

## Bio-efficacy of different antibacterial antibiotic, plant extracts and bioagents against bacterial blight of soybean caused by *Pseudomonas syringae pv. glycinea*

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Medicinal Soybean (*Glycine max* (L.) Merrill.), is a native of Eastern Asia. It belongs to the family Leguminosae and sub-family Papilionoidae. Soybean crop is known to be affected by more than 100 plant pathogens out of 35 are of economic importance. Among the major bacterial, bacterial blight caused by *Pseudomonas syringae* has been reported yield loss potential for this disease to range from 4 per cent to as high as 40 per cent under extreme condition.

An experiment was carried out to study efficacy of different antibacterial antibiotic, plant extracts and bioagents against bacterial blight of soybean caused by *Pseudomonas syringae pv. glycinea*. The results revealed that all the five antibiotics tested in vitro applying poisoned food technique against *Pseudomonas syringae* significantly inhibited the growth of the test pathogen over untreated control. However, antibiotic, Streptocycline + Copper oxychloride recorded minimum mean colony diameter (10.47mm) and maximum mean inhibition (83.65 mm) of growth of the test pathogen over untreated control (mean col. dia. 90.00 mm and mean inhibition, 0.00) followed by the antibiotic Streptocycline 100 ppm (mean col. dia., 15.64 mm and mean inhibition, 76.69%) and Copper oxychloride (mean col. dia., 21.42 mm and mean inhibition, 62.74%). In field, the highest mean per cent disease incidence 35.51 per cent was observed in poushamycin treatment. The lowest mean per cent disease incidence 12.74 per cent was found in treatment streptocycline 100 ppm + Copper oxychloride (@0.25%) and recorded highest seed yield (2605 kg/ha) and test weight (14.33 g). Plant leaf extract (@ 5 and 10%) of Neem recorded lowest mean colony diameter (34.72 mm) and highest mean mycelial growth inhibition (59.26%) of the test pathogen over untreated control followed by Ginger (mean col. dia, 44.42 mm and mean inhibition, 48.55%).

### Biography

G P Jagtap has done his M.Sc. (Agri), Ph.D NET (ICAR). Norman Borlaug Fellow 2008 (USA). He is a recipient of Norman Borlaug International Fellowship - 2008 and worked at Plant Disease Diagnostic Laboratory, Texas A&M University, USA. He did his doctorate degree from GBPUA&T, Pantnagar with specialization in Plant Pathology and presently working as a Assistant Professor in the Department of Plant Pathology, MKV, Parbhani. He has published 20 research papers, 40 popular articles, 2 Books and 6 practical manuals. He has participated in several International and National conferences and guided 10 M.Sc. (Agri) students. He has 11 years experience in Teaching, Research and Extension work.

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