



RESEARCH ARTICLE :

Effect of liquid biofertilizers (*Bradyrhizobium* and PSB) on growth characters of soybean (*Glycine max* L.)

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SUMMARY : A field experiment was carried out on “Effect of liquid biofertilizers (*Bradyrhizobium* and PSB) on growth characters of soybean”. It was conducted in *Kharif* season during the year 2013-14 at the research farm of Oil Seed Research Station, Latur, Maharashtra, in Factorial Randomized Block Design with three replications and variety MAUS-81 as a test crop along with 16 treatment combination containing four levels of liquid *Bradyrhizobium* (0ml, 5ml, 10ml and 15ml) and four levels of liquid PSB (0ml, 5ml, 10ml and 15ml). The results of field experiment indicated that the growth parameters *viz.*, plant height, number of functional leaves, root length and dry matter yield were significantly increased due to dual inoculation with 10ml of *Bradyrhizobium japonicum* kg⁻¹ seed + 10 ml of PSB kg⁻¹ seed (A₂B₂) treatment over rest of the treatments but they were at par with (A₃B₃). Number of branches of soybean was significantly increased with individual seed inoculation of 10ml *Bradyrhizobium japonicum* kg⁻¹ seed (A₂) as well as 10 ml of PSB kg⁻¹ seed (B₂) over rest of the treatments but they were at par with A₃ (15ml *Bradyrhizobium japonicum* kg⁻¹ seed) and B₃ (15 ml of PSB kg⁻¹ seed), respectively.

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BACKGROUND AND OBJECTIVES

Soybean (*Glycine max* L.) a leguminous crop originated in China. It is basically a pulse crop and gained the importance as an oil seed crop as it contains 20% cholesterol free oil. It posses a very high nutritional value, and contains 40 per cent high quality protein due to this reason, soybean is known as ‘poor man’s meat’. India stands next only to China in the Asia pacific region, with respect to production (12.9 m.t). Maharashtra is the

second largest producer in India, with 4.86 m.t of production (Anonymous, 2013). Soybean played a key role in the yellow revolution. It is newly introduced and commercially exploited crop in India. Soybean has been playing an important role in national economy by earning an average of Rs. 32,000 million per annum through export of soy meal and contributing about 18% to the edible oil production (Anonymous, 2012).

In view the prices of fertilizers are

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