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***Albizia procera*-rhizobium characterization to enhance symbiosis for producing quality nursery stocks for afforestation programs**

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Albizia procera (Safed siris) is one of the important Nitrogen Fixing Tree (NFT) species belongs to family Fabaceae, sub-family Mimosoideae. This species provides timber for making carts, carriages, small handle tools, supplies excellent fodder during lean periods of summer. It grows best on moist alluvial soils, well-drained loams or clay soils. Its ability to grow on dry, sandy, stony, and shallow soils makes it a useful species for reforestation of difficult sites but in expanding *A. procera* plantation in barren degraded hilly land, low fertility of the area creates major problem. Chhattisgarh region is exposed to extreme dry and hot climate during summer for prolonged period resulting in severe loss of mesophilic crop beneficial microbes in surface soils. Further due to high temperature, salinity condition may prevail especially in rhizosphere region. Hence, identification of stress tolerant *Rhizobium* from *Albizia procera* is certainly useful in order to formulate those cultures which are able to survive/persist for longer period and work more efficiently in such conditions. So there is a need for searching stress tolerant and effective indigenous *Rhizobium* of Chhattisgarh plain which can enhance symbiosis.

Rhizobium isolate from nodulated *A. procera* plant was tested for Gram staining reaction, its sensitivity towards antibiotics of different concentrations, tolerance to salt concentration and acidity. Results revealed that *A. procera* - *Rhizobium* was gram negative, produced white translucent colonies of circular shape and raised, smooth surface with milky white in colour on YEMA media. The *Rhizobium* isolate from nodule of *A. procera* is highly sensitive to antibiotic Tetracyclin (30 µg) forming inhibition zone of 28 mm while it is somehow resistance to Chloramphenicol (30 µg) (zone of inhibition of 11 mm). The isolate shows luxuriant growth at temperature 30°C and 35°C while with increase in temperature growth reduces. It is tolerant upto 30,000 ppm salt concentration whereas maximum growth was seen at 10,000 ppm. The isolate was found good in its growth at pH range of 6.5-7.5 but can tolerate pH 5.0. So it may be useful for tropical acidic rainfed areas of C.G. plain to support the growth of *A. procera* in afforestation programme and wasteland management.

Biography

Smriti Kolhey completed her BSc Ag from SGCARS Jagdalpur and M.Sc. Ag from College of Agriculture, Raipur from the Indira Gandhi Krishi Vishwavidyala, Raipur. In Master's Degree her subject was Agricultural Microbiology and has done her research work on forest legume tree sp. *Albizia procera*. She has published her abstracts in National Seminar and Conferences. She got a place in "Junior technical assistant" (Feb 2012) in Chhattisgarh State Civil Supply Corporation Ltd., "Rural Agriculture Extension Officer" (April 2012) by office of Zonal Director of Agriculture, Bilaspur division, Bilaspur (C.G.) and "Rural Agriculture Extension Officer" (May 2012) by office of Zonal Director of Agriculture, Raipur division, Raipur (C.G.).

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Effect of climatic parameters on incidence of mirid bug *Poppiocapsidea biseratense* on Bt cotton

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A study on seasonal incidence of mirid bug was carried out at Main Agricultural Research Station, Raichur Karnataka during 2011-12. Observation on mirid bug population was recorded at weekly interval on ten squares from each plant of Bt cotton to know the effect of different weather parameters like temperature, relative humidity rainfall etc. An attempt was made to correlate the possible influence of weather parameters on population build up of mirid bug. The population of mirid bug, *P. biseratense* and mean weather parameters were subjected to correlation analysis. The present study analysis revealed that the population of mirid bug, *P. biseratense* showed a positive association with maximum temperature ($r=0.077$), and negative relationship with minimum temperature ($r=-0.173$), morning relative humidity ($r=-0.054$), evening relative humidity ($r=-0.432$), and rainfall ($r=-0.352$). However, the influence of weather parameter like evening relative humidity was found to be negatively significant. Peak incidence of mirid bug was noticed in the month of November and December. In general the incidence of mirid bug was low in the crop sown in June - July (early sown) and more in the crop sown in August (late sown).

Biography

Prakash has completed his BSc (Agri.) from University of Agricultural Sciences Dharwad, Karnataka; M.Sc. (Agri.) from University of Agricultural Sciences Raichur, Karnataka with Gold medal, and now he is a Ph.D. scholar in Agricultural Entomology at University of Agricultural Sciences Dharwad, Karnataka. He is DST INSPIRE fellow of year of 2012-13.

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