International Journal of Bioresource Science
Citation: IJBS: **12**(01): 49-54, June 2025
DOI: 10.30954/2347-9655.01.2025.6

ASSOCIATION FOR AGRICULTURE ENVIRONMENT AND BIOTECHNOLOGY

RESEARCH PAPER

Genetic Variability and Heritability Estimates in Finger Millet [*Eluesine coracana* (L.) Gaertn.]

N. Anuradha*, T.S.S.K. Patro, U. Triveni, A. Anisha and M. Divya

Acharya NG. Ranga Agricultural University, Agricultural Research Station, Vizianagaram, India

*Corresponding author: anuradha.pragnya@gmail.com (**ORCID ID:** 0000-0001-6244-9143)

Received: 12-03-2025 **Revised:** 29-05-2025 **Accepted:** 08-06-2025

ABSTRACT

Finger millet is a drought resilient crop and grown for both food and fodder in semi-arid regions of Africa and Asia. Analysis of genetic variability and heritability for quantitative traits is essential for finger millet crop improvement. To embark upon the amount of genetic variability present in finger millet, the present investigation was undertaken with 25 advanced breeding lines of finger millet obtained from all over India. Analysis of variance for 25 finger millet breeding lines revealed significant variation for all traits studied. The mean grain yield was 31.46 q/ha, with a minimum of 24.7 q/ha (KMR 652) and maximum of 43.0 q/ha (RAUF 17). Grain yield recorded genotypic coefficient of variation of 14.54, while phenotypic coefficient of variation was 19.78. Heritability ranged from 23.8% (number of productive tillers/plant) to 97.56% (days to maturity), while the heritability of grain yield was 54.03%. High heritability and high genetic advance were observed for days to 50% flowering and finger length indicating the prevalence of additive gene action for these traits. Grain yield was observed to be controlled by additive action as indicated by moderate heritability and high genetic advance while fodder is influenced by both additive gene and non-additive gene action since it had moderate heritability and genetic advance. The present findings imply the presence of larger variability for yield and other related traits which can be exploited in finger millet improvement.

HIGHLIGHTS

- Significant differences were observed among 25 finger millet genotypes.
- RAUF 17 has recorded highest grain yield of 43.0 q/ha among 25 genotypes.
- Grain yield has recorded moderate heritability and high genetic advance as per cent of mean indicating both additive and no additive gene action.
- High positive correlation was observed between grain yield and ear weight.

Keywords: Finger millet, variability, heritability, genetic advance, correlation

Millets are crops of antiquity and valued for their nutritional value in recent times. Finger millet (*Eluesine coracana* (L.) Gaertn.) is the third most important millet after Sorghum and Pearl millet. It is rich source of essential amino acids and minerals especially it is a reliable source of Calcium content in the grain. Its Ca content is even thrice that of milk (Anuradha *et al*. 2022).

Finger millet is a very adaptable crop that may be cultivated in a variety of climates. Due to its high resilience, it can be produced in areas where other cereals cannot, such as poor soils with low nutrient levels and little precipitation. It can grow on less than one-fourth of the water needed by paddy. It is little bit resistant to water logging, salinity, and

How to cite this article: Anuradha, N., Patro, T.S.S.K., Triveni, U., Anisha, A. and Divya, M. (2025). Genetic Variability and Heritability Estimates in Finger Millet [*Eluesine coracana* (L.) Gaertn.]. *Int. J. Bioresource Sci.*, **12**(01): 49-54.

Source of Support: IUCEA; **Conflict of Interest:** None

drought. It is a crop of future food security due to its climate-smart adaptation.

Plant breeders are continuously working to create new kinds over existing ones in an effort to serve both the present and the future demands of a changing climate. In order to generate a new variety, genetic variability must exist for the trait or traits to be improved. The genetically diverse population serves as a foundation for the selection of various characteristics. Traits can be easily selected if they are highly heritable. Any plant breeding effort must consider a trait's heritability since it offers insight into the heritable variance. A complex trait, grain yield is controlled by numerous genes and further impacted by the surrounding environment. Direct selection for such complex traits may not be worthy. Therefore, a thorough understanding of the relationship between yield-contributing traits and grain production aids in the indirect selection of yield through highly heritable traits. Hence, 25 advanced finger millet breeding lines were examined in this study to determine their genetic diversity, heritability, yield association, and other significant features.

MATERIALS AND METHODS

In the current study, 25 finger millet genotypes obtained from all over India were evaluated in the farm of Agricultural Research Station, Vizianagaram, Andhra Pradesh during *kharif*, 2018. Each genotype was raised in a plot of 10 rows of 3 m length in three replications under randomized complete block design (RCBD) with a spacing of 22.5 × 10 cm. Recommended doses of fertilizers, DAP (87 kg/ha), MOP (42 kg/ha) and Urea (22 kg/ha) were applied basally at the time of land preparation and remaining 22 kg/ha Urea was applied three weeks after sowing. Healthy crop was maintained following standard management practices. Observations were recorded on plant height, main ear length, finger length, leaf length, leaf width, peduncle length, leaf junction to node length in cm; productive tillers per plant, fingers per main ear and leaves per plant in numbers; 50% flowering and maturity and were recorded in days by visualizing the entire plot. Grain yield and fodder yield were recorded on per plot basis and then converted into q/ha.

Analysis of variance and summary statistics was calculated as per Panse and Sukathme (1967). Phenotypic and genotypic coefficients of variation (PCV and GCV) were computed as per Burton and Devane (1953). Heritability in broad sense was computed as per Allard (1960). Pair wise Pearson's phenotypic correlations were calculated for all traits studied. Heritability and genetic advancement were categorized into low, medium and high as per Johnson *et al.* (1955).

RESULTS AND DISCUSSION

The existence of genetic variability in the population serves as the foundation for crop development. We can determine the primary underlying source of variation, whether it is environment-sensitive, and whether it can be passed down to the following generation by studying variability and heritability. Consequently, an efficient breeding program for the enhancement of various features can be established based on this study.

The results from ANOVA disclosed presence of large variability for 25 finger millet genotypes as indicated from p values of genotypes for all 16 traits studied (Table 1). Similar variability was reported by earlier workers (Mulualem (2022), Kumar *et al.* (2022), Sharma *et al.* (2023), Priya *et al.* (2023), Hansalia *et al.* (2024). Mean values and summary statistics were given in table 2 and 3.

Days to 50% flowering ranged from 69 to 102 days with a mean of 85 days while days to maturity ranged from 100 to 129 days (Table 2). Earliest maturity was observed in VL 376 (100 days) while short plant height was found in KMR 652 (100.5 cm). More number of productive tillers were found in OEB 604 (4), while more number of fingers ranged from 6.5 (GPU 99) to 9 (VL 376). Longest ear head was observed in GPU 99, which was also observed to have widest leaf (1.3 cm). RAUF 17 recorded highest grain yield (43 q/ha) and VR 1110 recorded highest fodder yield (101.7 q/ha).

PCV of all the traits was higher than GCV (Table 3). GCV ranged from low to moderate. Moderate GCV and PCV were observed for grain yield, ear length, ear weight and days to 50% flowering indicating more variability of these traits among finger millet advanced breeding lines. Low GCV and PCV were observed for plant height and days to maturity,

Table 1: ANOVA of 25 finger millet genotypes

Source of Variations	df	Mean Sum of Squares															
		Days to 50% flowering	Days to Maturity	Plant Height (cm)	No. of Prod. Tillers	No. of fingers/ Ear	Ear Length (cm)	Finger Length (cm)	Finger width (cm)	Peduncle length (cm)	Leaf junction to Node Length	Leaf Number	Leaf Length (cm)	Leaf width (cm)	Ear weight (q/ ha)	Grain Yiel (q/ ha)	Fodder Yield (t/ha)
Genotypes	24	240.39	235.13	157.96	0.51	1.37	5.19	4.21	0.04	3.78	6.15	2.42	29.43	0.02	88.55	80.62	494.74
Replications	2	2.00	1.40	204.20	0.49	1.80	4.32	1.69	0.12	0.64	30.12	38.95	8.57	0.02	13.43	1.04	22.91
Error	50	2.93	1.94	49.58	0.26	0.47	1.02	0.69	0.02	1.79	2.56	1.13	13.26	0.01	23.83	17.81	167.51
p value for Treatments		2E-32	2E-36	0.0002	0.02	0.0006	5E-07	3E-08	0.007	0.01	0.004	0.01	0.008	0.018	4E-05	3E-06	0.0006
p value for Replications		0.51	0.49	0.02	0.17	0.0275	0.02	0.096	0.0019	0.70	6E-05	4E-10	0.52	0.13	0.57	0.94	0.87

Table 2: Mean values of 25 Finger millet genotypes for yield and its component traits

Sl. No.	Entry	Days to 50% flow	Days to Maturity	Plant height (cm)	No. of product. tillers	No. of fingers/ ear	Ear length (cm)	Finger length (cm)	Finger width (cm)	Peduncle length (cm)	Leaf junction to Node Length	Leaf Number	Flag leaf length (cm)	Flag leaf width (cm)	Ear weight (q/ha)	Grain Yield (q/ ha)	Fodder Yield (q/ ha)
1	WN 562	97.3	129.0	109.6	3.3	7.3	11.7	7.3	1.2	11.4	9.7	13.5	41.4	1.2	38.3	30.8	92.0
2	GPU 99	94.7	125.7	104.8	3.9	6.5	13.9	9.1	1.3	12.6	12.3	10.0	42.0	1.3	36.9	28.9	88.8
3	GPU 67	89.7	119.0	104.2	3.5	7.7	9.9	5.5	1.2	10.7	10.0	12.6	43.4	1.2	43.8	31.1	81.4
4	KMR 652	90.7	118.7	100.5	3.3	7.0	7.7	3.7	1.1	8.6	9.6	12.7	37.5	1.0	34.9	24.7	82.5
5	VR1117	75.3	105.3	122.5	3.4	8.6	10.9	6.6	1.2	10.4	11.9	12.7	40.8	1.2	35.7	26.9	64.2
6	VL 394	74.3	104.3	127.5	2.5	8.4	9.3	5.0	1.2	10.4	12.6	12.6	33.6	1.2	35.8	26.5	73.9
7	GPU 45	80.0	114.3	115.5	3.5	6.6	9.2	5.5	1.2	11.2	14.4	12.5	36.7	1.1	47.4	31.2	77.1
8	HR-13	79.0	107.7	112.4	2.7	6.9	10.2	6.2	1.0	11.9	14.3	12.5	40.9	1.1	42.5	34.4	67.7
9	KMR 650	86.7	115.7	105.7	3.4	8.7	11.2	6.5	1.2	11.6	11.7	12.9	37.7	1.1	54.0	41.7*	85.3
10	RAUF 17	89.3	118.0	123.4	3.6	6.8	11.7	6.3	1.1	11.6	14.3	10.7	37.0	1.2	56.8	43.0*	95.8
11	TNEc 1299	85.0	117.0	107.0	3.1	6.5	10.0	5.9	1.2	11.1	13.1	10.7	39.4	1.1	35.4	34.1	63.9
12	WN 591	92.0	123.3	117.2	3.1	7.1	10.8	6.6	1.0	11.6	11.4	14.1	37.9	1.1	44.2	34.2	92.3
13	VL 376	70.7	100.0	122.6	2.9	9.0	11.6	6.6	0.9	10.7	12.4	12.0	34.8	0.9	43.6	25.1	60.3
14	VR 1110	82.3	114.3	121.2	3.8	7.1	9.8	4.6	1.4	9.8	11.5	12.9	37.4	1.0	39.9	35.2	101.7
15	VL 382	68.7	100.3	123.2	3.6	7.5	9.5	6.1	0.7	12.1	12.6	12.5	38.8	1.1	35.2	33.9	57.5
16	BR-14-27	86.3	114.0	117.2	3.3	8.0	9.9	5.9	1.1	11.7	12.8	12.6	43.0	1.0	42.4	34.3	82.8
17	PR 202	87.7	118.7	120.9	3.2	7.6	8.8	5.3	1.2	10.8	11.4	12.9	37.5	1.0	41.7	25.7	90.3
18	TNEc 1297	87.0	116.3	113.9	2.7	7.7	11.2	7.0	1.1	11.8	12.0	12.5	37.8	1.0	39.3	31.2	57.3
19	GPU 98	82.7	115.7	108.2	3.0	7.9	8.6	5.3	1.2	11.5	12.2	12.4	33.5	1.0	38.3	28.6	58.5
20	OEB 604	96.7	128.7	116.9	4.2	6.9	12.3	8.8	1.2	11.3	14.0	13.2	41.0	1.2	43.4	35.2	76.5
21	PR 1639	93.7	122.3	120.7	3.5	7.5	9.9	6.9	1.3	10.0	11.9	13.4	36.3	1.1	43.5	29.1	79.0
22	IIMRFM-8023-17	77.3	109.0	117.7	3.0	7.7	10.8	7.0	1.1	13.2	14.4	12.7	37.1	1.0	39.1	29.2	70.5
23	IIMRFM-8011-17	70.3	100.0	109.0	3.4	7.1	10.7	7.5	1.3	11.5	13.0	12.3	37.2	1.1	43.9	25.7	74.3
24	GSMC-1	102.3	129.0	107.7	3.1	7.5	9.0	5.5	1.0	8.0	9.8	12.8	45.8	1.0	38.3	28.8	93.6
25	Sri Chaitanya	88.0	117.0	115.6	2.6	7.4	9.8	5.1	1.3	10.6	10.9	13.4	40.3	1.1	38.6	31.2	67.9
	Mean	**85.38**	**115.09**	**114.83**	**3.25**	**7.51**	**10.32**	**6.21**	**1.10**	**11.00**	**12.19**	**12.50**	**38.95**	**1.09**	**41.12**	**31.46**	**77.46**
	CD (5%)	2.81	2.29	11.55	0.84	1.12	1.66	1.36	0.22	2.19	2.62	1.75	5.97	0.17	8.00	6.92	21.22
	CD (1%)	3.74	3.05	15.39	1.12	1.49	2.21	1.82	0.29	2.93	3.50	2.33	7.96	0.23	10.67	9.22	28.29
	CV (%)	2.01	1.21	6.13	15.74	9.10	9.80	13.37	12.00	12.16	13.12	8.52	9.35	9.42	11.87	13.41	16.71

indicating lesser variability for these traits in the population. Grain yield recorded moderate GCV (14.54) and PCV (19.78) implying ample variability for this trait. Patil *et al.* (2021), Anuradha *et al.* (2023), Charitha *et al.* (2023), Anjana *et al.* (2023), Sharma *et al.* (2023) also reported moderate GCV and PCV for grain yield.

Heritability and genetic advance as per cent mean (GAM) ranged from low to high for traits studied (Table 3). Plant height had high heritability with moderate GAM indicating the role of both additive and non additive gene action. High heritability and high GAM was observed for days to 50% flowering and finger length indicating presence of additive gene action and is less influenced by the environment and hence selection can be effective. Grain yield values indicate presence of additive gene action but are influenced by environment to some extent as they had high genetic advance and moderate heritability. Selection for these traits may be effective. Fodder yield had moderate heritability and moderate genetic advance indicating both

Table 3: Genetic parameters of 25 finger millet genotypes

Sl. No.		Days to 50% flower	Days to Maturity	Plant height (cm)	No. of prod. tillers	No. of fingers/ ear	Ear length (cm)	Finger length (cm)	Finger width (cm)	Peduncle length (cm)	Leaf junction to Node Length	Leaf Number	Flag leaf length (cm)	Flag leaf width (cm)	Ear weight (q/ha)	Grain Yield (q/ha)	Fodder Yield (q/ha)
1	Mean	85.38	115.09	114.83	3.25	7.51	10.32	6.21	1.10	11.00	**12.19**	**12.50**	**38.95**	**1.09**	**41.12**	**31.46**	**77.46**
2	Minimum	68.7	100.0	100.5	2.5	6.5	7.7	3.7	0.7	8.0	9.6	10.0	33.5	0.9	34.9	24.7	57.3
3	Maximum	102.3	129.0	127.5	4.2	9.0	13.9	9.1	1.4	13.2	14.4	14.1	45.8	1.3	56.8	43.0	101.7
4	GCV	10.42	7.66	5.23	8.79	7.31	11.43	17.43	7.81	7.40	8.98	5.24	5.96	5.45	11.30	14.54	13.48
5	PCV	10.61	7.76	8.06	18.03	11.67	15.05	21.97	14.32	14.24	15.90	10.01	11.09	10.88	16.39	19.78	21.47
6	ECV	2.01	1.21	6.13	15.74	9.10	9.80	13.37	12.00	12.16	13.12	8.52	9.35	9.42	11.87	13.41	16.71
7	Heritability % (Broad Sense)	96.43	97.56	42.15	23.80	39.22	57.61	62.95	29.76	27.01	31.88	27.47	28.89	25.06	47.52	54.03	39.44
8	Genetic Advance	18.00	17.94	8.04	0.29	0.71	1.84	1.77	0.10	0.87	1.27	0.71	2.57	0.06	6.60	6.93	13.51
9	GAM (%)	21.08	15.59	7.00	8.84	9.43	17.86	28.49	8.78	7.92	10.44	5.66	6.60	5.62	16.04	22.02	17.44

Table 4: Phenotypic correlation among yield and other related traits in 25 finger millet genotypes

	Days to 50% flowering	Days to Maturity	Plant height (cm)	No. of product. tillers	No. of fingers/ ear	Ear length (cm)	Finger length (cm)	Finger width (cm)	Peduncle length (cm)	Leaf junction to Node Length	Leaf Number	Flag leaf length (cm)	Flag leaf width (cm)	Ear weight (q/ha)	Grain Yield (q/ha)
Days to Maturity	0.98**														
Plant height (cm)	-0.42*	-0.41*													
No. of product. tillers	0.26	0.33	-0.09												
No. of fingers/ ear	-0.36	-0.43*	0.31	-0.37											
Ear length (cm)	0.14	0.16	0.03	0.35	-0.07										
Finger length (cm)	0.14	0.18	-0.02	0.40	-0.13	0.88**									
Finger width (cm)	0.27	0.31	-0.19	0.21	-0.20	0.10	0.05								
Peduncle length (cm)	-0.30	-0.22	0.10	0.05	-0.09	0.55**	0.58**	-0.12							
Leaf junction to Node Length	-0.45*	-0.39	0.40*	0.09	-0.20	0.28	0.35	-0.10	0.62**						
Leaf Number	0.12	0.12	0.17	-0.18	0.29	-0.35	-0.22	-0.03	-0.26	-0.37					
Flag leaf length (cm)	0.51**	0.45*	-0.38	0.25	-0.23	0.20	0.21	-0.05	-0.14	-0.31	-0.01				
Flag leaf width (cm)	0.22	0.25	-0.06	0.39	-0.31	0.50*	0.46*	0.30	0.24	0.09	-0.25	0.28			
Ear weight (q/ha)	0.10	0.08	0.09	0.24	0.01	0.27	0.15	0.05	0.20	0.33	-0.04	-0.14	0.07		
Grain Yield (q/ha)	0.21	0.21	0.05	0.30	-0.21	0.30	0.12	-0.06	0.32	0.31	-0.11	0.15	0.24	0.63**	
Fodder Yield (q/ha)	0.59**	0.58**	-0.10	0.43*	-0.31	0.09	-0.06	0.33	-0.28	-0.31	0.09	0.28	0.20	0.36	0.28

additive and non additive gene action and is having environmental influence to some extent. Direct selection for grain yield may be difficult because of influence by environment. Similar results were reported earlier in finger millet (Jahnavi and Lal, 2023; Nagaraja *et al.* 2023).

Correlation between different traits gives an insight into simultaneous selection of different traits at a time. Ear length and finger length are positively and significantly associated (Table 4). Selection for any one of the trait will lead to improvement of other trait. Since finger length was observed to be governed by additive gene action, selection will be effective and selection of finger length will also improve ear length. Pearson's correlations were significantly high and in positive direction for grain yield with ear weight, which implies selection of this trait will simultaneously improve grain yield. Since, ear weight is moderately influenced by the environment, selection for this trait may be rewarding for indirect improvement of grain yield. Similar association of grain yield with ear weight was reported by Soe *et al.* (2020), Giddaluri *et al.* (2022), Gayatri *et al.* (2022), Hema *et al.* (2022), Ghimire *et al.* (2023), Patel *et al.* (2023). Whereas, fodder yield was positively and significantly associated with days to 50% flowering, days to maturity and number of productive tillers/plant, which is in agreement with Sharma *et al.* (2023) for days to 50% flowering and number of productive tillers/plant and Ghimire *et al.* (2023) for days to maturity..

CONCLUSION

Significant variation for all the traits studied in the present investigation. GCV was low to moderate for traits studied indicating low to moderate variability in the present population. Moderate GCV and PCV were observed for grain yield, ear length, ear weight and days to 50% flowering. Additive gene action is likely to be acting for finger length and it is also highly associated with ear length, making selection effective in improvement of these traits. Grain is supposed to have additive and non additive gene action with environmental influence to some extent, hence direct selection may not be effective. It is highly associated with ear weight, which is moderately influenced by the environment.

ACKNOWLEDGEMENTS

Facilities provided by Agricultural Research Station, Vizianagaram are highly acknowledged. The work was carried out by utilizing the grants received from Acharya N.G. Ranga Agricultural University, Guntur.

REFERENCES

Allard, R.W. 1960. Principles of Plant Breeding. John Wiley and Sons Inc., New York. 485.

Anjana, R.J., Indira P.K., Nilavu, E.D., Pavithran, P., Lydia P.J and Patricia K.J. 2023. Correlation studies in traditional varieties of finger millet [*Eleusine coracana* (L.) Gaertn.]. *The Pharma Innovation Journal*, **12**(6): 1648-1652.

Anuradha, N., Patro, T.S.S.K., Priya, C.S., Rani, Y.S and Triveni, U. 2023. Variability, heritability and genetic advance in finger millet. *Frontiers in Crop Improvement*, **11**(6): 2863-2865.

Burton, G.W. and Devane, E.W. 1953 Estimating heritability in tall fescue (*Festuca arundiraceae*) from replicated clonal material. *Agronomy Journal*, **45**: 478-481.

Charitha, I., Gendre, S., Sahu, H., Tiwari, A and Kumar, P. 2023. Characterization and evaluation of finger millet [*Eleusine coracana* (L.) Gaertn.] genotypes for qualitative and quantitative traits. *The Pharma Innovation*, **12**(7): 2933-2937.

Gayatri, C.U., Lal, G.M., Elangovan, M and Anwar, S. 2022. Estimation of Genetic Variability Direct and Indirect Effects of Yield Contributing Traits on Grain Yield in Finger Millet [*Eleusine coracana* (L.)]. *International Journal of Environment and Climate Change*, **12**(11): 3355-3360.

Ghimire, K., Pandey, M.P., Joshi, B.K., Ghimire, S.K., Manandhar, H.K. and Gauchan, D. 2023. Phenotypic diversity among finger millet [*Eleusine coracana* (L.) Gaertn.] landraces of Nepal. *Genetic Resources*, **4**(8): 1-14.

Giddaluri, C., Lal, G.M. and Supriya, P. 2022. Assessing genetic variability, correlation, direct and indirect effects of yield contributing characters on seed yield in finger millet (*Eleusine coracana* L. Gaertn.). *International Journal of Environment and Climate Change*, **12**(11): 1552-58.

Hansalia, M.A. and Pali, V. 2024. Assessment of genetic variability for morphological and nutritional traits in finger millet [*Eleusine Coracana* L. Gaertn.]. *Plant Archives*, **24**(2): 2695-2699.

Hema, P., Pandey, S. and Yadav, B.N. 2022. Study of genetic variability and character association in elite lines of finger millet [*Eleusine coracana* (L.)] suitable for eastern plain zone of Uttar pradesh. *International Journal of Environment and Climate Change*, **12**(12): 438-447.

Jahnavi, A. and Lal, G.M. 2023. Genetic variability for yield and yield attributing traits in finger millet [*Eleusine coracana* L. Gaertn] under irrigation in central India. *International Journal of Plant and Soil Science*, **35**(19): 392-403.

Johnson, H.W., Robinson, H.F and Comstock, R.E. 1955. Estimate of genetic and environmental variability in Soybeans. *Agronomy Journal*, **47**: 314– 318.

Kumar, R., Jaiswal, M., Mishra, A., Yadav, D., Prajapati, P.K. and Mishra, U.K. 2022. Genetic variability studies for yield and related attributes in finger millet (*Eleusine coracana*) genotypes. International Journal of Plant & Soil Science, 34 (23): 1763-1770.

Mulualem, T. 2022. Studies on the genetic variability, heritability, and genetic advance of finger millet (*Eleusine coracana* L.) genotypes in northwestern Ethiopia. *Journal of Current Opinion in Crop Science,* **3**(2): 55-61.

Nagaraja, T.E., Bhat, S. and Nandini, C. 2023. Evaluation of genetic diversity in germplasm accessions of finger millet [*Eleusine coracana* (L.) Gaertn.]. *Mysore Journal of Agricultural Sciences*, **57**(2): 238-245.

Panse, V.G. and Sukathme, P.V. 1967. Statistical Method for Agricultural Workers. ICAR, New Delhi, pp. 381.

Patel, U., Patil, H.E. and Ray, P. 2023. Correlation and path analysis for grain yield and its component traits in finger millet (*Eleusine coracana* L.). *Biological Forum – An International Journal*, **15**(9): 660- 664.

Patil, H.E., Pali, V., Patel, B.K. and Elangovan, M. 2021. Waghai white Nagli-55 (WWN-55): high grain yielding, multiplier, multi finger, long finger, bold grain white finger millet [*Eleusine coracana* L. Gaertn.] genotype. *The Pharma Innovation Journal,* **10**(12): 111-117.

Priya, P.K., Anuradha, N., Ganapathy, K.N., Patro, T.S.S.K., Kumar, P.R. and Ramesh, D. 2023. Assessment of variability, heritability and genetic advance for quantitative characters in finger millet [*Eleusine coracana* (L.) Gaertn] Germplasm. *The Andhra Agricultural Journal,* **70**(1): 034-038.

Sharma, M., Madhusudan, K., Vasisth, P and Gupta, P. 2023. Characterization of novel germplasm for yield and yield related traits in finger millet [*Eleusine coracana* L. Gaertn.]. *Annals of Agricultural Research,* **44**(1): 106-114.

Soe, W., Jeena, A.S., Rohit, Pant, U. and Kumar, A. 2020. Deciphering the correlation and path coefficient for yield and yield component traits in finger millet (*Eleusine coracana*) germplasm collected from Uttarakhand. *Frontiers in Crop Improvement*, **9**(2): 187-190.