Biological Forum – An International Journal **14(2): 912-916(2022)**

ISSN No. (Print): 0975-1130
ISSN No. (Online): 2249-3239

Assessment of Genetic Variability for Growth and Yield Traits of Curry Leaf (*Murraya koenigii* L. Sperg) under Sodic Soil

D. Vidhya[1*], K. Indumathi[2], K. Gurusamy[3], P. Paramaguru[2] and S. Geethanjali[4]
[1]Department of Fruit Science, Horticultural College and Research Institute,
Tamilnadu Agricultural University, Coimbatore (Tamilnadu), India.
[2]Horticultural College & Research Institute for Women,
Tamilnadu Agricultural University, Trichy (Tamilnadu), India.
[3]Department of Food Process Engineering, Agricultural Engineering College & Research Institute,
Tamil Nadu Agricultural University, Coimbatore, (Tamilnadu), India.
[4]Department of Genetics and Plant Breeding, Centre for Plant Breeding and Genetics,
Tamilnadu Agricultural University, Coimbatore (Tamilnadu), India.

(Corresponding author: D. Vidhya)*
(Received 04 March 2022, Accepted 10 May, 2022)
(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: Curry leaf is considered an underutilized tree spice cum medicinal plant and is found in most of the south Indian kitchen gardens. Like other major horticultural crops, this underutilized spice not getting attention with respect to its crop improvement. Due to its vast adaptability and distribution to the different soil, agroclimatic condition, and nutraceutical value, there is a scope for searching genotypes for sodic soil, which will be an alternate crop even for the salt affected soil. In addition to that curry leaf has natural variability in its growth, yield and biotic stress. Hence the assessment of genetic variability for growth and yield attributes of thirteen curry leaf genotypes were carried out in the present investigation at Horticultural College & Research Institute for Women, Trichy under salt affected soil. Among the plant growth attributes, the highest genotypic and phenotypic variances were recorded for plant height (879.16 and 955.64 cm), leaf area (308.81 and 329.90 cm^2) and the number of mature shoots per plant (28.86 and 31.45) respectively. In this study, the PCV was relatively greater than GCV for all traits observed, however, GCV was near to PCV for the characters like plant height and leaf area inferred that high contribution of genotypic effect for phenotypic expression of such characters. The fresh leaf yield per plant had a significant and positive association with plant height (0.561 and 0.588 cm), plant girth (0.821 and 0.808 cm), internode length (0.651 and 0.596 cm), petiole length (0.732 and 0.753 cm), number of mature shoot per plant (0.647 and 0.665), number of compound leaves (0.455 and 0.544) and leaf area (0.455 and 0.544 cm^2). Hence the study concluded that the selection of curry leaf genotypes for yield attributes has high heritability and genetic advance and has a significant positive association among the yield attributing characters which indicated the strong scope of a breeding program in curry leaf.

Keywords: Genetic variability, Phenotypic Coefficient of Variation (PCV), Genotypic Coefficient of Variation (GCV), Genetic Advancement (GA), correlation, curry leaf.

INTRODUCTION

Curry leafis botanically as *Murraya koenigii* L**.** Sperg has a wide distribution throughout India, both in wild and cultivated forms. It is a perennial tree spice cum medicinal plant and is versatile in nature (Chittaragi *et al*., 2022). A number of 'landraces' of this species are widely found in homestead gardens, especially in southern India. They areunder-utilized and under explored spice crops in terms of efforts towards their genetic improvement and area under cultivation.Generally, genetic resource of any crop plant includes gene pools of both domesticated and wild species. They are the potential resource of useful genes, which could be of immense use for the genetic improvement of crops. Vavilo (1926) stated that about 160 species of domesticated plants have originated in India. Among these, the tree spice, curry leaf constitutes a minor group of plant, which had its origin in India. In plant breeding program, it is essential to maintain a germplasm collection or have access to new material in the gene pool from which potential attributes may be incorporated into the crop (Simmonds, 1979 and Nandi *et al*., 2021). Evaluating the genetic variation in the germplasm is the first step toward understanding the scope and utility of material in the collection (Marshall, 1990). Information obtained from the analyses of genetic variability and molecular systematics of crop species will allow the breeders to understand better the biogeographical distribution, variability and historical development of the crop germplasm with which they are working, and to

facilitate more efficient use of the available variability for the crop (Harlan, 1992; Devi *et al*., 2021).

Curry leaf in India has ample genetic variability. Grouping of the curry leaf genotypes and the presence of variation among them indicated the strong scope for breeding programme (Chittaragi *et al*., 2021). In Tamil Nadu, curry leaf is mainly grown in Coimbatore, Erode, Madurai, Salem and Tiruchirappalli districts. The plantis rich in the volatile properties as well as antioxidants and it isutilized in our traditional systems of medicine too (Xie *et al*., 2006; Chittaragi *et al*., 2021). Every household of Indian kitchen were not satisfied without curry leaves. Because they are used for culinary purposes as a condiment. Recent past this high-value low volume crops are gaining prime value in the nutraceutical industries. The growing demand from the emerging segment of nutraceuticals is driving the global consumption of Indian spices.The curry leaf has vast adaptability and distribution to the different soil, agroclimatic condition, and its nutraceutical value, there is a scope for searching genotypes for salt affected soil, which will be an alternate crop even for the salt affected soil. In addition to that curry leaf has natural variability in its growth, yield and biotic stress.In this connection, it is a time to find out the genotypes which could meet the need of domestic and industrial needs. In addition to that finding the variability among the population is vital for further breeding work in curry leaf. With this view, an experiment was conducted at HC&RI (W), TNAU, Trichy, Tamil Nadu between 2016-2019with thirteen genotypes used to assess the variability, heritability, genetic advance and inter relationships between traits and the direct and indirect effects of some quantitative parameters.

MATERIAL AND METHODS

The investigation was carried out to collect the different curry leaf genotypes across Tamilnadu between 2016-2019. Curry leafland races or genotypes collected from different locations were established at Horticultural College and Research Institute for Women, Tamilnadu Agricultural University, Trichy under sodic soil. The details of land races or genotypes collected were given in table 1. The plants were planted at a spacing of 1.5 × 1.5 m and all cultural practices were performed as per the standard package of practices. The research trial was laid out in randomized block design with three replications. The observations on growth and yield attributes *viz.,* plant height (cm), plant girth (cm), internode length (cm), petiole length (cm), number of mature shoot per plant, number of compound leaf per plant, number of leaflet per compound leaf, leaf area and fresh yield per plant (g) were made in each replication. The mean data were used to assess the variability present among the population and subjected to correlation coefficient among the various traits observed in curry leaf.

The data recorded for each character was subjected to analysis of variance (ANOVA) using randomized complete block design to test the variations among genotypes. The analysis of variance was calculated using the procedure suggested by Panse and Sukhatme (1985). The genotypic and phenotypic variation were calculated by using the mean sum of square from variance table (Lush, 1940). The Phenotypic Coefficient of Variation (PCV) and Genotypic Coefficient of Variation (GCV) were calculated as per the formula proposed by Burton (1954). Accordingly, the PCV and GCV of the genotypes were classified into three range of variations such as low (< 10 %), medium (10-20 %) and high (> 20 %) as suggested by Sivasubramanian and Menon (1973). Heritability was estimated as per the formula suggested by Lush (1940) and expressed in per cent. The range of heritability was categorized as low (0-30 %), medium (31-60 %) and high (> 60 %) as proposed by Johnson *et al*. (1955). Genetic advance was calculated as per formula proposed by Johnson *et al.* (1955) and characters were classified in to high (more than 20 %), medium (10 - 20 %) and low (less than 10 %).

RESULT AND DISCUSSION

In the present investigation analysis of variance was carried out for nine traits. The analysis of variance showed significant difference among the genotypes for all traits observed and reported that the genotype mean square for the traits observed were found to be significant (Table 2). The estimates of phenotypic variance, genotypic variance, phenotypic coefficient of variation (PCV) and genotypic coefficient of variation (GCV) were depicted within the table 3. Genetic variance among the curry leaf population were from 0.27 for internodal length to 879.16 for plant height while, the phenotypic variance was ranged from 0.35 to 955.64 respectively for the internode length and plant height. Among the plant growth characters studied, plant height (879.16 and 955.64), leaf area (308.81 and 329.90) and number of mature shoots per plant (28.86 and 31.45) recorded the very best genotypic and phenotypic variances respectively. This result expressed that the existing curry leaf population reflected with large variability. Hence such genotypes might be utilized for the further crop improvement programmes. Similar results were reported earlier by Lal *et al.* (2001) Shoba *et al*. (2020); Chittaragi *et al*. (2022) in curry leaf.

The result informed that those attributes were more viable for selection than the other characters and inferred that the presence of considerable genetic variability for the studied genotypes, which empowers the breeder to improve curry leaf production only through simple selection. Hence the selection among the genotypes may be based on these traits will be efficient. Generally genotypic coefficient of variation is a measure of genetic variability which provides means to compare with other characters facilitating the successful identification of desirable types under sodic soil. The range of GCV of the traits recorded was ranged from 13.83 % in leaflet per compound leaf, to 46.01 % for leaf area. Likewise, the PCV was ranged from 20.02 % for leaflet per compound leaf to 47.55% for leaf area (Table 3). According to the statement of Deshmukh *et al.* (1986), the PCV and GCV values greater than 20% are regarded as high and values

between 10% and 20% to be medium, whereas values less than 10% are considered to be low. Accordingly, high PCV and GCV were registered for Leaf area (47.55 and 46.01), Number of mature shoot per plant (45.89 and 43.97), Plant girth (32.36 and 30.76) and Plant height (29.53 and 28.33) while traits with moderate GCV were recorded for the Internode length (19.88), Number of compound leaves (17.58) and Leaf let per compound leaf (13.83). The existence of substantial variability for the characters were indicated through high values of PCV and GCV and this will facilitate effective selection in the curry leaf population.

In this study, the PCV was relatively greater than GCV for all traits observed, however, GCV was near to PCV for the characters like plant height and leaf area inferred that high contribution of genotypic effect for phenotypic expression of such characters. Similar result was reported by Selvakumari (2013), Sheetal and Maurya (2015); Shoba *et al*. (2020). The traits with wider gaps between estimate of PCV and GCV showed disparate contribution of environmental factors in addition to genotypic effect for expression of the traits (Karunakar *et al*., 2018).

Table 1: Sample identifications (Sample ID), original names and the locations (GPS data) of the samples collected from Tamilnadu.

Sr. No.	Sample ID	Original Name	Longitude (N)	Latitude (E)	Altitude (M)	District	State
1.	MK 01	Kanniyakumari Local 4	8.10	77.54	30.9	Kanniyakumari	TN
2.	MK 02	Paiyur Local	12.21	78.18	490.0	Paiyur	TN
3.	MK 03	Kanniyakumari Local 3	8.10	77.54	30.9	Kanniyakumari	TN
4.	MK 04	Trichy local -1	10.84	78.69	74.0	Trichy	TN
5.	MK 05	Kanniyakumari Local 2	8.10	77.54	30.9	Kanniyakumari	TN
6.	MK 06	Kanniyakumari Local 1	8.10	77.54	30.9	Kanniyakumari	TN
7.	MK 07	Negamem local -1	10.31	78.69	94.0	Karaikudi	TN
8.	MK 08	Pathinetangudi local	9.99	78.33	142.0	Kanniyakumari	TN
9.	MK 09	Sevarakkottai local	10.01	78.65	75.0	Sivagangai	TN
10.	MK 10	Kundrakudi Local	10.11	78.70	102.0	Sivagangai	TN
11.	MK 11	Devakottai local	9.94	78.80	49.0	Sivagangai	TN
12.	MK 12	Negamem local -2	10.31	78.69	94.0	Sivagangai	TN
13.	MK 15	Veppankulam local	9.95	78.72	69.0	Sivagangai	TN

TN - Tamilnadu

Table 2: Analysis of variance (ANOVA) for different quantitative characters in curry leaf.

Traits	Error Mean Square (d.f.=24)	Genotype Mean Square (d.f.=12)	Replications Mean Square (d.f.=2)
Plant height (PH)	76.49	2713.95**	62.85
Plant girth (PG)	0.65	19.07**	0.57
Internode length (IL)	0.09	0.88**	0.55*
Petiole length (PL)	2.70	49.11**	1.93
Number of mature shoot per plant (MSP)	2.60	89.16**	2.24
Number of compound leaves (NCL)	1.15	10.75**	0.73
Leaf let per compound leaf (LLPCL)	5.60	20.92**	5.29
Leaf area (LA)	21.10	947.15**	5.87
Fresh leaf yield per plant (FYP)	3658.15	49075.68**	7680.25**

* and ** significant at 5% and 1% respectively

Table 3: The estimates of genotypic coefficient of variation (GCV), phenotypic coefficient of variation (PCV), Heritability (%), genetic advance mean for different traits in curry leaf.

Characters	Mean	Fratio	S.E.	C.D. (5%)	CV (%)	PV	GV	EV	GCV %	PCV %	Heritability %	Genetic advance (% mean)
Plant height (PH)	104.67 ± 5.05	35.48	5.05	14.71	8.36	955.64	879.16	76.49	28.33	29.53	92.00	55.97
Plant girth (PG)	8.05 ± 0.47	29.17	0.47	1.36	10.04	6.79	6.14	0.65	30.76	32.36	90.38	60.24
Internode length (IL)	2.59 ± 0.17	10.25	0.17	0.49	11.32	0.35	0.27	0.09	19.88	22.87	75.50	35.58
Petiole length (PL)	14.46 ± 0.95	18.20	0.95	2.76	11.36	18.17	15.47	2.70	27.21	29.49	85.15	51.72
Number of mature shoot per plant (MSP)	12.22 ± 0.93	34.50	0.93	2.70	13.16	31.45	28.86	2.58	43.97	45.89	91.78	86.77
Number of compound leaves (NCL)	10.18 ± 0.62	9.33	0.62	1.81	10.55	4.35	3.20	1.15	17.58	20.50	73.52	31.05
Leaf let per compound leaf (LLPCL)	16.35 ± 1.37	3.74	1.37	3.98	14.47	10.71	5.11	5.60	13.83	20.02	47.71	19.68
Leaf area (LA)	38.20 ± 2.65	44.92	2.65	7.73	12.02	329.90	308.81	21.09	46.01	47.55	93.61	91.69
Fresh leaf yield per plant (FYP)	513.98 ± 34.92	13.42	34.92	101.73	11.77	18797.33	15139.18	3658.15	23.94	26.67	80.54	44.26

Generally, the genotypic coefficient of variance provides information on the genetic variability present in quantitative characters of the base population, but it is alone not possible to determine the amount of the variation that was heritable. The clear picture of the amount of genetic advance to be expected from selection was governed by the genetic coefficient of variance together with heritability estimates (Burton and Devane, 1953). Heritability estimates in the present study was ranged from 47.71 % in leaflet per compounds leaf to 93.61% for leaf area (Table 3). The heritability values are useful in the prediction of expected progress to be achieved through any selection progress as well as heritability in association with genetic advance would highlight a reliable index of selection value (Panse, 1957). The heritability values greater than 80% were very high, values from 60–79% were moderately high, values from 40– 59% were medium and values less than 40% were low (Singh, 2001). Accordingly, in the present study, the estimate of heritability of Plant height, Plant girth, Petiole length, Number of mature shoot per plant, Leaf area and Fresh leaf yield per plant were recorded with high heritability. This result revealed the relatively small contribution of the environmental factors to the phenotype and selection for such characters could be fairly easy due to the high additive effect. The results were in line with work of Raja and Bagle (2008); Selvakumari (2013); Sheetal and Maurya (2015); Shoba *et al*. (2020).

Accordingto Jonhson *et al.* (1955) that the worth of genetic advance as percent of the mean is categorized as low (< 10%), moderate (10–20%) and high (> 20%). The GAM of leaflets per compound leaf was classified as moderate, whereas other characters were found to be high (Table 3). The high heritability estimates together with the high genetic advance as per mean is typically more helpful in predicting gain under selection than heritability alone. In the present investigation, among the curry leaf genotypes studied, the very high heritability alongwith high genetic advance as percent of the mean are exhibited by plant height, plant girth, Plant girth, Petiole length, Number of mature shoot per plant, Leaf area, and for fresh leaf yield per plant. The moderate high heritability along with high genetic advance as percent of the mean was expressed by the Internode length and Number of compound leaves which reflecting the presence of additive gene action for the expression of those traits which is fixable for next generations, and selection in next population based on this character would be ideal. Similar observation was recorded by Raja and Bagle (2008); Selvakumari (2013); Sheetal and Maurya (2015) in moringa, Shoba *et al*. (2020) and Chittaragi *et al*. (2022) in curry leaf. The traits having moderate values of heritability as well as moderate genetic advance as percent of the mean viz. leaf let per compound leaf, suggest that selection for improvement of those characters may also be rewarding. It also indicates a greater role of non-additive gene action in their inheritance. Similar results were also reported by Shoba *et al*. (2020); Indhumathi *et al*. (2020).

Phenotypic and genotypic correlations of nine characters in all possible combinations were calculated to know the relationship among them (Table 4). In general, genotypic correlation coefficients were higher than corresponding phenotypic correlation coefficients for most of the traits. Fresh leaf yield per plant had significant and positive association with plant height (0.561 and 0.588), plant girth (0.821 and 0.808), internode length (0.651 and 0.596), petiole length (0.732 and 0.753), number of mature shoot per plant (0.647 and 0.665), number of compound leaves (0.455 and 0.544) and leaf area (0.455 and 0.544) may be considered as selection indices for yield improvement Similar results were also reported by Subha *et al* (2010); Indhumathi *et al*. (2020); Chittaragi *et al*.(2022) in curry leaf.

Table 4: Genotypic and phenotypic correlation coefficients among various traits in curry leaf.

		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9
X_1	G	**1.000**	0.778**	0.628**	0.776**	0.774**	0.631**	0.122	0.638**	0.561**
	P	**1.000**	0.788**	0.613**	0.791**	0.790**	0.655**	0.248*	0.645**	0.588**
X_2	G		**1.000**	0.823**	0.890**	0.928**	0.824**	0.215*	0.644**	0.821**
	P		**1.000**	0.752**	0.885**	0.921**	0.810**	0.337*	0.653**	0.808**
X_3	G			**1.000**	0.895**	0.883**	0.725**	0.004	0.727**	0.651**
	P			**1.000**	0.835**	0.824**	0.689**	0.147	0.653**	0.596**
X_4	G				**1.000**	0.851**	0.681**	0.314*	0.840**	0.732**
	P				**1.000**	0.861**	0.735**	0.446*	0.826**	0.753**
X_5	G					**1.000**	0.856**	0.205*	0.576**	0.647**
	P					**1.000**	0.847**	0.310*	0.591**	0.665**
X_6	G						**1.000**	0.106	0.626**	0.455*
	P						**1.000**	0.403*	0.621**	0.544**
X_7	G							**1.000**	0.447	-0.140
	P							**1.000**	0.435*	0.174
X_8	G								**1.000**	0.449*
	P								**1.000**	0.477*
X_9	G									**1.000**
	P									**1.000**

X_1- plant height (cm), **X_2-** plant girth (cm), **X_3** - internode length (cm), **X_4** - petiole length (cm), **X_5** - number of mature shoot per plant (nos.), **X_6** - number of compound leaves (nos), **X_7** - leaf let per compound leaf (nos.), **X_8** - leaf area (cm^2) and **X_9** - Fresh leaf yield per plant (g).

CONCLUSION

The study can be concluded as selection of curry leaf genotypes for yield attributes having high heritability and genetic advance also has significant positive association among the yield attributing characters. This will be more effective for have count ability for increasing variability and also to achieve the objective of selection of promising entries for further improvement of breeding programme.

FUTURE SCOPE

Further experiments are needed to completely evaluate performance and other quality attributes of curry leaf under salt affected soil and the obtained data can be used as traits for different plant breeding programs to develop better salt tolerant varieties.

Acknowledgments. The financial support received from Tamilnadu Agriculture University, Coimbatore is duly acknowledged. The authors also acknowledge the support received from the Horticultural College & Research Institute for (Women)-Trichy, TNAU for extension of field and laboratory facilities.

Conflict of Interest. None.

REFERENCES

Burton, G. W. and Devane, E. H. (1953). Estimation of heritability in tall festca (*Festuca arundinacea*) from replicated clonal materials. *Agronomy Journal*, *45*: 478–481.

Burton, G. W. (1954). Quantitative inheritance in grasses. Proceedings of *6th International Grassland Congress*, *1*: 277-283.

Chittaragi, D., Ananthan, M., Venkatesan, K., Jeyakumar, P. and Mahalingam, L. (2021). Evaluation of Curry leaf (*Murraya koenigii*. Spreng) Accessions for Biochemical Traits. *Biological Forum – An International Journal*, *13*(4): 946-951.

Chittaragi, D., Ananthan, M., Venkatesan, D. C. K., Mahalingam, L. and Jeyakumar, P. (2022). Studies on genetic variability, heritability, correlation and path coefficient analysis in curry leaf (*Murraya koenigii* Spreng.) genotypes. *Electronic Journal of Plant Breeding*, *13*(1): 193-197.

Deshmukh, S. N., Basu, M. S. and Reddy, P. S. (1986). Genetic variability, character association and path analysis of quantitative traits in Virginia bunch varieties of ground nut. *Indian Journal of Agriculture Science*, *56*: 816–821.

Devi, K., Kour, K., Bakshi, P., Sharma, B. C., Sharma, M. and Sinha, B. K. (2021). Assessment of Morphological Diversity in Indigenous Ambri Apple (*Malus* × *domestica* Borkh.). *Biological Forum – An International Journal*, *13*(2): 325-331.

Harlan, J. R. (1992). Crops and Man. Second edition. *American Society of Agronomy* and *Crop Science Society of America*. Madison, Wisconsin

Indhumathi, K, D., Vidhya, K. Gurusamy, P. Paramaguru and Santhi V. P. (2020). Genetic Variability Studies and Character Association for Yield and Quality Traits in Curry leaf (*Murray akoengii* (L.) Spreng.). *Chemical Engineering*, *1*(1): 164 -171.

Johnson, H. W. Robinson, J. F. and Comstrock, R. E. (1955). Estimates of genetic and environmental variability in soybeans. *Agron Journal*, *47*(7): 314-318.

Karunakar, J., Preethi, T. L., Boopathi, N. M., Pugalendhi, L., & Hepziba, S. J. (2018). Genetic variability, correlation and path analysis in Moringa (*Moringa oleifera* L.). *J. Pharmacogn. Phytochem*, *7*(5), 3379-3382.

Lal, R. K., Sharma, J. R., Singh, N., Misra, H. O. and Naqvi, A. A. (2001). Genetic association and diversity in the genetic resources of curry leaf (*Murraya koenigii*). *J. Med. Aromat Plant Sci.*, *22*: 216-220.

Lush, J. L. (1940). Inter size correlation and regression of offspring on dams as a method of estimating heritability of characters. *In*: *Proceedings of American Society for Animal Production*, *33*: 293.301.

Marshall, D. R. (1990). Crop genetic resources: Current and emerging issues. In: Brown, A.H.D., M.T. Clegg, A.L. Kahler and B.S.Weir (eds.). *Plant Population Genetics, Breeding, and Genetic Resources*, pp: 367-388. Sinauer Associates. Sunderland, Massachusetts.

Nandi, S., Rout, S., Sur, B., Chakraborty, M., Hijam, L., Roy, S.K. and Gupta, A. (2021). Assessment of Genetic Parameters, Trait Association and Diversity Analysis in Indian Mustard [*Brassica juncea* (L.) Czern and Coss]. *Biological Forum – An International Journal*, *13*(2): 95-109.

Panse, V. G. (1957). Genetics of quantitative characters in relation to plant breeding. *Indian Journal. Genet.*, *17*(2), 318-328.

Panse, V. G. and Sukhatme, P. V. (1985). Statistical Methods for Agricultural Workers 4th Edition 359, ICAR, New Delhi

Raja, S. and Bagle, B. G. (2008). Variability, inter-relationship among characters and path coefficient studies in annual moringa. *Indian Journal of Hort*., *65*(4):434-440.

Selvakumari P. (2013). Assessment of morphological, biochemical and molecular diversity in moringa (*Moringa oleifera* Lam.) with special reference to its industrial applications. Ph.D. Thesis. Tamil Nadu Agricultural University, Coimbatore.

Sheetal, T. and Maurya, I. B. (2015). Genetic variability in drumstick genotypes. *Annals of Plant and Soil Research*, *17*(1): 67-70.

Shoba, N., Balakrishnan, S., Paramaguru, P. and Vithya, K., (2020). Genetic variability and character association studies in curry leaf (*Murraya koenigii*). *Electronic Journal of Plant Breeding*, *11*(02), pp.694-697.

Simmonds, N.W. (1979). Principles of crop improvement. Longman Scientific and Technical. New York.

Singh, B., (2001). Plant Breeding: Principles and Methods, 6th ed., Kalyani Publishers, New Delhi, India.

Sivasubramanian, S. and Menon, P. M. (1973). Genotypic and phenotypic variability in rice. *Madras Agric. Journal*, *60*(9-12): 1093-96

Subha, R., Jansirani, P. and Raja Babu, C. (2010). Studies on crop regulation in curry leaf (*Murraya koenigii* Spreng.) during off season. *International Journal of Plant Sciences*, *5*(1): 269-273.

Vavilov, N. I. (1926). Centres of origin of cultivated plants. *Bull. Appl. Bot. Genet. Plant Breed*., *16*(2). pp. 248

Xie, J. T., Chang, W. T., Wang, C. Z., Mehendale, S. R., Li, J. and Ambihaipahar, R. (2006). Curry leaf (*Murraya koenigii* Spreng.) reduces blood cholesterol and glucose levels in ob/ob mice. *American Journal of Chinese Medicine*, *34*, 279–284.

How to cite this article: D. Vidhya, K. Indumathi, K. Gurusamy, P.Paramaguru and S. Geethanjali (2022). Assessment of Genetic Variability for Growth and Yield Traits of Curry Leaf (*Murraya koenigii* L. Sperg) under Sodic Soil. *Biological Forum – An International Journal*, *14*(2): 912-916.