

Abstract

Foliar Nutrient Management on Potato Grown under Zero Tillage and Mulching in Coastal Saline Soil of West Bengal, India [†]

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Abstract: The Coastal Saline Zone (CSZ) of West Bengal, India is dominated by rice-fallow-fallow system cropping system. Only 4% of the cultivated area of the coastal zone can be irrigated with available sweet water. To cope up with the present situation is introduction of new high value crops to catch the fallow winter period emphasizing on water saving technologies. In this way mono-cropped saline soils of coastal region can be converted into multiple cropping through the adoption of zero tillage potato technology. Soils of the CSZ show multi-nutritional deficiencies and these deficiencies adversely affect the crop. To address this issue, field experiment was conducted in winter season of 2016–2018 in CSZ of West Bengal, India with the focal objectives of studying the feasibility of potato under zero-tilled-mulched condition in CSZ of West Bengal; assessing the effect of foliar nutrient management practices on growth, yield, quality and economics of potato. The foliar nutritional supplementation with 2% Urea at 30 & 50 days after planting (DAP) of potato along with 0.1% Boron at 30 DAP not only increased tuber number and yield but also quality parameters of potato tuber such as TSS, tuber hardness, vitamin C etc. were significantly increased. It may thus be concluded that 2% Urea at 30 & 50 at DAP of potato along with 0.1% Boron at 30 DAP as foliar application is the best foliar nutrient management option for potato grown under zero tillage and mulching in coastal saline soils of West Bengal, India.

Keywords: potato; micronutrients; foliar application; coastal soil; zero tillage

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