Detailed Profile of Dr. A. K. Tewari, Prof. Plant Pathology, College of Agriculture

Birth & Educations:

Born in Nawabganj, Gonda, Uttar Pradesh on 24 April 1967. Educated High School and Intermediate from UP Board (1982 & 1984); B.Sc. (Ag). from NDUAT, Kumarganj, Faizabad, UP (1987); M.Sc. Ag. and Ph.D. (Plant Pathology) from GBPUAT, Pantnagar, UP (1990 &1996)

Positions hold: Scientist In charge, Moon Mushroom Farm. Rampur, UP (1990-1991); Senior Research Fellow, Department of Plant Pathology, GBPUAT, Pantnagar (1993-1996); Assistant Executive at Alpine Biotech Ltd. Dewas, MP (1997-1999); Research Associate, Division of Mycology & Plant Pathology, IARI, New Delhi (1999-2001); Assistant Professor, Division of Plant Pathology, SKUAST-J, Jammu (2001-2006); Senior Research Officer/Associate Professor (2006-2012) and Professor, Department of Plant Pathology, College of Agriculture, GBPUAT, Pantnagar, Uttarakhand (since 2012 contd….)

Research Areas: Rapeseed-Mustard Pathology, Pathogen diversity and Pant disease management strategies, Biological control of plant pathogens, Mushroom production and protection technology.

Brief About

Prof. Tewari has extensive experience in **Rapeseed mustard pathology** *viz.* pathogen diversity, identification of resistance sources against major diseases of rapeseed mustard and their management strategies; identified a set of host differentials for the differentiation of *Albugo candida* isolates, identified 21 Indian pathotypes of *Albugo candida* and developed techniques for long term preservation of white rust samples and maintenance of *Albugo candida* isolates (44 no.) and all of these research work has been documented in more than 60 scientific publications.*;* Research in **Biocontrol of plant pathogens** includes: Isolation and identification of crop specific *Trichoderma* and *Bacillus* spp.*,* Standardized mass production and formulation technology (WP, EC & Paste based) of *Trichoderma* to get higher CFU and shelf-life and Developed eco-friendly management strategies of late blight of potato using combination of copper+ Chitosan +*Trichoderma* all of these has been documented in more than 35 scientific publications; Experience in **Mushroom** under controlled conditions includes: Spawn preparation, composting, and crop management strategies as has spent more than 4 years in Pvt. Organization

Prof. Tewari has an experience of 25 years in research and teaching of UG and PG students. He has guided 11 M.Sc. and 12 Ph.D. students in plant pathology. He has handled two International Collaborative project (Indo-UK: 2015-2019) and Indo-German Project (2011-2016) funded by DBT, Govt. of India and three National external funded projects and presently handing one collaborative research project (2024-2029) funded by DBT. He visited Germany and UK to present project research work. He has published more than 100 research papers in National and International Journals, 01 text book and several book chapters, popular articles and farmer's bulletin. He has awarded by three best research paper presented in International and National symposium. Under his guidance three students got Best Ph.D. Thesis Award at National Level.

He has also served/serving additional responsibilities *viz*. Joint Director, Mushroom Research and Training Centre (Oct. 2022-June 2023); CO-PI & PI (May 2006-12 & 2012…)

and Project coordinator (May 2019…) of AICRP-Rapeseed Mustard; PI (July,2011-April 2019) of AICRP on Biocontrol.

Leading Research Publications:

International Journals

1. **Tewari, A.K**. Mukhopadhyay. A.N and Rashmi Aggrawal (2003). Colonization *of Gliocladium virens* on biologically treated chickpea seed for biocontrol of chickpea wilt-complex. *Acta Phytopathologica et Entomologica Hungarica*. 38:79-85.
2. Aggrawal Rashmi, **Tewari, A.K**.; Srivastava, K.D. and Singh D.V. (2004). Role of antibiosis in the biological control of spot blotch (*Cochliobolus sativum*) of wheat using *Chaetomium globosum*. *Mycopathologia.* 157: 367-78.
3. Kumar, Vinod; Mathela, C.S.; Tewari, Geeta; Singh, Darshan; **Tewari, A.K**. and Bisht, K.S. (2014). Chemical composition and antifungal activity of essential oils from three Himalayan Erigeron species. *LWT - Food Science and Technology.* 56: 278-283.
4. Sofi, T. A.; **Tewari, A. K**.; Razdan, V. K. and Koul, V. K. (2014). Long term effect of soil solarization on soil properties and cauliflower vigor. *Phytoparasitica*. 42 (1): 1-11.
5. Saxena, D.; **Tewari, A.K**. and D. Rai (2014). The *in vitro* effect of some commonly used fungicides, insecticides and herbicides for their compatibility with *Trichoderma harzianum* PBT23. *World Applied Sciences Journal.* 31 (4): 444-448)
6. Kumar, Vinod; Mathela, C.S.; **Tewari, A.K**. and K.S. Bisht (2014). *In vitro* inhibition activity of essential oils from some *Lamiaceae* species against phytopathogenic fungi. *Pesticide Biochemistry and Physiology.* 114 (2014) 67–71.
7. Rai D. and **A. K. Tewari** (2016). Shelf-life studies of different formulations based on *Trichoderma harzianum* (Th14). *Annals of Biological Research*. 7 (7):1-5. (IF 0.28).
8. Arora, H., Padmaja, K. L., Kumar, P., Mukhi, N., **Tewari, A. K**., Mukhopadhyay, A., Gupta, V., Pradhan, A. K. and D. Pental (2019). BjuWRR1, a CC-NB-LRR gene identified in Brassica juncea, confers resistance to white rust caused by *Albugo candida*. *Theoretical and Applied Genetics*. 132: 2223–2236.
9. Mukherjee, P. K., Mehetre, S. T., Sherkhane, P. D., Muthukathan, G., Ghosh, A., Kotasthane, A. S., Khare, N., Rathod, P., Sharma, K. K., Nath, R., Tewari, A. K., Bhattacharyya, S., Arya, M., Pathak, D., Wasnikar, **A. K, Tiwari**, R. K. S. and D. R. Saxena (2019). A Novel Seed-Dressing Formulation Based on an Improved Mutant Strain of *Trichoderma virens*, and Its Field Evaluation. *Frontiers in Microbiology.* 10: 1-13.
10. Pooja Upadhyay and **A. K. Tewari** (2019). Evaluation of botanical extracts, animal wastes, organic and inorganic salts, micronutrients and bio-agents against Sclerotinia *sclerotiorum* (Lib) *de Bary* a cause of Sclerotinia rot of rapeseed mustard under field conditions. *Bulletin of Environment Pharmacology and Life Sciences*. 8(12): 60-65.
11. Erayya Ladi; Nandani Shukla; Yogita Bohra; **Anand Kumar Tiwari** and Jatinder Kumar (2020) Copper tolerant *Trichoderma asperellum* increases bio-efficacy of copper against *Phytophthora infestans* in dual combination. *Phytoparasitica.* 1-16. https://doi.org/10.1007/s12600-020-00804-9
12. Devanshu Dev; **A. K. Tewari**; Pooja Upadhyay and G. R. Daniel (2020). Identification and nomenclature of *Albugo candida* pathotypes of Indian origin causing white rust

disease of rapeseed-mustard. *European Journal of Plant Pathology.* 1-17. https://doi.org/10.1007/s10658-020-02135-1

National Journals

13. **Tewari, A.K.** and A.N. Mukhopadhyay (2001). Testing of different formulations of *Gliocladium virens* against chickpea wilt-complex. *Indian Phytopathology*. 54:67-71.
14. **Tewari, A.K.** and A.N. Mukhopadhyay (2003). Management of chickpea root rot and collar rot by integration of biological and chemical seed treatment. *Indian Phytopathology*. 56:39-42.
15. Rashmi Aggarwal, **A.K. Tewari**, P. Dureja and K.D. Srivastava (2007). Quantitative analysis of secondary metabolites produced by *Chaetomium globosum* Krunze ex Fr., *Journal of Biological control*. 21 (1): 163-168.
16. Sofi, T.A., **Tewari, A.K** and V.K. Razdan (2007). Soil solarization reduces damping-off by soil-borne fungal pathogens and improves vigour of cauliflower seedling. *Journal of Mycology and Plant Pathology.* 37 (1): 68-71.
17. A. Sofi, **A.K. Tewari**, Nadeem A. Ganai and F.A. Ahangar (2009). Soil solarization integrated with ecofriendly practices to manage cauliflower damping–off and seedling vigour. *Journal of Mycology and Plant Pathology.*39 (2): 252-256.
18. Arocha, Y., Singh, A., Pandey, M., Tripathi,A.N., Chandra,B., Shukla, S.K., Singh,Y., kumar,A., Srivastava, R.K., Zaidi, N.W., Arif, M., Narwal, S., Tewari, A.K., Gupta, M.K., Nath, P.D., Rabindran, R., Khirbat, S.K., Byadgi, A.S., Singh, G. and Boa, E. (2009) . New plant hosts for group 16 SrII, '*Candidatus Phytoplasma aurantifolia'*, in India. *Plant Pathology*. 58: 39 (New report)
19. Prateeksha Mehra; **A. K. Tewari** and Gohar Taj (2017). Studies on cultural, morphological, pathogenic and molecular variability of *Alternaria brassicae*, the causal agent of blight disease of rapeseed-mustard. *Journal of Oilseed Brassicas.* 8 (2): 1-11.
20. Pandey, Puja and **A. K. Tewari** (2017). Selection of host differentials for the identification of *Albugo candida* pathotypes. *Indian Phytopathology. 70 (3):378-380.*
21. Rashmi Yadav, Laxman Prasad, J. Nanjundan, **A. K. Tewari**, Paramjeet Singh, P. S. Sandhu, Usha Pant, Ram Avtar, J. Radhamani, Sandeep Kumar Mahesh Rao and J. C. Rana (2018). Identification and evaluation of Indian mustard genotypes for white rust resistance and agronomic performance. *Indian Journal of Genetics and Plant Breeding.* 78(1): 81-89.
22. Manju Sharma, **A. K. Tewari**, Roopali Sharma and J. Kumar (2018). Field evaluation of potential bio agents against chickpea wilt complex. *Journal of Biological Control,* 32(3): 172-178
23. V. Amirthalingam, **A. K. Tewari**, Manju Sharma, Roopali Sharma and J. Kumar (2018). Evaluation of bioagents for their compatibility for the development of consortium to enhance their efficacy. *Journal of Biological Control,* 32(3): 172-178
24. Ambika Rautela, Nandani Shukla, Abhijeet Ghatak, **A K Tewari** and J Kumar. (2019). Field evaluation of different copper sources in a consortium of copper-Chitosan-*Trichoderma* for the management of late blight disease of tomato. *Journal of Pharmacognosy and Phytochemistry*. 7 (4): 126-1266).
25. K. Gairola and **AK Tewari** (2019). Management of White Rust (*Albugo candida*) in Indian mustard by Fungicides and Garlic Extract. *Pesticide Research Journal*. 31 (1): 60-65.

26. A Rautela, M Dwivedi, **AK Tewari** and J Kumar (2019). Enzymatic activity and secondary metabolite profile of *Trichoderma asperellum* in presence of chitosan *Indian Phytopathology*. 72 (3): 437-444.

27. K Gairola and **AK Tewari** (2019). Early detection and management *of white rust disease (Albugo candida) in rapeseed-mustard. Journal* of Oilseed Brassica. 10 (2), 67-79.

28. Erayya, Shukla Nandani, A. Srinivasraghavan, **Tewari A.K**. and Kumar, J (2020). Compatibility of *Trichoderma* spp. with copper chitosan graded combinations. *Plant Disease Research.* 35 (1): 42-44. (NR-4.58). DOI:10.5958/2249-8788.2020.00008.6

29. Manjari Singh, Parul Setiya, **Tewari Anand Kumar**, Ajeet Singh Nain "Comparison of machine learning and regression approaches to forecasting Alternaria blight epidemic of Indian mustard" (2022). *The Pharma Innovation Journal*. 11 (6): 2974-2984.

30. Pooja Upadhyay, **AK Tewari** and Himanshu Punetha (2023). Biochemical estimation of polyphenol and peroxidases in resistant sources against white rust disease of rapeseed mustard incited by *Albugo candida*. *The Pharma Innovation Journal*, 12(3): 4964-4974

31. Marjit Chandan, A.K. Tewari, Rahul Purohit, Shweta, Priya Baruah and Chidanandappa. (2023). Efficacy of Fungicides and optimization of Application Timing for the management of Sclerotinia Rot of Mustard caused by *Sclerotinia sclerotiorum. International Journal of environment and Climate Change*. 13(12): 1142-1158