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DEVELOPMENT OF TROMBAY COWPEA VARIETY 'TC-901' AMENABLE FOR SUMMER CULTIVATION BY INDUCED MUTAGENESIS

Legumes/pulses form an integral component of Indian agriculture complementing cereals and ensuring nutritional security of predominantly vegetarian population of the country. To make India self-sufficient in pulses and to meet the buffer stock requirement, it becomes imperative to augment horizontal and vertical growth. Horizontal growth primarily by expanding pulses area could be accomplished by tapping under-utilized niches such as summer and rice fallows. Cowpea [Vigna unguiculata (L.) Walp] is one of the predominant arid legume crops potent for summer cultivation. With a view to developing summer cowpea varieties, an induced mutagenesis programme was initiated in 2008 by exposing seeds of an exotic line 'EC394763'(from IITA, Nigeria) to 250 Gy of gamma rays. In M2 generation, a mutant 'TCM 60-1'with more pods and altered seed coat colour was identified and its true breeding nature was ascertained up to M5 generations. This high yielding mutant was evaluated as 'TC-901'for five consecutive years in the National summer trials of Network Project on Arid Legumes, Indian Council of Agricultural Research. Cowpea entry 'TC-901'(1021 to 1353 kg/ha) out-yielded the national check variety 'RC-101'by 15% and showed field resistance to mosaic and root-rot diseases. Endowed with promising agronomic attributes of semi-determinate growth habit, early maturity (70 days), medium large seeds (12.4 g/100 seeds), more number of pods and seeds per pod and high fodder yield (4954 kg/ha), 'TC-901'has been identified for release for summer season by Varietal Identification Committee in its meeting held on 9th November 2017 at Gwalior, India. 'TC-901'is the first national cowpea variety identified for summer and is expected to enhance the area under summer pulses after its release and notification for cultivation in India.

Country or International Organization

INDIA

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