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Reveal Quality and Price Determinants of an Orphan Crop in India and Nepal

DOREEN BUERGELT, MATTHIAS VON OPPEN

University at Kiel, Department of Agricultural Economics, Germany

Abstract

The Ricebean (*Vigna umbellata*) has been an established pulse in India and Nepal. Its nutritious value and its adaptation to the low-input conditions typical of marginal areas render it a comparative advantage in places where modern crop varieties can barely survive. The ricebean has a high protein content which is important for poor people who cannot afford to buy protein rich food such as animal products or who are vegetarian because of religious reasons. Ricebean is found in many parts of Nepal and in the Indian States of Uttarakhand, Orissa, Madhya Pradesh and Chhattisgarh. Areas where the ricebean is grown today are characterised as remote regarding the access to markets and prevalence of subsistence households.

Crops, like the ricebean are also known as ‘orphan crops’ because they have been largely overlooked by the research community despite their importance to rural livelihoods particularly in poor areas. Until today, there are no improved ricebean varieties.

In the frame of the EU funded project ‘Food security through ricebean research in India and Nepal’ (FOSRIN) an improved ricebean variety will be developed by breeders. Improvements will be in terms of quality as well as quantity. Higher yields meet farmer’s needs and good quality suits consumer’s preferences. To determine quality performance for certain characteristics ricebean samples were collected at Nepalese and Indian markets. These samples were analysed in laboratories for the following cryptic (non-visible) characteristics: moisture, protein, fat, crude fibre, ash, carbohydrates, swelling capacity and water uptake. Further, evident (visible) parameters as, colour, colour diversity, share of foreign matter, shape and 100-seed weight were quantified in the same in-country laboratories.

Multivariate regression was used to relate ricebean prices to the selected characteristics and further to estimate the influence of characteristics on prices. The estimated coefficients are used to calculate a market-based Consumer Preference Index (CPI). With this index breeders can assess the expected price of an improved ricebean variety at an early stage in plant breeding as quantities of 100 to 200 grams per sample are sufficient to calculate the CPI.

Keywords: Consumer preferences, India, Nepal, ricebean