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Farmers Perception About Salt Tolerant Wheat Varieties in Saline Areas of Gujarat

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ABSTRACT

Salinity has been a major factor constraining agriculture in Gujarat. Use of salt tolerant varieties is considered as one of economic and ecological approach to overcome this. Attempt was made to demonstrate potential of salt tolerant wheat varieties (KRL 210 and KRL 19) in salt affected Vertisols of Bara tract area of Gujarat. Study was conducted with 53 farmers from Bharuch district of Gujarat. Data were collected using personal interview of the farmers using a well structured interview schedule. Study found that in economic benefits, all farmers agreed that cultivation of salt tolerant varieties in salt affected areas helped in increasing the income of the farmers. In terms of social benefits, about 76 per cent farmers agreed that cultivation of salt tolerant varieties in saline areas helped in upliftment of small and marginal farmers and achieving food security of the household. In terms of environmental benefits, 96 per cent farmers agreed that saline land and moderate saline ground water could be effectively used for cultivation of salt tolerant varieties. For agronomic practices majority of farmers agreed that salt tolerant varieties had more number of tillers (96%) and less lodging and shattering tendency (92%). Under quality of output, all farmers agreed that eating quality of salt tolerant wheat varieties was good. Thus farmers' response to salt tolerant wheat varieties was good, which helped them in increasing their income; bringing their saline land under cultivation, securing household food security. However, there is need to create awareness among farmers in salt affected areas of Gujarat about presence and potential of such varieties which would help in increasing productivity and prosperity of these farmers.

Key words: salinity, salt tolerant varieties, wheat, perception

INTRODUCTION

Salinity of soil affects plant growth and productivity; along with the economic welfare, environmental health and agricultural production (Win, 2011; Rengasamy, 2006). Globally around 1.2 billion ha land is affected by the problem of salinity and sodicity (FAO, 2007), while in India, total 6.73 Mha of land is affected by salinity (Mandal *et al.*, 2009) where problems of low productivity and poverty are common. In Gujarat state alone about 2.22 Mha of land is affected by salinity (CSSRI, 2016) which remains either barren or possesses some native hardy bushes and coarse grasses. This problem of salinity intensifies because of some physicochemical characteristics of black soil which is prevalent in the state like low infiltration rates, high clay content, and narrow workable moisture range.

Food production in salt affected areas can be increased through proper technological interventions like improving condition of the soil and adopting crop varieties which are tolerant to salinity (Shahbaz *et al.*, 2012). Use of salt tolerant varieties is one of the best, biological and ecological approaches as adaptive measures by the farmers to cope up the problem of salinity (Gautam *et al.*, 2010; Ismail, 2009). ICAR-Central Soil Salinity Research Institute (ICAR- CSSRI), Karnal, Haryana, India, has developed and released salt tolerant wheat varieties like KRL 1-4, KRL 210, KRL 213, KRL 19 etc. which are popular in parts of north India (Hollington, 2000, Sankar *et al.* 2011). In 2011 salt tolerant wheat varieties occupied 193 thousand hectare area in country and during the period of 2001 to 2011, national level production from these varieties was 0.48 million tones.(Tripathi *et al.*, 2011).

Salt tolerant wheat varieties KRL 210 and KRL 19 were introduced in the Gujarat state by Regional Research Station, CSSRI Bharuch with the help of different NGO partners, CSPC Ahmedabad and KVK Chaswad; to demonstrate the prospects of cultivating salt tolerant wheat varieties to overcome problem of salinity in the

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