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# Evaluation of different curry leaf genotypes for leaf morphology

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**Abstract**
The trial titled "Evaluation of Different Curry Leaf (*Murraya koenigii*) Genotypes" was conducted at the College of Horticulture, Dapoli, in the Ratnagiri district from 2023 to 2025. A survey was carried out in various locations within Ratnagiri to select the best curry leaf varieties. Uniform plants aged 10 to 15 years were chosen based on their yield and leaf aroma. The results showed that the number of compound leaves per tertiary branch varied from 18 (in genotypes CL-9 and CL-13) to 28 (in genotype CL-11). The maximum leaf length was observed in CL-10, measuring 37.2 cm, while the highest leaf width was recorded in CL-11 at 13.4 cm. Leaflet length ranged from 3.9 cm (for CL-12 and CL-15) to 9.0 cm (for CL-11), and leaflet width varied from 1.5 cm (in CL-25) to 3.7 cm (in CL-1).

**Keywords:** Curry leaf, evaluation of genotypes, leaf morphology

## Introduction
Curry leaf (*Murraya koenigii* L. Spreng) is an herbal spice and a perennial plant belonging to the family Rutaceae. This aromatic tree is deciduous to semi-evergreen in nature. Curry leaf is primarily found in tropical and subtropical regions and is highly valued for its various nutraceutical, therapeutic, culinary, medicinal, and industrial applications. It is commonly distributed across India, although it is absent in the higher Himalayan regions. The plant thrives in both natural and cultivated environments, typically at elevations up to 1650 meters. In southern India, curry leaf is a staple in the home gardens of nearly every household (Joseph and Peter, 1985) [1]. Rich in bioavailable calcium and other essential nutrients, curry leaf is a valuable addition to the diet (Raghu, 2020) [4]. This true diploid plant has a chromosome count of 2n=18 (x=9) and can reach heights of up to 6 meters. It features slender, sturdy woody stems that eventually develop into a densely shaded crown. The leaves are arranged alternately, are stipulate, bipinnately compound, and usually glabrous, measuring between 15-20 cm in length. Curry leaves are abundant in essential minerals, including calcium (Ca), iron (Fe), potassium (K), magnesium (Mg), phosphorus (P), sulfur (S), and zinc (Zn) (Raghu *et al*., 2020) [4]. Various parts of *Murraya koenigii* have traditionally been used in folk medicine to treat conditions such as rheumatism, traumatic injuries, and snake bites (Verma, 2018) [8]. They are also beneficial for addressing piles, inflammation, itching, and conditions like leukoderma and blood-related disorders (Reddy *et al*., 2018) [7]. Essential oils, which are strongly fragrant and responsible for the plant's distinctive flavor, can be obtained from various parts of the curry leaf plant, including fresh leaves, tender branches, stems and flowers through hydro or steam distillation. These essential oils are used across a range of applications, including soap, perfumes, cosmetics, aromatherapy, food processing, and various other industries (Raghu and Kumar, 2023) [3].

## Materials and Methods
The investigation on the evaluation of different curry leaf (*Murraya koenigii* L.) types was carried out at the Department of Plantation Spice Medicinal and Aromatic Crops, College of Horticulture, Dapoli. The survey was taken for selection of best curry leaf types and on the basis of plant vigour, health and leaf aroma, finally 15 curry leaf types were selected for present study. Evaluation of 15 accessions was carried out which were found in Ratnagiri district Maharashtra, during 2023-25. The total number of leaflets per compound leaves were measured for 5 leaves of each accession and the average was recorded.

Leaf length of 5 mature leaves was measured from tip to stalk end with help of scale and was expressed in centimetres. Leaf width of 5 mature leaves was measured from the broadest points on the leaf with the help of vernier calliper and was expressed in centimetres. Leaflet length of 5 leaflets from each accession was measured from the petiole to the tip of the leaf with the help of vernier calliper and was expressed in centimetres. Leaflet width of 5 leaflets from each accession was measured from the broadest ends of the lamina with the help of vernier calliper and was expressed in centimetres.

## Result and Discussion

### Number of leaflets per compound leaves

Number of leaflets per compound leaves in curry leaf ranged between 16 and 20. The highest number of leaflets per compound leaf was recorded in CL-2, CL-10 and CL-15 (20 leaflets) followed by 6 accessions namely CL-3, CL-5, CL-7, CL-11, CL-12 and CL-14 (19 leaflets), CL-13 (18 leaflets), followed by 4 accessions namely CL-1, CL-4, CL-8 and CL-9 (17 leaflets) and the lowest number of leaflets per compound leaf was recorded in CL-6 (16 leaflets).

These results align with Rathore *et al*. (2023) [6] in curry leaf their study revealed that the number of leaflets per compound leaf ranged from 16 to 24.2. Notably, accession CL-10 recorded the highest number of leaflets per compound leaf, with a total of 24.2 leaflets. The data is presented in the table 1.

### Leaf length (cm)

Leaf length ranged between 24.8 cm to 37.2 cm among different curry leaf accessions. The highest leaf length was recorded in CL-10 (37.2 cm) followed by 3 accessions namely CL-2, CL-9 and CL-15 (32.5 cm) and the lowest leaf length was recorded in CL-3 (24.8 cm). The data is presented in the table 2.

### Leaf width (cm)

Leaf width ranged between 7.6 cm to 13.4 cm among different curry leaf accession. The highest leaf width was recorded in CL-11 (13.4 cm) followed by CL-5 and CL-10 (12.8 cm) and the lowest leaf width was recorded in CL-7 (7.6 cm). The data is presented in the table 2.

### Leaflet length (cm)

Leaflet length is an important and contributing factor for leaf area, photosynthesis and breeding value. Leaflet length ranged between 3.9 cm to 9.0 cm in different curry leaf accessions. The highest leaflet length was recorded in CL-11 (9 cm) followed by CL-1 (7.4 cm) and the lowest leaflet length was recorded in CL-12 and CL-15 (3.9 cm). The data is presented in the table 3.

The present results are in close conformity with the finding reported by Peter (2019) [2] who showed variation in leaflet length of curry leaf ranged from 2.96 cm in accession MK 119 to 4.56 cm in accession MK 142. Similarly, Rathore *et al*. (2023) [6] reported the variation in leaflet length of curry leaf in which leaf length varied from 2.87 cm to 5.13 cm.

### Leaflet width (cm)

Leaflet width is an important and contributing factor for leaf area, photosynthesis and breeding value. Leaflet width ranged between 1.5 cm and 3.7 cm in different curry leaf accessions. The highest leaflet width was recorded in CL-1 (3.7 cm) followed by CL-4 and CL-11 (3.6 cm) and the lowest leaflet width was recorded in CL-15 (1.5 cm). The data is presented in the table 3.

Variation in leaflet width of curry leaf ranging from 1.45 cm to 2.76 cm was recorded by Rathore *et al.* (2023) [6].

**Table 1:** Number of leaflets per compound leaves

| Accession No. | Number of leaflets per compound leaves. |
|---|---|
| CL- 1 | 17 |
| CL- 2 | 20 |
| CL- 3 | 19 |
| CL- 4 | 17 |
| CL- 5 | 19 |
| CL- 6 | 16 |
| CL- 7 | 19 |
| CL- 8 | 17 |
| CL- 9 | 17 |
| CL- 10 | 20 |
| CL- 11 | 19 |
| CL- 12 | 19 |
| CL- 13 | 18 |
| CL- 14 | 19 |
| CL- 15 | 20 |
| Mean | 18.4 |
| Range | 16-20 |
| S. D | 1.29 |
| C.V. (%) | 7.05 |

**Table 2:** Leaf length and leaf width

| Accession No. | Leaf length (cm) | Leaf width (cm) |
|---|---|---|
| CL- 1 | 28.3 | 10.9 |
| CL- 2 | 32.5 | 9.2 |
| CL- 3 | 24.8 | 9.5 |
| CL- 4 | 25.8 | 11.5 |
| CL- 5 | 32.2 | 12.8 |
| CL- 6 | 32.2 | 7.7 |
| CL- 7 | 28.4 | 7.6 |
| CL- 8 | 30.2 | 10.8 |
| CL- 9 | 32.5 | 10.1 |
| CL- 10 | 37.2 | 12.8 |
| CL- 11 | 30.2 | 13.4 |
| CL- 12 | 26.1 | 8.2 |
| CL- 13 | 25.5 | 9.2 |
| CL- 14 | 25.1 | 8.2 |
| CL- 15 | 32.5 | 10.4 |
| Mean | 29.5 | 10.15 |
| Range | 24.8-37.2 | 7.6-13.4 |
| S. D | 3.65 | 1.88 |
| C.V. (%) | 12.35 | 18.57 |

**Table 3:** Leaflet length and width.

| Accession No. | Leaflet length (cm) | Leaflet width (cm) |
|---|---|---|
| CL- 1 | 7.4 | **3.7** |
| CL- 2 | 6.3 | 3.1 |
| CL- 3 | 5.3 | 2.4 |
| CL- 4 | 6.2 | 3.6 |
| CL- 5 | 6.5 | 2.6 |
| CL- 6 | 4.4 | 1.9 |
| CL- 7 | 6.1 | 3.2 |
| CL- 8 | 5.0 | 2.1 |
| CL- 9 | 5.0 | 2.5 |
| CL- 10 | 6.4 | 3.1 |
| CL- 11 | 9.0 | 3.6 |
| CL- 12 | 3.9 | 2.1 |
| CL- 13 | 5.3 | 2.4 |
| CL- 14 | 5.7 | 3.0 |
| CL- 15 | 3.9 | 1.5 |
| Mean | 5.76 | 2.72 |
| Range | 3.9-9.0 | 1.5-3.6 |
| S.D. | 1.33 | 0.67 |
| C.V. (%) | 23.24 | 24.67 |

## Conclusion

The investigation on the evaluation of different curry leaf (*Murraya koenigii* L.) types for leaf morphology carried out at the Department of Plantation Spice Medicinal and Aromatic Crops, College of Horticulture, Dr. Balasaheb Sawant Konkan Krishi Vidyapeeth, Dapoli, Dist. Ratnagiri (M.S.) during 2024-2025 revealed that among the 15 different accessions surveyed within the age of 10 to 15, number of compound leaves per tertiary branch ranged from 18 (CL-9 and CL-13) to 28 (CL 11). The maximum leaf length was recorded in CL-10 (37.2 cm) and the maximum leaf width was 53 recorded in CL-11 (13.4 cm). Leaflet length ranged from 3.9 cm (CL-12 and CL-15) to 9.0 cm (CL-11) and leaflet width ranged from 1.5 cm (CL-25) to 3.7 cm (CL-1).

## References


1. Joseph S, Peter KV. Curry leaf (*Murraya koenigii*), perennial nutritious leafy vegetable. Econ Bot. 1985;39:68-73.
2. Peter A. Evaluation of Curry leaf accessions (*Murraya koenigii* L.) for yield and quality [MSc (Hort) thesis]. Thrissur: Kerala Agricultural University; 2019.
3. Raghu B, Kumar G. Curry leaf: importance, conservation and genetic improvement in India. In: National conference on ethnic vegetables; 2023. p. 80-83.
4. Raghu B, Shetru A, Dhananjaya M. Genetic improvement of curry leaf in India: Challenges and future prospects. Indian Hortic. 2020;65:127-130.
5. Ragu BR. Diversity and Distribution of Curry Leaf in India. J Hortic Sci. 2020;15(1):1-8.
6. Rathore AS, Ameta KD, Kaushik RA, Jain D, Choudhary R, Bairwa HL, *et al*. Study of morphological variability in curry leaf (*Murraya koenigii* L.) Germplasm of Southern Rajasthan. Pharma Innov J. 2023;12(8):1074-1076.
7. Reddy BM, Dhanpal CK, Lakshmi BVS. A review on curry leaves (*Murraya koenigii*): versatile multi-potential medicinal plant. Int J Adv Pharm Med Bio Allied Sci. 2018;1:31-41.
8. Verma S. Overview study on *Murraya koenigii* (mitha neem): Rutaceae. J Drug Deliv Ther. 2018;8(4):90-92.