

(Resume) CURRICULUM VITAE



Name: Mohammed Abdul-khalik AL-Hamdany
E mail: ma_alhamdany@yahoo.com

Date of Birth: March, 11, 1946

Place of Birth: Babylon-Iraq

Position: Chief Scientific Researches and Expert (Plant Pathologist) in Plant Breeding and Crop Improvement Center / Agricultural Office / Ministry of Science and Technology Baghdad-Iraq (Head of Plant Pathology Dept.) 2003 to 2010.

Degrees:

B.Sc. Plant Protection (1968), College of Agriculture, Baghdad University, Baghdad, Iraq.

M.Sc. Plant Pathology (1975), College of Agriculture, Baghdad University, Baghdad, Iraq.

Ph.D., Plant Pathology (1980) Kansas State University Manhattan-Kansas USA.

Major: Field Crop Diseases

Minor: Mycology

Employment:

1. Nov.1968-1975 Assistant Lecturer, Agri. Coll. Baghdad Univ.
2. Feb.1975 – Aug. 1976 Lecturer (M.Sc.). = = = = =
3. Sep.1976-Feb.1980 Scholarship for PhD in Kansas State Univ.
4. Apr.1980-1988 Scientific Researcher/ IAEC /Agri.&Biol. Researches Center.
5. 1988-1997 Senior Sci. Researcher IAEC = = = = = .
6. 1997- 2003 Chief Scientific Researches = = = = = = = .
7. 2003-2010 Expert, Plant Pathologist in Agriculture Researches Directorate/Ministry of Science and Technology.

Languages:

1. Arabic
2. English

Scientific Membership:

1. Iraqi Biological Society.
2. Iraqi Plant Protection Society.
3. Arab Plant Protection Society.
4. The World Forum of Researchers and Inventors (WFRI)
5. Editing Board of Iraqi Journal of Agriculture
6. Scientific committee of Plant Pathology Encyclopedia
7. Iraqi Agricultural Engineers Syndicate
8. Iraqi Inventors & Innovators Society

Area of Interest:

1. Field Crop Diseases (Wheat and Barley)
2. Breeding for Disease Resistance.

Teaching Graduate Students:

1. Advance Mycology. Babylon Univ. College of Science
2. Advance Plant Pathology. Baghdad Univ. and Babylon Univ.
3. Host: Parasite Relationship. Baghdad Univ.
4. Cereal Rust Diseases. Baghdad Univ. College of Agric.
5. Epidemiology. Baghdad Univ. College of Agric.

Reports:

1. Development of new method for potato production in Iraq. Agricultural Researches and Food Technology Office / Ministry of Science and Technology. Internal Report. 1992.
2. Establishment of Hydroponics' Culture System for production of vegetable crops in Iraq. Agricultural Researches and Food Technology Office / Ministry of Science and Technology. Internal Report 1994

Scientific Achievements:

1. Registration of Faba bean cultivar (Tuwaitha)!
 - 2.!!Registration and Release of Faba bean cultivar (Babil).
 3. Registration of two barley cultivars (Noor 17 and Rafidian 1!!
 4. Registration and Release of an extreme earliness barley cultivar !!!!!!!!!!(Noor 68).
 5. Registration and Release of Barley cultivar (Furat 9) with highly ! !!!!!!!!!mildew resistance.
 6. Registration and Release of Wheat cultivar (Babil 113) with yellow ! !!!!!!!!!rust resistance.
 7. Patent entitled "Fast Detection Method for Stripe Disease in Barley ! !!!!!!!!!seeds. No. 2949 in 2001
 - !!!!8. Golden Medal for Patent 2949 in the 2nd International Invention Fair !!!!!!!!!in Middle East, IIFME, Kuwait, 9-13, Nov.2008
 9. Golden Prize in the AL-Basil Invention and Innovation Fair for the Patent No. 2949. Damascus/Syria 15-20/7/2009.
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Research Activities: Leader of the Following Scientific Projects:

1. Breeding for Loose smut resistance in Barley.
2. Identification of mildew resistance source in Barley.
3. Breeding for mildew resistance in Barley.
4. Source of slow mildewing in Barley.
5. Physiological specialization in *Ustilago hordei*.
6. Breeding for multiple disease resistance (cover smut, leaf stripe and powdery mildew) in Barley.
7. Breeding for flag smut and yellow rust resistance in bread wheat.
8. Pathogen diversity of *Puccinia striiformis* in Baghdad region/Iraq.
9. Pathogen diversity of wheat leaf rust *Puccinia triticina* (*Puccinia recondite* f.sp. *tritici*) in Baghdad region.
- 10.Induced mutations in Broad Bean By gamma rays and EMS.
- 11.Induced early mature mutants in Cotton by gamma rays.
- 12.Induced rust resistance in alfalfa by gamma rays.
13. Biological control of *Rhizoctonia solani* in Sesame.
14. Breeding for extreme earliness in Barley.
- 15.Disease Control and Pathogen suppression by Furfural

16. Breeding for Multiple resistance (rust, smut, and drought) in Bread Wheat.
17. Breeding for stripe disease resistance in barley
18. Disease control and growth stimulation by *Trichoderma* spp. in cotton against *Rhizoctonia solani*.
19. Enhancement of seedling emergence in cotton by seed associated fungal species.
20. Pathogen Diversity of Bunt causal agent (*Tilletia caries* & *T. foetida*) in Iraq.
21. Production of potato by bud technique in Iraq.
22. Production of some vegetable by soilless culture technique
23. Improved disease resistance in chick pea *in vitro*
24. Pathogen diversity of Bunt causing fungi in Iraq
25. Pathogen diversity of *Ustilago hordei* in Iraq

List of Publications:

- 1. AL- Hamdany, M. A. and M.M.Salih. 1985.** *Leveillula leguminosarum* on alfalfa in Iraq. Brit. Mycol., 84 (2): 338-340.
- 2. AL- Hamdany, M. A. and T.F. Abed. 1985.** Etiological studies of alfalfa rust in central Iraq. Indian Phytopathology, 38: 668-671.
- 3. AL- Hamdany, M. A. and M.M.Salih. 1985.** Effect of gamma rays and EMS on *Alternaria* leaf spot disease in broad bean throughout four generations in Iraq. Arab J. Plant Protection, 3: 72-75.
- 4. AL-Hamdany, M.A. and M.M. Salih. 1986.** Wilt causing fungi on broad bean. Indian Phytopathology, 39: 620-622.
- 5. AL-Hamdany, M A., I.F.Ibrahim, M.M. Salih, L.J. Kadhem, A.H. Mahmood, and F.A. Kadhem. 1986.** A note on response of twelve induced barley mutants to powdery mildew. Phytoprotection, 67:129-131.
- 6. AL-Hamdany, M. A. and M.M.Salih .1986.** *Rhizoctonia* damping-off in sesame. Indian Phytopathology, 39: 124-126.
- 7. AL-Hamdany, M.A. and M.M. Salih. 1986.** Induced resistance in alfalfa against rust disease by gamma rays. J. Agric. Water Reso. Res., 4: 29-37.

- 8. Ibrahim, I. F. and AL-Hamdany, M.A., L.J. Kadhem, A.H. Mahmood, and M.M. Salih 1986.** Host reaction of twenty Barley cultivars with *Erysiphe graminis* f. sp. *hordei*. J. Agric. Water Reso. Res. 5(2): 13-20.
- 9. AL-Hamdany, M. A. and F.A. Kadhem.. 1987.** Preliminary studies on the behavior of M5 and M6 of barley induced mutants to powdery mildew. Iraqi J. Agric. Sci.(Zanco), 5(4): 183-190.
- 10. AL-Hamdany, M. A.1988.** Efficiency of isolates of *Trichoderma* spp. to suppress *Rhizoctonia solani* in sesame. J. Agric. Water Reso. Res., 7(2): 107-114.
- 11. AL-Hamdany, M. A., M.M. Salih and I.A. Al- Dulaimi. 1989.** New source of mildew resistance in barley. J. Agric. Water Reso. Res., 9(2): 210-214.
- 12. Timimi, K. M. F. Fattah, and M. A. AL-Hamdany. 1989.** Shoot apex fasciation in *Sesame indicum* with Mycoplasma-like Organisms. Plant Pathology, 138: 300-304.
- 13. AL-Dulaimi, I. A., M. A. AL-Hamdany and M.M. Salih. 1989.** Effect of associated fungi in sesame seeds on seed germinability. Proc. 5th Scientific Conf. Sci. Res. Coun., 1: 3-10.
- 14. AL-Hamdany, M. A., M.M. Salih and I.A.Al- Dulaimi.1989.** Biological control of Rhizoctonia damping- off in sesame. Proc. Inter. Symp. Biol. Cont. Antalya, Turkey, 66-70.
- 15. AL-Hamdany, M. A. and M.M. Salih. 1989.** Possible induction of wilt resistance in broad bean by gamma rays and EMS. Proc. Nat. Conf, Pest, and Disease of Veget. and Fruits in Egypt and Arab Countries. Egypt, Ismaielyia, October 1989.
- 16. Hamdany, M.A., Salih, M.M. and Al-Dulami, I.A., 1990.** Selection of mildew and smut resistant lines from barley induced mutants. Page 279-280 *In* proceedings of the 8th congress of the Mediterranean phytopathological union. October 28 - November 3rd, Agadir Morocco, 1990.
- 17. AL-Hamdany, M. A. et al. 1991.** Transfer of Mildew resistance trait in barley. 3rd Conf. of High Coun. Iraqi Sci. Soc. Tikreet. Iraq, 1991.
- 18. AL-Hamdany, M. A. et al. 1992.** Disease response of some barley genotypes to loose smut. Basrah J. Agric., Sci. 5(2): 215-222.

- 19. AL-Hamdany, M. A. et al. 1993.** Induced two mutants in broad bean by mutagens. Proc. Workshop Meeting, Role of Irradiation in Developing Improved Agricultural Generations. Faculty of Arab Atomic Energy. Baghdad, Iraq, Dec. 18-20, 1993.
- 20. Salih, M.M. and AL-Hamdany, M. A. 1993.** Searching for rust resistance in barley. Proc. Workshop Meeting, Role of Irradiation in Developing Agricultural Generations. Faculty of Arab Atomic Energy. Baghdad, Iraq, Dec. 18-20, 1993.
- 21. AL-Dulaimi, I. A. and M. A. AL-Hamdany. 1993.** Crop improvement in cotton by experimental mutagens. Proc. Workshop Meeting, Role of Atomic Energy. Baghdad, Iraq, Dec. 18-20, 1993.
- 22. AL-Hamdany, M. A. et al. 1993.** Supper mildew resistance gene in barley. Proc. Workshop on Technology Transfer in the Production of Cereals and Legumes. Co-ordi. ICARDA. Mousel-Iraq 65-72.
- 23. AL-Hamdany, M. A. et al. 1994.** Induced new alfalfa cultivars by gamma rays. Proc.2nd Conf. of Peaceful Use of Atomic Energy in Arab Nation. Egypt, Nov. 5-9, 1994.
- 24. AL-Hamdany, M. A. et al.1996.** Breeding program for extreme earliness in barley. Proc. Workshop Genetic Resources, ICARDA Baghdad, Iraq 1996.
- 25. AL-Hamdany, M. A., I.A.Al-Dulaimi, M.M.Salih, A.T.Amin, J.A.Sabar and N.R.Shuraida. 1997.** Identification of physiologic races of *Ustilago hordei* covered smut of barley in Central Iraq. Iraqi J. of Agriculture, 2(1): 88-97.
- 26. AL-Hamdany, M. A., M.M.Salih, A.T.Amin, J.A.Sabar and N.R.Shuraida. 1997.** Slow mildew in barley induced mutant (D/31) under field conditions. J. of IPA Agricultural Researches, 7(1): 66-73.
- 27. Al-Hamdany, M.A.; Al-Noaimi, H.N.; Salih, H.M. and Abood, H.M. 1997.** Disease control of root knot nematode by furfural. Page 336 In: *Proc.6th Arabic Conf. Plant Protection Science*. Beirut/Lebanon, 1997.

- 28. Al-Hamdany, M.A. and Al-Noaimi, H.N. 1997.** The suppressing of phytopathogenic fungi in growth medium by furfural. Page 456 In: *Proc. 6th Arab Conf. Plant Protection Science*. Beirut/Lebanon, 1997.
- 29. AL-Hamdany, M. A. et al. 1998.** Fast method for screening wheat genotypes to flag smut. *Iraqi J. Agriculture*, 3(1): 28-34.
- 30. AL-Hamdany, M. A. et al. 1998.** Registration and release of new faba bean cultivar in Iraq. *FABIS News Letter*, 41: 37-38.
- 31. AL-Hamdany, M. A. et al. 1998.** Phytotoxin of *Fusarium avenaceum* on broad bean. *Indian Phytopathology*, 51(3): 282-283.
- 32. Al-Hamdany, M.A. 1999.** Virulence of yellow rust population in Baghdad area. *Iraq/ICARDA Bi-Annual Coordination Meeting*. October, 1999, Baghdad, Iraq.
- 33. AL-Hamdany, M. A., M.M.Salih, A.T.Amin, J.A.Saber and N.R.Shuraida. 1999.** Developing two barley cultivars with mildew resistance. *Iraqi J. Agriculture*, 4 (1): 1-7.
- 34. AL-Hamdany, M. A. et al. 1999.** Activity of furfural for control of *Urocystis agropyri*, causal agent of flag smut on wheat. *Iraqi J. Agriculture*, 4(1): 164-176.
- 35. AL-Hamdany, M. A. et al. 1999.** Use of furfural for control of the root knot Nematodes *Meloidogyne javanica* on cucumber and eggplant under greenhouse conditions. *Arab J. Plant Protection*, 17(2): 84-87.
- 36. AL-Hamdany, M. A. et al. 1999.** Suppression phytopathogenic fungal growth in culture medium by furfural. *DRASAT/Agricultural Sciences*, 27(3): 465-470.
- 37. AL-Hamdany, M. A. et al. 1999.** Diagnosis of air pollution symptoms on the plants, *J. Agri. and Development in Arab World*, 2: 50-61.
- 38. Al-Hamdany, M.A.; A.H. Kadhem; H.A.Abas and H.Y. Jaber. 1999.** Developing disease resistant wheat cultivars. I. Induction bread wheat cultivar Babil 113 has resistant reaction to flag smut and yellow rust. Page 25 in: *Proc. 15th Sci. Conf. Iraqi Biological Society*. November, 26-27, Tikret, Iraq.

- 39. AL- Hamdany, M. A. 2000.** Fast detection of infected barley seeds with stripe disease agent (*Drechslera graminea*).*Iraqi J. Agriculture*, 5(1):53-57.
- 40. AL-Hamdany, M. A. 2000.** Mycorrhizae and its important to plants. *J. Agri. and Development in Arab World*, 2: 38-45.
- 41. AL-Hamdany, M. A. et al. 2000.** Induced early mature mutants in cotton by gamma rays. Pages 311- 319 in *Proc. 5th Arab Conf. Peaceful Uses of Atomic Energy*, Beirut-Lebanon, 13-17/11/2000.
- 42. AL-Hamdany, M.A. et al. 2000.** Improve disease resistance in Barley against powdery mildew, cover smut and stripe diseases. *Iraqi J. Agriculture*, 5(3): 8-18.
- 43. Al-Hamdany, M.A. 2000.** Breeding For Disease Resistance. **National Workshop on Biological Control of Agricultural Pest**, Iraqi Atomic Energy Commission, Baghdad, Iraq, 25-26 Nov. 2000.
- 44. Stephan, Z.A. and M. A. AL-Hamdany 2001.** Efficacy of furfural treatment in controlling the disease complex of root-knot Nematode and Fusarium wilt on tomato and eggplant under lathhouse conditions. *Arab J. Plant Protection*, 19(2): 97-100.
- 45. AL-Hamdany, M. A., H.A.Abas and I.H.Kadhém. 2002.** Shifting in the virulence pattern of wheat leaf rust causal agent in Baghdad region. *Iraqi J. Agriculture*, 7(5) : 9-17. Special Issue
- 46. AL-Hamdany, M. A., C.R.Wellings; A.H. Kadhém and H.A. Abas 2002.** Virulence pattern of yellow rust causal agent population *Puccinia striiformis* Westend. on Near Isogenic Lines in Baghdad area. *Arab J. Plant Protection*, 20(1): 24-28.
- 47. AL-Dulaimi, I.A. and M.A. AL-Hamdany. 2001.** Effect of isolate and inoculum level of *Trichoderma* spp. on damping-off in watermelon. *J. Ibin Al-Haythem of Applied Science*, 14(4a): 12-23.
- 48. AL-Hamdany, M. A. et al. 2002.** Induced mutations in broad bean by gamma rays and EMS. *Proc. 6th Arab Conf. Peaceful Uses of Atomic Energy*, Cairo, Egypt, Dec. 14-19/12/2002.
- 49. AL-Hamdany, M. A. et al. 2003.** Inheritance of Barley loose smut resistance in Natans and Compana. *Iraqi J. Agriculture*, 8(3): 1-7.
- 50. Al-Hamdany, M.A. 2002.** Ignorance of plant protection concept in Breeding Programs in Iraq. *2nd Sci. Conf. of Plant Protection / Agricultural College, Baghdad Univ.* April 23-24, 2002, Baghdad, Iraq.

- 51. Al-Hamdany, M.A. 2003.** Breeding for flag smut resistance in bread wheat. *Proc. 8th Int. Cong. Plant Pathology*, Feb. 2003, Christchurch Newzeland.
- 52. AL-Hamdany, M. A. et al. 2003.** Improved disease resistance in barley. *Expert Meeting of Barley Improvement in Arab World*, held by Federation of Arab Scientific Research Council. Tripoli, Libya, Jan. 2003.
- 53. AL-Hamdany, M. A. et al. 2003.** Developing early mature barley cultivars. *Expert Meeting of Barley Improvement in Arab World*, held by Federation of Arab Scientific Research Council. Tripoli, Libya, Jan. 2003.
- 54. Al-Hamdany, M.A. et al.2003.** New source of Mildew-Leaf rust resistance in barley. *Proc. 8th Conf. Arab Society of Plant Protection*, Al- Baydha, Libya, 12-16 Nov. 2003.
- 55. Al-Hamdany, M.A. et al. 2003 .** Host reaction to wheat black stem rust during late epidemic form in Baghdad area. Page 46A In: *Proc. 8th. Arab Congress of Plant Protection, 12-16 October*, 2003, El-Beida, Libya.
- 56. AL-Hamdany, M. A. ,J.A.Sabar, H.A.abass and A.M.Taqi. 2004.** Identification of mildew and leaf rust resistance source in barley. *Arab J.Plant Protection*, 22(2): 153-155.
- 57. AL-Hamdany, M. A., H.S.Ketan and F.R.Hameed. 2004.** Efficacy of some isolates of Trichoderma as biocontrol agents and growth stimulators in cotton. *Iraqi J. Agriculture*, 9(3): 93-99.
- 58. AL-Sadawi, I.S. and M.A.AL-Hamdany, F.A. Al- Khuzaaly and K.A. Al- Temimi. 2004.** Production of high classes of potato tubers using Soil less culture technique. *Iraqi J. Agriculture*, 9(3):106-112.
- 59. Al-Hamdany M. A. et al. 2006.** Registration and release of Bread wheat cultivar (Babil 113) in Iraq. *Proc. Wheat Seminar, Ayob Research Institute, Faisalabad, Pakistan*, Feb.20-21, 2006.
- 60. Al-Hamdany, M.A., A.H. Kadhem;H.A.Abas and H.Y.Jaber. 2006.** Developing new bread Wheat cultivar in Iraq. *Iraqi J. Agriculture*, 11:146-156.

- 61. Hameed, F.M., M.A. Al-Hamdany and Fattah, F.A. 2006.** Relationship between the host and the biocontrol agent in disease control of cotton damping-off. *Proc. 9th Arab Congress of Plant Protection*, Damascus, Syria, Nov.19-23, 2006.(Abstract)
- 62. Al-Hamdany, M.A. 2006.** Sick Plants... Why? *Iraqi J Agriculture (Extension)*, No. 1: 56-60.
- 63. Al-Hamdany, M.A. 2006.** Common Scab of Potato Tubers. *Iraqi J. Agriculture (Extension)*, No.2: 32-33.
- 64. Al-Hamdany, M.A. 2006.** Ear and Grain Rot Disease in Corn. *Iraqi J. Agriculture (Extension)*, No.4: 25-28.
- 65. AL-Hamdany, M.A., A.H.Kadhem, A.A.Nefel and H.A.Abas. 2008.** Deduced two broad bean cultivars by experimental mutagens in Iraq. *Iraq J. Agriculture*, 13(1):150-158.
- 66. Hameed, F.M., M.A. AL-Hamdany, and F.A.Fattah, 2008.** Induced Rhizoctonia wilt resistance in cotton seedlings by *Trichoderma* spp. *Proc. 9th. International Cong. Plant Pathology*, Torino, Italy. 24-29 Aug.2008.(Abstract)
- 67. Hammed, F.M, M.A. AL-Hamdany and F.A. Fattah. 2008.** The role of host plant in the biological control of Rhizoctonia on cotton seedlings. *J. Babylon University / Science*, 16(1):106-112.
- 68. AL-Hamdany, M.A. 2008.** Antifungal activity of furfural on *Sclerotinia sclerotiorum*. *Proc. 9th. Inter. Cong. Plant Pathology*, Torino, Italy. 24-29 Aug.2008.
- 69. AL-Hamdany, M.A., H.Y. Jaber and H.A. Abas. 2008.** Improved Earliness and productivity of cotton by gamma rays. 2008. *Proc. Inter. Symposium of Induced Mutations in Plants*, IAEA, Vienna, 12-15, Aug. 2008.
- 70. Al-Hamdany, M.A. and H.Y.Jaber . 2009.** Induced promising earliness variants in cotton cultivar Ashor 1 by gamma rays. *International J. Biology and Biotechnology* (Pakistan), 6(3): 187-189.
- 71. Hameed, F.M., F.A.Fattah and M.A. AL-Hamdany 2010.** Resistance induction in cotton (*Gossypium hirsutum* L.) by *Trichoderma* spp. *Iraqi J. Agri.*, 15(1): 48-55.

- 72. Al-Rawi, M.S., M.A.AL-Hamdany, A.F.Abd Al-lattef and M.M.F. AL-Rahman. 2010.** Propagation of Chickpea *in vitro*. *Baghdad J. Science*, 7(4): 1322-1330.
- 73. AL-Hamdany M.A., J.A.Sabar, H.A.Abas, H.Y.Jaber, M.S. Khatar and N.R.Shuraida. 2010.** Host reaction of Iraqi wheat cultivars and hybrid lines to bunt causal agents. *Iraqi J. Agriculture*, 15(2): 169-175.
- 74. AL-Hamdany, M.A., J. A. Sabar, H. A. Abas, S.N. Abdulwahab, I.H. Kadhem, H. S. Ketan, A.M. Taqi and N.N.M.Ali.. 2011.** Effective barley cover smut resistance genes in Iraq. *Arab J. Pl. Protection*, 29(2):240-244.
- 75. AL-Hamdany, M.A., H.Y.Jaber and I.H.Kadhem . 2011.** Role of *Chalara radicicola* in date-palm tree decline. *Arab J. Pl. Protection*, 29 (1): 118-121.
- 76. AL-Hamdany, M.A., H.Y.Jaber, M.M.Bashir, J.A.Sabar, J.A.Sabar, H.A.Abas, I.H.Kadhem, H.S.Ketan, N.N.M. Ali, S.N. Abdulwahab and A.M.Taqi. 2011.** Infection types of interaction between Iraqi wheat cultivars and bunt pathogen isolates with a preliminary survey of bunt resistant genes. *Arab J. Pl. Protection*, 29(2):233-239.
- 77. AL-Hamdany, M.A. 2011.** Wheat Rusts status in Iraq. *Proc. of BGRI Technical Workshop on Wheat Rusts*. June, 13-16, 2011, St. Paul, Minnesota, USA.
- 78. Younis, M. M. B., M.A. AL-Hamdany, S.N. Abdul-Wahab, I. Abas. 2012.** The role of some fungal isolates associated with green color lint seeds in emergence stimulation of cotton seedlings. *Arab J. Pl. Prot.*, 30(1): 11-16.
- 79. Salih, M.M. and M.A. AL-Hamdany. 2012.** Disease responses of Barley genotype with *Puccinia hordei*. *Pakistan J. Phytopathology*, 24(1):74-78.

80. Younis, M. M. and M.A.AL-Hamdany, S.N. Abdul-Wahab, and I. Abbas . 2012. Coloring of cotton seed lint, the causing agents and its relation to seedling emergence. *Journal of Environmental Studies (JES)* (Accepted for Publication on March 21, 2012.)

81. AL-Hamdany, M.A. *et al.* 2012. Disease response of Wheat genotypes to *Anguina tritici* isolated from Central Iraq. (Applied for Publication)

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