

# 14. Korgut (IC0599689; INGR 14055), a Rice (*Oryza sativa* L.) Germplasm Tolerant (SES score 3) to Salinity Stress (EC=12 dS/m) at Seedling Stage

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Korgut, a traditional rice landrace from the State of Goa, was collected during *kharif* 2010 in farmers' field at Chorao Island of North Goa District (Manohara and Singh, 2013). It is being conserved and maintained at

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ICAR Research Complex for Goa. Phenotyping for salt stress tolerance at seedling stage under hydroponics culture with EC = 12 dS/m was conducted at CRRRI, Cuttack in *kharif* 2012 and repeated in *kharif* 2013. It showed tolerance (SES score 3) to salinity stress at seedling stage. Its tolerance was associated with low ratio of Na<sup>+</sup>-K<sup>+</sup> (0.18) in shoot as compared to susceptible check IR29 (0.68) (CRRRI Annual report 2011-12; Nath *et al.*, 2013; NICRA, 2012).

**Morpho-agronomic characteristics:** Based on the data recorded during *kharif* 2012 & 2013, the mean values of different agro-morphological and yield and its components are given in Table 1.

**Associated characters and cultivation practices:** Korgut is cultivated during *kharif* season between June to October month. It shows an additional trait of early seedling vigour which aids in establishment under the stress situation. Farmers' cultivate this rice accession by direct sowing with limited use of chemical inputs. Hence, the packed rice of this landrace fetches premium price in the market. Apart from this, the accession has various other uses such as suitability for parboiled rice; for ganji preparation; and has a property of slow digestion upon consumption. This germplasm can be used as a genetic stock for future breeding programmes aiming at development of high yielding salt tolerant rice varieties for coastal saline soils.

Table 1. Agro morphological description of the rice germplasm Korgut

Characteristics	Description
Basal leaf sheath colour	Green
Early plant vigour	Intermediate
Days to 50% flowering	92
Days to maturity	123
Plant height (cm)	145
Leaf length (cm)	49.03
Leaf width (cm)	1.26
No. of tillers/plant	7-8
Panicle type	Semi erect
Panicle length (cm)	29.80
Panicle exertion	Mostly exerted
Awning	Fully awned
Apiculi colour	Brown
Stigma colour	White
100 grain weight (g)	3.26
Decorticated grain length (mm)	6.19
Decorticated grain width (mm)	2.56
L/B ratio	2.54
Hull colour	Brown
Grain yield (t/ha)	1.5 - 2.0

Manohara KK and NP Singh (2013) Genetic divergence among rice landraces of Goa. *Oryza* 50: 100-104.

Nath D, RL Mohanta, G Das, K Chattopadhyay, DP Singh, RK Sarkar and ON Singh (2013) Evaluation for salt-tolerance in rice at seedling stage. In: ARRW Golden Jubilee International Symposium on sustainable rice production and livelihood security: challenges and opportunity at CRRRI, Cuttack on 2-5 March 2013, pp 61-62.

National Initiative on Climate Resilient Agriculture (2012) *Research Highlights* for 2010-12, p 20.

## References

CRRRI (2012) *Annual Report* 2011-12, p 28.