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## **Effect of Rhizosphere on Release of Fixed Ammonia**

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**Abstract**– Greenhouse experiments with two crops, namely Maize (var-Gangasafed-2) and wheat [C-306], grown in three soils (Inceptisol, Vertisol and Alfisol)] was undertaken to determine the rates of release and fixation of  $\text{NH}_4^+$  in the rhizosphere of both the crops in comparison to non-rhizosphere soil. Crops were grown for a period of 43 days. A set of pots without crops was kept to compare between rhizosphere and non rhizosphere effect. Destructive sampling was done periodically at 0th, 15th, 22nd, 29th, 36th, 43rd day after emergence and samples were analysed for Fixed  $\text{NH}_4^+$ . From 22nd day onwards, release of fixed  $\text{NH}_4^+$  was found to be significantly higher in rhizosphere than in the non rhizosphere. Root induced release of fixed  $\text{NH}_4^+$  was maximum in Inceptisol. On the other hand rate of release of fixed  $\text{NH}_4^+$  in rhizosphere was lowest in Alfisol. Moreover in Alfisol under wheat there was no significant difference between rhizosphere and non rhizosphere in the rate of release of fixed  $\text{NH}_4^+$ .