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Nutrient Requirement for Sustainable Sugarcane Production

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A field study was conducted to determine the appropriate fertiliser rate for highest sugarcane yield and maximum economic return at High Ganges River Floodplain soils in Bangladesh. The soils under study were low in total N, available P, exchangeable K and medium in S. Results revealed that the application of inorganic fertiliser at the rate of 161 kg N, 28 kg P, 67 kg K and 7 kg S per hectare gave the highest sugarcane yield of 86.15 tonnes and the highest net economic benefit of taka 152666 (1US\$=78.95 taka) per hectare with benefit cost ratio 2.57 in the study area which indicated the application of fertiliser on soil test basis is useful for moderate yield goal. The average yield increase from this approach was 55 per cent over control. The available P and S of the soil were slightly increased while that of total N and exchangeable K in the soil decreased. However, application of inorganic fertiliser increased the absorption of N, P, K and S in cane leaf tissues among the different treatments over control that led to higher cane and sugar yield.

Keywords: Sugarcane, nutrient, sustainable, production, Ganges River floodplain.

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