

Collection and characterization of underutilized vegetable athalakkai (*Momordica cymbalaria*) for growth and yield characters

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Abstract

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Objectives

To identifying high yielding athalakkai genotypes suitable for commercial cultivation of Tamil Nadu.

Acknowledgment

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Introduction

- Athalakkai (*Momordica cymbalaria*) is a perennial herbaceous climber, belongs to the family cucurbitaceae. It is a plant more or less similar to bitter gourd.
- This is a tropical perennial crop of vines and climbers type found to have India to be the place of origin.
- Athalakkai is widely distributed in the tropical regions of Africa and India. It is found in South Indian states of Andhra Pradesh, Maharashtra, Madhya Pradesh and Tamil Nadu.

Materials and Methods

Characterization of underutilized vegetable athalakkai (*Momordica cymbalaria*) for growth and yield characters” was carried out at College Orchard, Department of Horticulture, Agricultural College and Research Institute, Madurai during 2019 – 2020. In Tamil Nadu, it is found in Virudhunagar, Madurai, Theni, Dindigul and Ramanathapuram districts and vegetables are available in the market during November to January. Survey was conducted at Virudhunagar, Dindigul, Madurai and Theni districts and collected sixteen accessions of athalakkai. The collected tubers were planted during Rabi season with the bed size is 3 x 3 m. The study was laid out in a Randomized Block Design (RBD) with sixteen treatments and replicated thrice. Observations such as growth, yield and quality characters were recorded and analysed statistically.

References

1. Bharathi,L.K. and K.J. John.2013.*Momordica* Genus in Asia- Overview. Springer, p. 143.
2. Bharathi, L.K, A.D. Munshi, T.K. Behera, K.J. John, K.V. Bhat and A.S. Sidhu. 2013. Morphological relationship among the *Momordica* species of Indian occurrence. Indian J. Genet., 73(3): 278-286.

Result and Discussion

- The results revealed that among the 16 accessions, MI-2 (Pudupatti local) recorded the highest values in growth and yield characters such as days taken for flowering (18.33 days), vine length (142.67 cm), number of vines per plant (8.67), number of fruits per vine (12.33), number of fruits per plant (71.67), fruit length (4.93 cm), fruit weight (0.93 g), number of seeds per fruit (3.68) and yield (65.10 g/plant) followed by MI – 14 (Chittur local), whereas MI – 12 (Kovilangulam local) registered the lowest values in all the traits (19.33 days; 110.00 cm; 5.33; 11.67; 63.67; 4.67 cm; 0.83 g, 3.33 and 53.30 g).
- MI – 12 (Kovilangulam local) recorded the highest days (6.67 days) taken for sprouting, whereas the MI – 2 (Pudupatti local) found the least days taken for sprouting (5. 67 days).
- Regarding quality characters, MI-12 found the highest in vitamin C (289.00 mg/100 g) and Crude fibre content (6.40 g) whereas MI-12 registered the lowest content of quality characters (284.12 mg/100 g; 6.30 g).

Conclusion

The present study it was concluded that MI-2 (Pudupatti local) performed well under Madurai condition and need for further evaluation.