

RESEARCH ARTICLE :

Effects of fertility management on soil enzymatic activities under different agro climatic zones of Andhra Pradesh and Telangana

■ **P.V. GEETHA SIREESHA, G. PADMAJA, CH. SREENIVAS, M. VIJAY SHANKAR BABU AND P.C. RAO**

ARTICLE CHRONICLE :

Received :

11.07.2017;

Accepted :

25.08.2017

KEY WORDS:

Agro climatic zones,
Urease,

Dehydrogenase,
Phosphatase,
Integrated nutrient
management

SUMMARY : Among the different Agro Climatic zones, urease activity was highest in Northern Telangana Zone followed by Southern Telangana Zone and Godavari Zone with 56.2, 55.8 and 46.2 μg of $\text{NH}_4^+\text{-N}$ g^{-1} soil 2h^{-1} , respectively. Dehydrogenase activity is highest in Godavari Zone with 596.3, 500.5 and 488.2 μg of TPF g^{-1} soil day^{-1} . Higher activity of alkaline phosphatase (μg of p-nitrophenol g^{-1} soil h^{-1}) was recorded under rice-rice system at Southern Telangana Zone (149.7) followed by Godavari Zone (144.9). The treatment receiving inorganic fertilizers along with organic manures resulted higher activity of enzymes in all the zones. The enzyme activity of soils, which is governed by microbial population is also significantly higher in INM treatments in all the four zones. Soil enzyme activities can be used as potential indicators of nutrient cycling processes and fertility management, particularly in long-term organic and conventional farming systems.

How to cite this article : Sireesha, P.V. Geetha, Padmaja, G., Sreenivas, Ch., Babu, M. Vijay Shankar and Rao, P.C. (2017). Effects of fertility management on soil enzymatic activities under different agro climatic zones of Andhra Pradesh and Telangana. *Agric. Update*, 12 (TECHSEAR-10) : 2810-2814.

Author for correspondence :

P.V. GEETHA SIREESHA

Department of Soil
Science and Agricultural
Chemistry, College of
Agriculture, (P.J.T.S.A.U),
Rajendranagar,
HYDERABAD (M.S.) INDIA
Email : geethashirisha
048@gmail.com

See end of the article for
authors' affiliations