NITROGEN MANAGEMENT FOR WHEAT PRODUCTION THROUGH INTEGRATED PLANT NUTRITION SYSTEM

Iftikhar Ahmed, Moazzam Jamil, Munir Hussain Zia and Aslam John[1]

ABSTRACT

A field study was conducted to generate specific information on effect of single and combined application of mineral and organic sources of nitrogen in conjunction with effective microorganisms (EM) inoculum as a biological component of Integrated Plant Nutrition System (IPNS) for wheat production. The results showed a significant increase in all growth parameters, yield and quality of crop through integrated use of organic and mineral sources of N as compared to control. Amongst the various N sources, mineral N applied alone was found to be the best giving maximum grain and straw yields (3146.3 kg grain ha^{-1} and 4105.3 kg straw ha^{-1}), protein contents in grain (13.36 %) and net return (Rs.13793). However, economic analysis suggested the use of ½ mineral N + ½ organic N along with EM whereby a poorer farmer can get substantial and comparable yield (2882 kg grain ha^{-1} and 3965 kg straw ha^{-1}), a better quality (i.e. protein contents in grain = 12.39 %) and higher rate of return (9.65 VCR). EM application was found to increase the efficiency of organic N sources as well as integrated form of organic + mineral N sources but alone was proved to be ineffective for increasing wheat yield.