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Vegetable soybean expansion in India: challenges and opportunities

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Vegetable soybean or *Edamame* has immense potential in India owing to its high nutritional quality. The variety 'Swarna Vasundhara' has made a good start in the eastern state of Jharkhand. Also there is demand for the varieties 'Karune' and 'NRC105' with 7% sucrose content at R6 stage. Recently, advanced breeding lines free from kunitz trypsin inhibitor have been developed by hybridization with NRC101 (source of null allele of kunitz trypsin inhibitor). Genotypes with high levels of sucrose, aspartic acid, glutamic acid and alanine scored high for taste; though no significant relationship was noted between isoflavones and the taste score. Further, *basmati* flavored varieties are in their final stage of testing for potential release in the country. These varieties are expected to generate more consumer interest and fuel the growth of this crop.

Agronomic studies conducted have indicated the need to develop varieties suited to different agro-ecological zones.

One of the challenges in further expansion of the crop is the susceptibility to diseases such as Yellow Mosaic Disease (YMD). This was very serious during 2015, particularly in Central India. Resistant sources from grain soybean (SL958) and *Glycine soja* are being utilized to develop YMD resistant varieties through back cross breeding. Poor seed viability in some of the varieties, particularly after storage, is another major issue. This is being addressed through hybridization with a soybean line (GC 84501-32-1) identified with high viability. Glabrous pods has been identified as a trait preferred by consumers from the private Industry. Efforts are in progress in combining all the three traits in a single variety. Mapping populations are also being developed for these traits for developing molecular markers for future marker assisted selection. The major soybean growing regions in the country present vast potential for the expansion of the crop.