Farmers’ Perceptions and Preferred Traits in Rice Varieties in Coastal Region of Kenya and Their Implications for Breeding

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\textbf{ABSTRACT}

The adoption rate of new rice varieties in the coastal region of Kenya has been negligible, possibly because the farmers’ special preferences are not taken into account during the breeding process. To bridge the gap between breeders and farmers, and to ensure faster release and widespread adoption of new varieties, participatory research was undertaken in two major rainfed rice-producing counties (Kwale and Kilifi) in coastal region of Kenya between December, 2013 and March, 2014. The objectives were to determine what rice varieties were grown by the farmers and what their trait preferences were. Results showed that, over 70\% of farmers grew local landraces with preference differing between counties. The landrace \textit{Sigaye} was preferred in Kilifi county while \textit{Kitumbo} and \textit{Madevu} dominated in Kwale county. \textit{Supaa} was the most preferred old improved variety mostly for taste, good fragrance and market. Preferred traits of new rice varieties were high-yield, short-duration, drought-tolerance, medium height, with white, long, bold grains of good baking quality. The good baking quality trait was found to be a unique requirement in the region, because rice is rarely bred for its baking properties especially in sub Saharan Africa. In this study, the role of farmers’ trait preferences were revealed in the adoption decisions when considering a new rice variety for the coastal region of Kenya. Future breeding programmes are encouraged to utilize the local varieties in their breeding programmes and incorporate farmer preferred traits into new rice varieties for the region.

\textbf{Key words:} Rice, \textit{Oryza sativa}, Farmers’ trait preferences, Landraces, Coastal region of Kenya