



RESEARCH ARTICLE :

Enzyme activity and nodulation of soybean [*Glycine max* (L.) Merrill] as influenced by various levels of nitrogen and phosphorus

■ RAGHUVVEER, J.A. HOSMATH AND KEERTI

ARTICLE CHRONICLE :

Received :

14.07.2017;

Accepted :

29.07.2017

SUMMARY : A field experiment was conducted at Main Agricultural Research Station, Dharwad on medium black soil during *Kharif*-2015. There were twelve treatment combinations consisted of three levels of nitrogen (20, 40 and 60 kg N ha⁻¹) and four levels of phosphorus (40, 60, 80 and 100 kg P₂O₅ ha⁻¹). Application of nitrogen @ 60 kg ha⁻¹ recorded significantly higher chlorophyll content (44.32) and dehydrogenase activity (5.89 µg TPF formed g soil⁻¹d⁻¹). Among the phosphorus, application of phosphorus @ 80 kg ha⁻¹ recorded significantly higher nodule numbers, dehydrogenase and phosphatase activity (31.60, 5.41 µg TPF formed g soil⁻¹d⁻¹ and 8.33 µg PNP formed g soil⁻¹h⁻¹, respectively) compared to other treatments and it was on par with application of phosphorus @ 100 kg ha⁻¹. Application of nitrogen @ 60 kg, phosphorus @ 80 kg and potash @ 25 kg per hectare found optimum to soybean.

KEY WORDS :

Soybean, Nitrogen, Phosphorus, Enzyme activity

How to cite this article : Raghuveer, Hosmath, J.A. and Keerti (2017) Enzyme activity and nodulation of soybean [*Glycine max* (L.) Merrill] as influenced by various levels of nitrogen and phosphorus. *Agric. Update*, 12 (TECHSEAR-4): 1092-1095; DOI: 10.15740/HAS/AU/12.TECHSEAR (4)2017/1092-1095.

Author for correspondence :

RAGHUVVEER

Department of
Agronomy, College of
Agriculture, University
of Agricultural Sciences,
DHARWAD (KARNATAKA)
INDIA
Email: ragu5362@
gmail.com

See end of the article for
authors' affiliations