Abstract

Yield Response of Sunflower to Sowing Dates and NPK Rates under Zero Tillage in Wet Soil of Southwestern Coastal Bangladesh [†]

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Abstract: The low cropping intensity in the southwestern coastal Bangladesh is constrained by excess wetness of soil, low fertility and scarcity of fresh irrigation water. Fallow-fallow-T. *aman* is the main cropping pattern in this region. In the recent years some winter (dry season) crops (wheat, sunflower, maize etc.) have been introduced. Among them sunflower is best suited as it can be established in wet soil and also having the capacity to tolerate salinity and drought to some extent. The fertility of soil of this area is low particularly nitrogen (N). There is no fertilizer recommendation for sunflower in this area. Thus it is necessary to develop a fertilizer recommendation for sunflower. To develop this, a set of field experiments were carried out during winter season (2018–19). In these experiments, the major nutrients [nitrogen (N), phosphorus (P) and potassium (K)] were varied in early (by November) and late (end of December) sown (dibbled) sunflower. Results showed that early sown sunflower produced higher seed yield with lower amount of N than that of late one. In case of P, unlike N, yield increase was not at par with the increase of P rates indicated residual P that applied to previous rice crop supported the sunflower. Potassium rates have little effect on yield increase. Based on the average yield (~3.5 t/ha) of the variety (Hysun-33) N, P and K @ 120–150, 40–50 kg/ha and 50–60 kg/ha was produced highest yield in early sown sunflower in excessively wet soil of southwestern coastal Bangladesh.

Keywords: sowing dates; NPK; excess wetness; *Helianthus annuus*; southwestern coastal Bangladesh

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