

Integrated nitrogen management practices in Safflower (*Carthamus tinctorius* L.) including different sources of organic manures on urease and dehydrogenase activity in soil

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A field experiment was conducted during rabi 2009-10 on a sandy loam soil at Students' Farm, College of Agriculture, Rajendranagar, Hyderabad, Acharya N. G. Ranga Agricultural University to study the effect of organic manures in combination with inorganic nitrogen fertilizer on urease and dehydrogenase activity in the soil at flowering and harvest stages of safflower (*Carthamus tinctorius* L.). The maximum activity of enzymes viz. Urease ($31.54 \mu\text{g of NH}_4^+\text{-N released g}^{-1}\text{soil h}^{-1}$), dehydrogenase ($154.83 \text{ mg of TPF produced g}^{-1}\text{soil d}^{-1}$) at flowering stage and Urease ($6.97 \mu\text{g of NH}_4^+\text{-N released g}^{-1}\text{soil h}^{-1}$), dehydrogenase ($12.29 \text{ mg of TPF produced g}^{-1}\text{soil d}^{-1}$) at harvest were observed with 50 % N through inorganic fertilizer + 50 % N through vermicompost.

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