordanian vegetable and fruit farmers. Bull. Fac. Agric., Cairo Univ., 65: 344-359.
34. **Al-Zyoud, F.** 2014. Adoption of integrated pest management among fruit trees' growers in Jordan. Bull. Fac. Agric., Cairo Univ., 65: 318-336.
35. Al-Dababseh, B.; M. Meihiar; **F. Al-Zyoud** and I. Ghabeish. 2014. Pathogenicity of Syrian isolates of *Bacillus thuringiensis* (Berliner) against the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under laboratory conditions. Jor. J. Biol. Sci., 7: 155-160.
36. Al-Fwaeer, M.; I. Abu-Obaid; **F. Al-Zyoud**; A. Abo-Alosh and M. Halaybeh. 2014. Population dynamics of the hibiscus mealybug *Maconellicoccus hirsutus* Green (Hom., Pseudococcidae) and its parasitoid on guava trees in Madaba-Jordan. Inter. J. Agric. Forest., 4: 171-177.
37. Ghabeish, I.; **F. Al-Zyoud** and D. Hassawi. 2014. Quantifying key variables of damage to wheat and barley by *Syringopais temperatella* Lederer (Lep., Scythrididae). Revista Colom. Entomol., 40: 176-181.
38. Sohail, K.; I. Khan; A. Saljoqi; M. Haq; M. Usamn; S. Shah; S. Ashfaq and **F. Al-Zyoud**. 2014. Tunneling behavior of *Heterotermis indicola* Wasmann (Iso., Rhinotermitidae) under insecticide treated conditions. Sarhad J. Agric., 30: 115-119.
39. Ahmed M.; L. Avilés; F. Sánchez; **F. Al-Zyoud** and M. Barros-Rodriguez. 2014. An overview on some biotic and abiotic factors affecting the population dynamics of Leucaena Psyllid *Heteropsylla cubana* Crawford (Hom., Psyllidae): Contributory factors for pest management. Trop. Subtrop. Agroecosys., 17: 437-446.
40. **Al-Zyoud, F.** and I. Ghabeish. 2015. Significance of the larval population size of the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) and the diapausing depth in the soil on the yield variables of wheat and barley. Jor. J. Agric. Sci., 11: 725-734.
41. **Al-Zyoud, F.**; D. Hassawi and I. Ghabeish. 2015. Oxalic acid as an alienate factor for wheat and barley resistance to cereal leafminer *Syringopais temperatella* (Lederer, 1855) (Lep., Scythrididae). SHILAP Revista De Lepidopterologia, 43: 113-123.
42. Meihiar, M.; M. Ahmad; **F. Al-Zyoud** and K. Amer. 2015. Environmental distribution, frequency and toxicity of *Bacillus thuringiensis* in Syria. Ann. Res. Rev. Biol., 5: 174-183.
43. **Al-Zyoud, F.** 2015. Investigating barriers to adoption of biological control technology by vegetables and fruit trees' growers in Jordan. Jor. J. Agric. Sci., 11: 1083-1101.
44. Ahmed M.; F. Sánchez; L. Avilés and **F. Al-Zyoud**. 2016. Survey the natural enemies of Leucaena psyllid and onion thrips on the harvest processes in different Leucaena genotypes. Revista Mexic. Ciencias Agrícolas, 7: 133-144.

45. **Al-Zyoud, F. 2017.** Current advances in pest management in olives, pp 30–35. Proc. Ensuring Sustainability of Jordanian Olive Sector. Amman, Jordan, p 94.
46. Ghabeish, I.; **F. Al-Zyoud,** and D. Hassawi. **2018.** Traditional and molecular identification and characterization of resistance in wheat and barley accessions to the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae). (Submitted).
47. **Al-Zyoud, F. 2018.** *Serangium parcesetosum* Sicard (Col., Coccinellidae): Predation potential on *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) and preference towards pest species. (Submitted).
48. Al-Dmour, S.; **F. AL-Zyoud** and K. Al-Absi. **2018.** Chemical control of the olive fruit fly *Bactrocera oleae* (Rossi) (Dip., Tephritidae) and its effect on olive quantity and quality parameters in Jordan. (Under preparation).
49. Al-Dmour, S.; K. Al-Absi and **F. AL-Zyoud.** **2018.** Quantifying the susceptibility of three olive cultivars to the olive fruit fly *Bactrocer aoleae* (Rossi) (Dip., Tephritidae) infestation in Jordan. (Under preparation).
50. **Al-Zyoud, F. 2018.** The most common parasitoids of *Bemisia tabaci*: Life cycle, parasitism, preferences, releases, combined use, current efforts and future perspectives. (Under preparation).
51. Amarin, R.; O. Kafawin, J. Ayad; **F. Al-Zyoud** and A. Ghidan. **2018.** Effect of saline water irrigation and growing media on growth, physiological and mineral parameters of clove pink *Dianthus caryophyllus*. (Under preparation).

### **Not Referred Papers:**

1. **Al-Zyoud, F. 2014.** Control of the cereal leafminer on wheat and barley in Jordan using integrated pest management. Al-Mouhandis Al-Ziray, 90: 6-7.
2. **Al-Zyoud, F. 2018.** Importance and benefits of insects to humans. Journal of the Jordan Society for Scientific Research.
3. **Al-Zyoud, F. 2018.** Control of the cereal leafminer on wheat and barley in Jordan using safe alternative methods. Journal of the Jordan Society for Scientific Research.
4. **Al-Zyoud, F. 2018.** IPM program for controlling the cereal leafminer on wheat and barley in Jordan. Farmer Sound Journal.

### **Books**

1. **Al-Zyoud, F. 2005.** The Ph.D. dissertation is published as a book under the title "Biological and ecological studies on the oligophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) as an efficient predator of the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae)". Cuvillier Verlag, Gottingen. ISBN 3-86537-381-X, pp 82.
2. **Al-Zyoud, F. 2018.** Compiled and edited the Abstract Proceedings of the Eighth Scientific Agricultural Conference (ESAC-2018), Faculty of Agriculture, Mutah University, Karak, Jordan, October 15-17, 2018, pp 178.
3. **Al-Zyoud, F. 2018.** Current advances in arthropod pest management in plants. (Under preparation).

### **Booklets**

1. **Al-Zyoud, F. 2014.** Control of the cereal leafminer *Syringopais temperatella* on wheat and barley in Jordan using different methods. Pp 26.

## **Abstracts (Published)**

1. Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its chemical control in Jerash Area. The Second Agriculture Scientific Conference, Jordan University of Science and Technology, **Irbid, Jordan, 29-30 April, 1997, P 7.**
2. Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its chemical control in Jerash Area. The Third Agriculture Scientific Conference, Mutah University, **Karak, Jordan, 27-29 April, 1999, P 17.**
3. Development, longevity and fecundity of *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) on different host plants at two temperatures. The Conference of Entomology, **Halle, Germany, 24-28 March, 2003, P 252.**
4. Development, mortality and reproduction of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey". The 54<sup>th</sup> German Plant Protection Conference, **Hamburg, Germany, 20-23 September, 2004, P 476-477.**
5. Longevity of the ladybird predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) on natural and artificial nutritional sources. The Conference of Entomology, **Dresden, Germany, 20-23 March, 2005, P 239.**
6. Chemical control of the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and population dynamics of arthropod pests on grapevine in Jerash Area-Jordan". The 55<sup>th</sup> German Congress of Plant Protection, **Göttingen, Germany, 25-28 September, 2006, P 348.**
7. Biology and predation rate of the predator *Serangium parcesetosum* (Col., Coccinellidae) by feeding on *Bemisia tabaci* and *Trialeurodes vaporariorum* (Hom., Aleyrodidae)". The Sixth Agricultural Scientific Jordanian Conference, the University of Jordan, **Amman, Jordan, 9-12 April, 2007, P 16-17.**
8. Prey preference and evaluation of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) as a bio-agent of *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) under greenhouse conditions". The Sixth Agricultural Scientific Jordanian Conference, the University of Jordan, **Amman, Jordan, 9-12 April, 2007, P 18.**
9. Biology, predation potential and prey preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae)". The Tropentag: Biophysical and Socio-Economic Frame Conditions for the Sustainable Management of Natural Resources, **Hamburg, Germany, October 6-8, 2009, P 134.**
10. Biology, predation potential and preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) in Jordan. The Seventh Scientific Agricultural Conference, **Jordan University of Science and Technology, Irbid, Jordan, October 8-12, 2012, P 22.**
11. Biology, predation potential and preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) in Jordan. The 1<sup>st</sup> International Symposium on Horticultural Insects Management (ISHIM 2012), **Amman, Jordan, November 19-22, 2012, P 18.**
12. Integrated pest management of the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) on wheat and barley in Jordan. The First Agricultural Conference, **Jerash Private University, June 26-24, 2014, P 5.**
13. *Serangium parcesetosum* Sicard (Col., Coccinellidae): Predation potential on *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) and preference towards pest



- species. The seventh Jordanian Scientific Conference, **Jordan Society for Scientific Research, Amman, Jordan, November 14, 2015.**
14. Chemical control of the olive fruit fly *Bactrocera oleae* (Rossi) (Dip., Tephritidae) and its effect on olive quantity and quality parameters in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 25.**
  15. Towards integrated pest management of the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae): Status, current and future control options. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 41.**
  16. Biology, predation potential and preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 42.**
  17. Effect of saline water irrigation and growing media on growth, physiological and mineral parameters of clove pink *Dianthus caryophyllus*. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 116.**
  18. Development, mortality and reproduction of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 139.**
  19. Biology, predation potential and prey preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae). The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 140.**
  20. Releasing the predator *Serangium parcesetosum* (Col., Coccinellidae) to control the cotton whitefly *Bemisia tabaci* (Hom., Aleyrodidae) under greenhouse conditions in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 141.**
  21. Effect of field history on the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018, P 142.**

## **Posters**

1. Development, longevity and fecundity of *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) on different host plants at two temperatures. The Conference of Entomology, **Halle, Germany, 24-28 March, 2003.**
2. Development, mortality and reproduction of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey. The 54<sup>th</sup> German Plant Protection Conference, **Hamburg, Germany, 20-23 September, 2004.**
3. Longevity of the ladybird predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) on natural and artificial nutritional sources. The Conference of Entomology, **Dresden, Germany, 20-23 March, 2005.**
4. Biology, predation potential and prey preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae). The Tropentag: Biophysical and Socio-economic Frame Conditions for the Sustainable Management of Natural Resources, **Hamburg, Germany, 6-8 October, 2009.**
5. Releasing the predator *Serangium parcesetosum* (Col., Coccinellidae) to control the cotton whitefly *Bemisia tabaci* (Hom., Aleyrodidae) under greenhouse

- conditions. The Seventh Scientific Agricultural Conference, **Jordan University of Science and Technology, Irbid, Jordan, 8-12 October, 2012.**
6. Effect of field history on the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) in Jordan. The Seventh Scientific Agricultural Conference, **Jordan University of Science and Technology, Irbid, Jordan, 8-12 October, 2012.**
  7. Biology, parasitoids, preferences and control of the cereal leafminer *Syringopais temperatella* in Jordan. The Seventh Scientific Agricultural Conference, **Jordan University of Science and Technology, Irbid, Jordan, 8-12 October, 2012.**
  8. Evaluation of the predatory beetle *Serangium parcesetosum* Sicard (Col., Coccinellidae) release rate and time on the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae). The 1st Inter. Symposium on Horticultural Insects Management (ISHIM 2012), **Amman, Jordan, 19-22 November, 2012.**
  9. Development, mortality and reproduction of the entomophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018.**
  10. Biology, predation potential and prey preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae). The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018.**
  11. Releasing the predator *Serangium parcesetosum* (Col., Coccinellidae) to control the cotton whitefly *Bemisia tabaci* (Hom., Aleyrodidae) under greenhouse conditions in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018.**
  12. Effect of field history on the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) in Jordan. The Eighth Scientific Agricultural Conference, **Mutah University, Karak, Jordan, October 15-17, 2018.**

### **Oral presentations at institutions, universities and conferences**

1. The Second Agriculture Scientific Conference at Jordan University of Science and Technology, Irbid, Jordan, April, 1997. (Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its chemical control in Jerash Area).
2. The First Conference of Environmental Problems at Mutah University, Karak, Jordan, April, 1999. (Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its chemical control in Jerash Area).
3. The Third Agriculture Scientific Conference at Mutah University. Karak, Jordan, October, 1999. (Population trends of arthropods on grapevine with special emphasis on the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its chemical control in Jerash Area).
4. The Seventh Arab Conference of Plant Protection at the University of Jordan, Amman, Jordan, October, 2000. (Population trends of grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and its parasitoids in Rakeen Area, Karak, Jordan).
5. Department of Entomology and Plant Protection, University of Bonn, Bonn, Germany, December, 2002. (Laboratory investigations on biological and ecological parameters of the Indian coccinellid predator *Serangium*

- parcesetosum* Sicard (Col., Coccinellidae) and its prey *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) under different climatic conditions).
6. Institute of Plant Diseases, University of Bonn, Bonn, Germany, February, 2003. (Laboratory experiments on biological and ecological parameters of the oligophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey under different climatic conditions).
  7. Department of Entomology and Plant Protection, University of Bonn, Bonn, Germany, November, 2003. (Biological and ecological studies on the coccinellid predator *Serangium parcesetosum* under different climatic conditions).
  8. Institute of Plant Diseases, University of Bonn, Bonn, Germany, February, 2004. (Prey consumption of the ladybird predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) during larval and adult stages with *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae) as prey at different temperatures).
  9. Department of Entomology and Plant Protection, University of Bonn, Bonn, Germany, November, 2004. (Biological and ecological studies on the oligophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) as an efficient predator of the cotton whitefly *Bemisia tabaci* (Hom., Aleyrodidae)).
  10. Faculty of Agriculture, Mutah University, Karak, Jordan, September, 2005. (Biological and ecological studies on the oligophagous ladybird *Serangium parcesetosum* Sicard (Col., Coccinellidae) as an efficient predator of the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae)).
  11. The 55<sup>th</sup> German Plant Protection Conference, Göttingen, Germany, September, 2006. (Chemical control of the grape berry moth *Lobesia botrana* Schiff. (Lep., Tortricidae) and population dynamics of arthropod pests on grapevine in Jeresh Area, Jordan).
  12. The Sixth Agricultural Scientific Conference, Amman, Jordan, April, 2007. (Biology and predation rate of the predator *Serangium parcesetosum* (Col., Coccinellidae) by feeding on *Bemisia tabaci* and *Trialeurodes vaporariorum* (Hom., Aleyrodidae)).
  13. The Sixth Agricultural Scientific Conference, Amman, Jordan, April, 2007. (Prey preference and evaluation of the predator *Serangium parcesetosum* (Col., Coccinellidae) as a bio-agent of *Bemisia tabaci* (Hom., Aleyrodidae) under greenhouse conditions).
  14. The Seventh Scientific Agricultural Conference, Irbid, Jordan, October, 2012. (Biology, predation potential and preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) in Jordan).
  15. The first International Symposium on Horticultural Insects Management, Amman, Jordan, November, 2012. (Biology, predation potential and preferences of the predator *Serangium parcesetosum* (Col., Coccinellidae) in Jordan).
  16. The Fifth Scientific Day, Faculty of Agriculture, Mutah University, Jordan, May, 2013. (The possibilities of solving the problem of the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) on wheat and barley in Jordan using Integrated Pest Management (IPM)).
  17. The First Agricultural Conference at Jerash Private University, June, 2014. (Integrated pest management of the cereal leafminer *Syringopais temperatella* (Lep., Scythrididae) on wheat and barley in Jordan).
  18. The Sixth Scientific Day, Faculty of Agriculture, Mutah University, Jordan, May, 2015. (Control of the cereal leafminer in Jordan).

19. The Seventh Jordanian Scientific Conference, Jordan Society for Scientific Research, Amman, Jordan, November, 2015. (*Serangium parcesetosum* (Col., Coccinellidae): Predation potential on *Bemisia tabaci* (Hom., Aleyrodidae) and preference towards pest species).
20. The Seventh Scientific Day, Faculty of Agriculture, Mutah University, Jordan, April, 2016. (Control strategies of the cereal leafminer in Jordan).
21. Building Capacity of Personnel in Jordanian Olive Industry: Ensuring Suitability of Jordanian Olive Sector, Amman, Jordan, April, 2017. (Current advances in pest management in olives).
22. Water Resources and Ecosystem Services, Tafila Technichal University, Tafila, Jordan, April 2018. (Ecosystem services provided by insects to humans).
23. Ecosystem Services and Scientific Research, Aless Secondary School, Tafila, Tafila, Jordan, April, 2018. (Scientific research and ecosystem services provided by insects to humans).
24. The Eighth Scientific Agricultural Conference, Mutah University, Karak, Jordan, October, 2018. (Towards integrated pest management of the cereal leafminer *Syringopais temperatella* Led. (Lepidoptera: Scythrididae): Status, current and future control options).
25. The Eighth Scientific Agricultural Conference, Mutah University, Karak, Jordan, October, 2018. (Biology, predation potential and preferences of the predator *Serangium parcesetosum* Sicard (Col., Coccinellidae) in Jordan).
26. The Eighth Seventh Scientific Day, Faculty of Agriculture, Mutah University, Jordan, November, 2018. (Control strategies of the cereal leafminer in Jordan).

### **Reviewing articles**

1. Editorial Board (Member) of the **Journal of Natural and Applied Sciences Series**, Dean of Academic Research, Mutah University, Karak, Jordan, 2014/2015.
2. Associate Editor at the **Sarhad Journal of Agriculture, Pakistan**, 2007-2011. I have reviewed 12 articles.
3. Reviewer at the **Jordan Journal of Agricultural Sciences (JJAS)**, Jordan since 2007. I have reviewed 51 articles until present.
4. Reviewer at **Dirasat, Jordan University**, 2012-2015. I have reviewed 9 articles.
5. Review at the **Deanship of Academic Research, University of Jordan** since 2009. I have reviewed 5 chapters and 1 book until present.
6. Reviewer at **Mutah Lil Bohath Wa Derasat** since 2008. I have reviewed 3 articles until present.
7. Reviewer at the **Jordan Journal of Biological Sciences (JJBS)**, Dean of Academic Research, Hashemeh University, Zarqa, Jordan since 2013. I have reviewed 20 articles until present.
8. Reviewer at the **Scientific Research Support Fund**, Amman, Jordan since 2011.
9. Reviewer at the Official **Journal of the Entomological Society of Serbia, Acta Entomologica Serbica** since 2009.
10. Reviewer at the **Annual Research and Review in Biology** since 2017.

### **Awards**

**1994-1997:** The M.Sc. study has been conducted with a partial scholarship from **GTZ, Germany (German Agency for Technical Cooperation)** and with

a teaching assistantship from the **Deanship of Scientific research**, University of Jordan, Amman, Jordan.

- 2001-2005:** The Ph.D. study was done with a full scholarship from **KAAD, Germany**.
- 2009:** Grant to conduct a research for three months (June-September) in Bonn University financed by **KAAD, Germany**.
- 2010:** Grant to conduct a research for three months (June-September) in Bonn University financed by **DFG (German Research Foundation), Germany**.
- 2011:** Grant to conduct a research for three months (June-September) in Bonn University financed by **DAAD, Germany**.

### **Proposals Submitted and Fund Received**

- 2006:** Evaluation of the predatory beetle *Serangium parcesetosum* Sicard (Coleoptera: Coccinellidae) release rate and time on the cotton whitefly *Bemisia tabaci* (Genn.) (Hom., Aleyrodidae). **Deanship of Scientific Research, Mutah University**. (Total amount JD 6,800)
- 2009:** Identification of plant viral diseases using Enzyme Linked Immunosorbent Assay (ELISA) funded by **KAAD, Germany** for a stay of 3-month-period at the Department of Phytomedicine, Faculty of Agriculture, Bonn University, Germany. (Total amount: JD 4,000)
- 2010:** Identification of plant viral diseases using diverse serological approaches funded by **DFG, Germany** for a stay of 3-month-period at the Department of Phytomedicine, Faculty of Agriculture, Bonn University, Germany. (Total amount: JD 7,000)
- 2011:** Purification of plant viruses for immunization and preparation of antisera funded by **DAAD, Germany** for a stay of 3-month-period at the Department of Phytomedicine, Faculty of Agriculture, Bonn University, Germany. (Total amount: JD 6,000).
- 2011:** Selection for wheat and barley genotypes resistant to the cereal leafminer *Syringopais temperatella* Led. (Lep., Scythrididae) under Jordanian conditions. **Scientific Research Support Fund, Ministry of Higher Education, Jordan**. (Total amount: JD 47,500)
- 2012:** Cooperative Scientist in the research proposal titled Integrated management of fruit fly in fruits and vegetables in Districts Peshawar and Swabi of Khyber Pakhtunkhwa, Pakistan. **Pakistan Agricultural Research Council, Islamabad, Pakistan**.

### **Workshops and Training Courses (Participated/attended)**

1. A series of workshops (7 workshops) entitled "Building the Capacity of Jordanian Researchers". The workshops include: evaluation of research proposals at Scientific Research Support Fund (SRSF), proposal evaluation and selection procedures of Tempus, and FP7 proposals, April 14<sup>th</sup> - May 20<sup>th</sup>, **2012, Ministry of Higher Education, Amman, Jordan**.
2. A workshop entitled "Discussion of the National Plan on the Persistent Organic Pollutants (POPs)". Ministry of Environment on 7-8 December **2005, Amman, Jordan**.
3. Two workshops on the cereal leafminer in Karak Province in May and October, **2005**. A permanent member at the Ministry of Agriculture Committee to monitor the pest. **Karak, Jordan**.

4. Jordanian Agriculture Engineers Association: Training course for the recently graduated Agricultural Engineers, 10-12 September, **2005**, Mutah University, **Karak, Jordan**.
5. A keynote speaker in a workshop on possibilities of solving the problem of the cereal leafminer on wheat and barley in Jordan, particularly in Karak District, 15 April, **2007**. Mutah University, **Karak, Jordan**.
6. Giving yearly lectures for the schools in Karak Governorate organized by Jordan Society for Scientific Research (JSSR), 2005-2007, **Karak, Jordan**.
7. A workshop entitled "Improving agricultural production, a national responsibility". Faculty of Agriculture, Balqa Applied University on April 30, **2009**, **Al-Shobak, Jordan**.
8. A workshop on how to find and figure out the solutions for agricultural problems with the cooperation of Al-Rai newspaper, **2009**, **Karak, Jordan**.
9. A workshop on how to reestablish Al-Muhassen Reserve, Faculty of Agriculture, Mutah University, **2009**, **Karak, Jordan**.
10. A training course about the production of tomato by IPM in the southern Ghor, **2010**, **Karak, Jordan**.
11. A workshop on olive development, **2011**, Al-Mazar, **Karak, Jordan**.
12. Participated in many visits to solve the problem of Leshmani disease which is transmitted by sand fly in Humood and Al-Sumakea with the cooperation of Ministry of Agriculture, **2012**, **Karak, Jordan**.
13. Attended the 6<sup>th</sup> Jordanian Agricultural Conference, Jordanian Association for Scientific Research and Jordanian Zaituna University, **2013**, **Amman, Jordan**.
14. Attended the National Agricultural Conference, Jordanian Agricultural Engineers Association, Meridian Hotel, **2013**, **Amman, Jordan**.
15. A workshop entitled "Management of grapevine pests". Agricultural Engineers Association, **2014**, **Amman, Jordan**.
16. A workshop entitled "IPM of olive pests". Agricultural Engineers Association, **2014**, **Amman, Jordan**.
17. Attended the 5<sup>th</sup> International Conference of Olive and its Products, **2014**, **Amman, Jordan**.
18. Attended the 11<sup>th</sup> Conference of Plant Protection, Arabic Association for Plant Protection and Balqa Applied University, Meridian Hotel, **2014**, **Amman, Jordan**.
19. A workshop on building capacity of personnel in Jordanian olive industry, **2017**, **Amman, Jordan**.
20. A workshop on water resources and ecosystem services, **2018**, **Tafila Technical University, Tafila, Jordan**.
21. A workshop on development of protected agriculture in Jordan, conducted by Ministry of Foreign Affairs of the Netherlands and Eco Consult, **2018**, **Mutah University, Jordan**.
22. A workshop entitled "Reducing the Persistent Organic Pollutants (POPs)". Proce Fasial Center for Dead Sea, environmental and energy, 2018, **Mutah University, Karak, Jordan**.

## **Professional Activities**

1. University Board Member, Mutah University Council in the academic years 2009/2010, 2013/2014 and 2018/2019 (Representative of Faculty of Agriculture).
2. Editorial Board Member of the Journal of Natural and Applied Sciences Series in the academic year 2013/2014, Deanship of Academic Research, Mutah University, Jordan.

3. Faculty Board Member in the academic years 2010/2011, 2011/2012, 2012/2013, 2014/2015, 2016/2017 and 2018/2019 (Representative of Plant protection and IPM), Faculty of Agriculture, Mutah University, Karak, Jordan.
4. Member of the Faculty Scientific Committee in the academic year 2012/2013 and 2014/2015, Faculty of Agriculture, Mutah University, Karak, Jordan.
5. Member of the Faculty Higher Studies Committee in the academic year 2014/2015, 2017/2018 and 2018/2019, Faculty of Agriculture, Mutah University, Karak, Jordan.
6. Chairman/Member of the Department of Plant Protection and IPM Scientific Committee in the academic years 2011/2012 until present, Faculty of Agriculture, Mutah University, Karak, Jordan.
7. Member, The Organizing Committee of the First Conference of Environmental Problems at Mutah University, Karak, Jordan, 1999.
8. Member, The Organizing Committee of the Third Agriculture Scientific Conference at Mutah University, Karak, Jordan, 1999.
9. Member, The Organizing and Scientific Committee of the Sixth Jordanian Agricultural Scientific Conference. Amman, Jordan, 2007.
10. Member, The Organizing Committee of the Seventh Jordanian Agricultural Scientific Conference. Jordan University of Science and technology, Irbid, Jordan, 2012.
11. Member, The Scientific Committee of the Eleventh Conference of Plant Protection, Arabic Association for Plant Protection and Balqa Applied University, Meridian Hotel, Amman, Jordan, 2014.
12. Member, The Scientific Committee of the Seventh Jordanian Scientific Conference, Jordan Society for Scientific Research and Middle East University, 2015, Amman, Jordan.
13. Chairman, The Scientific Day of the Faculty of Agriculture, Mutah University, Karak, Jordan, 2013.
14. Legal Representative for Mutah University at the Feeding Knowledge Networks, Milano, Italy, 2013.
15. Head of the Plant Production Department Committee for the students' elections in the academic years 2008/2009 and 2014/2015, and a member of the same committee in the academic years 2013/2014 and 2014/2015, Faculty of Agriculture, Mutah University Karak, Jordan.
16. Chairman, The Investigating Committee for Students' Mistakes in the academic years 2018/2019 and Member of the same committee in the academic years 2012/2013, 2013/2014, 2014/2015 and 2016/2017, Faculty of Agriculture, Mutah University, Karak, Jordan.
17. Secretary of the Faculty of Agriculture board in the academic year 2008/2009, Faculty of Agriculture, Mutah University, Karak, Jordan.
18. Member, The Committee of Establishing and Reviewing the Academic Plane for many times for the Department of Plant Protection and IPM, Faculty of Agriculture, Mutah University, Karak, Jordan.
19. Permanent Member, The Ministry of Agriculture to monitor the cereal leafminer in Karak, Jordan.
20. Member, The Student Extension Committee of the first year in the academic years 2011/2012, 2013/2014, 2015/2016 and 2018/2019, Faculty of Agriculture, Mutah University, Karak, Jordan.

21. Member, The Establishing Master Program Committee in the Department of Plant Protection and IPM, Faculty of Agriculture, Mutah University, Karak, Jordan.
22. Chairman/Member, The Protection Committee at the Agricultural Research Station, Faculty of Agriculture, Mutah University, Karak, Jordan since 2005.
23. Member, The Scientific Committee of the 11<sup>th</sup> Conference of Plant Protection, Arabic Association for Plant Protection and Balqa Applied University, Meridian Hotel, Amman, Jordan, 2014.
24. Consultant at the Jordan Society for Scientific Research, Amman, Jordan and PricewaterhouseCoopers, Riyadh, KSA, in the Project: Prepare the Kingdom of Saudi Arabia Ministry of Agriculture Strategy and Restructuring for the period 2016-2025, 2015-2016.
25. Chairman, The Scientific Day of the Faculty of Agriculture, Mutah University, Karak, Jordan, 2016.
26. Member, The Higher Committee of the Eighth Scientific Agricultural Conference, Faculty of Agriculture, Mutah University, Karak, Jordan, 2018.
27. Chair, The Preparatory Committee of the Eighth Scientific Agricultural Conference, Faculty of Agriculture, Mutah University, Karak, Jordan, 2018.
28. Chair, The Scientific Committee of the Eighth Scientific Agricultural Conference, Faculty of Agriculture, Mutah University, Karak, Jordan, 2018.
29. Member, The Finance Committee of the Eighth Scientific Agricultural Conference, Faculty of Agriculture, Mutah University, Karak, Jordan, 2018.
30. Moderator, Workshop on Water Resources and Ecosystem Services, Tafila Technical University, Tafila, Jordan, 2018.
31. Moderator, Workshop on Development of Protected Agriculture in Jordan, with the cooperation of Ministry of Foreign Affairs of the Netherlands and Eco Consult, Mutah University, Jordan, 2018.
32. Chairman and member for many investigating the promotions for other people from Assistant to Associate Professor and from Associate Professor to Full Professor, Faculty of Agriculture, Mutah University, Jordan, 2015-2018.

### **Certifications of Acknowledgement**

1. Jordan Society for Scientific Research for giving many lectures about Scientific Research and Development for schools in Karak, Jordan, 2009.
2. Building the capacity of Jordanian researchers. Scientific Research Support Fund, Ministry of Higher Education, Amman, Jordan, 2012.
3. Building capacity of personnel in Jordanian olive industry, Faculty of Agriculture, Mutah University, Karak, Jordan, 2016.
4. Building capacity of personnel in Jordanian olive industry, Amman, Jordan, 2017.
5. ESP Regional Conference (MENA 2018), Dead Sea, Jordan, April, 2018.
6. Eighth Scientific Agricultural Conference, Faculty of Agriculture, Mutah University, Karak, Jordan, 2018.

### **Defense Committees**

1. External Examine, M.Sc. defence, Nutrition Dept., The University of Jordan, Jordan, June, 2007,
2. External Examine, Ph.D. defence, Plant Protection Dept., The University of Jordan, Jordan, December, 2015.



3. External Examine, Ph.D. defence, Plant Protection Dept., The University of Jordan, Jordan, July, 2016.
4. Co-Supervisor, M.Sc. defence, Plant Production Dept., Faculty of Agriculture, Mutah University, Jordan, August, 2017.
5. External Examine, Ph.D. defence, Plant Protection Dept., The University of Jordan, Jordan, November, 2017.
6. External Examine, Ph.D. defence, Plant Protection Dept., The University of Jordan, Jordan, April, 2018.

### **Research Interest and Experience**

1. Wide understanding and experience with biological control programs and its applications in different field crops, vegetables and fruit trees.
2. Wide understanding and experience with IPM programs and its applications in different field crops, vegetables and fruit trees.
3. Wide understanding with conservation of biodiversity and healthy environment by reducing pesticide applications.
4. Wide understanding with global climatic changes through sustainable agriculture.

### **Computer Skills**

1. Mutah University Computer Driving License (MUCDL, Certificate).
2. E learning (Certificate).
3. Model Educational Portal (Certificate).
4. Using the statistical software SPSS (Certificate).
5. Proficiency in Word, Excel, Power Point and Photo Processing.

### **Referees**

1. HE Prof. Dr. Rida Al-Khawaldeh, Jordanian Senate, Amman, Jordan. E-mail: r.shibli@ju.edu.jo.
2. HE Prof. Dr. Mahmud Duwayri, the University of Jordan, Amman, Jordan. E-mail: mduwayri@yahoo.com.
3. Prof. Dr. Cetin Sengonca, Department of Entomology and Plant Protection, Institute of Plant Diseases, University of Bonn, Nussallee 9, D-53115 Bonn, Germany. E-mail: C.Sengonca@uni-bonn.de.
4. Prof. Dr. Karl Schellander, Faculty of Agriculture, University of Bonn, Endenicher Allee, D-53115 Bonn, Germany. E-mail: karl.schellander@itz.uni-bonn.de
5. Prof. Dr. Ibrahim Nazer, Faculty of Agriculture, Jordan University, Amman, Jordan. E-Mail: nazeri@ju.edu.jo.

### **Declaration**

I am hereby declaring that all information given is true to the best of my knowledge.

*Firas Al-Zyoud*