

## A LONG TERM EFFECT OF DIFFERENT MODES AND LEVELS OF FYM AND FERTILIZER NITROGEN ON AVAILABLE MICRONUTRIENTS OF SOIL UNDER PEARL MILLET WHEAT CROPPING SYSTEM

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Received-03.09.2019, Revised-24.09.2019

**Abstract:** An ongoing long-term field experiment on integrated nutrient management (FYM and fertilizer N) under Pearl millet wheat cropping sequences, established in October 1967, at research farm, department of soil science, CCS HAU, Hisar, India was the experimental site for the study. The experimental treatment consisted of three level of FYM (15, 30 and 45 Mg/ha) till 2007-08 and 5, 10 and 15 ton per hectare from 2008-09 onwards. Every Kharif crop (summer season), in every Rabi crop (winter season) and in both (Kharif and Rabi) the crop was the mode of application. An absolute control without application of FYM in any of the seasons was maintained as a control. These 10 treatments( 3 FYM level x 3 modes of application+ 1 FYM control) were allocated in the main plots and each main plot was subdivided into three subplots receiving fertilizer N at 0, 60 and 120 kg N/ hectare in each season through urea using split plot design. All the treatments were replicated thrice. Each subplot measuring 10 x 5 m. FYM was incorporated in top 15-20 cm layers 3 to 4 weeks before sowing the crops. Significant increase in micronutrients (Zn, Mn, Cu, Fe) when FYM applied at 15 Mg/ha, followed by 10 and 5 Mg/ha and with application of fertilizer nitrogen from control to 120 kg/ha.

**Keywords:** Effect, Micronutrients, Fertilizer, Nitrogen, Wheat

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