

**Dr. Mallikarjuna J. Scientist (Entomology)**

Since joining my first posting at ICAR-NIBSM, Raipur during October 2013 I have tested new insecticide molecules viz., Flonicamid 15% + Fipronil 15% WG and Acephate 50%+ imidacloprid 1.8% SP against insect pests of rice for two consecutive seasons from 2014-15 and the this trail was sponsored by UPL India Pvt Ltd as contract research project. I have developed a regression model for estimating the yield losses due to different biotic stresses in rice crop. I am working as PI of AICRP on Nematodes in Agriculture since 2015 and reported rice root knot nematode from Chhattisgarh for the first time. Surveyed 14-15 districts of Chhattisgarh for diversity and distribution mapping of plant parasitic nematodes of different crops. Apart from that I am screening germplasm line of rice, chickpea, pigeonpea, Urd, mungbean and brinjal against root knot nematode.

Currently I am working on silicon-mediated defense mechanisms in against pink stem borer (PSB) and yellow stem borer respectively in wheat and rice. I have evaluated different doses of Diatomaceous earth (DE) along with potassium against PSB in wheat and found that both enhances the wheat tolerance levels to PSB damage and increases yield, photosynthesis and related parameters. It also found that DE and potassium also induces defense enzymes against PSB in wheat. Presently, I am looking into silicon-mediated defenses in rice against YSB using transcriptomics approach. Apart from that I am also screening chickpea and brinjal germplasm lines under field conditions as part of gene pool profiling programme. I am screening large rice gramplasm lines against Brown planthopper in laboratory conditions as part of Super Donor development programme.

During my studies, I received ICAR-JRF and SRF fellowships for M.Sc and Ph.D fellowships. I have secured first place in Agricultural Research Service (ARS) examination conducted by ASRB in Entomology discipline. My Ph. D thesis was on Silicon mediated resistance against YSB in rice.