Nitrogen Management through Organic Manures in Sugarcane (Plant)-Sugarcane (ratoon) Cropping Sequence in Southern Agro-Climatic zone of A P

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ABSTRACT

A field experiment was conducted during 2006-2007, 2007-2008 and 2008-2009 with two plant and two ratoon crops in sandy loam soil at Agricultural Research station Perumallapalle to study the effect of fertilizer nitrogen and organic manures on yield and quality of sugarcane plant and ratoon crops. The experiment was laid out in a split plot design and replicated thrice with three main plots viz., No organic manure (M_1), 25 t/ha farm yard manure (M_2), 12 t/ha press mud cake (M_3) and four sub plots viz., nitrogen levels 200kg N/ha (N_1) 250kg N/ha (N_2), 300 kg N/ha(N_3) and 350 kg N/ha (N_4). The experimental results revealed that application of 25 t/ha FYM and 12t/ha PMC recorded higher cane yield over no organic manure application but, statistically non significant. Cane yield and yield attributes were significantly influenced by the nitrogen levels. Highest cane yield was obtained with 350 kg N/ha but it was on par with 300 kg N/ha. The interaction between organic manures and nitrogen levels was not significant. In ratoon crop there was significant increase in cane yields with organic manures over no organic manures. Highest ratoon cane yields were obtained with PMC @ 12t/ha + 350 kg N/ha and it was on par with 25 t FYM/ ha + 350 kg N/ha.

Key words : Fertilizer nitrogen, Organic manures, Sugarcane.