

1 Supplementary Materials

2 **Table S1. Details of the 40 *Aloe vera* accessions used in the study**

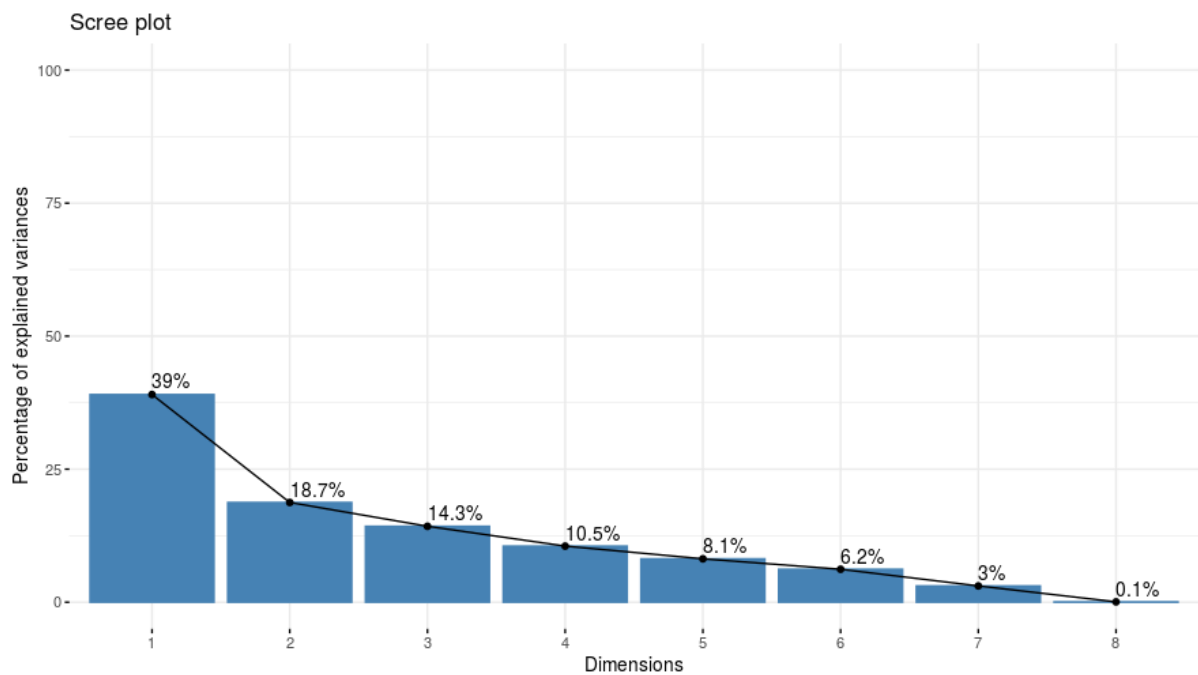
Accession Number	Place of Collection	Geographic Coordinates	Agro-climatic Conditions
TNA _v 2	Tiruvannamalai-1	12.2289° N, 79.0736° E	Semi-arid
TNA _v 5	Avaloorpettai	11.5944° N, 79.3525° E	Semi-arid
TNA _v 21	Tiruvannamalai-2	12.2289° N, 79.0736° E	Semi-arid
TNA _v 62	Chennai	13.0827° N, 80.2707° E	Coastal
TNA _v 6	Sengalpat	12.0383° N, 78.1794° E	Semi-arid
TNA _v 24	Nagapattinam	10.7905° N, 79.8415° E	Coastal
TNA _v 1	TNAU-1	11.0168° N, 76.9558° E	Semi-arid
TNA _v 26	Botanical garden	11.0168° N, 76.9558° E	Semi-arid
TNA _v 48	Namakkal	11.2287° N, 77.9797° E	Semi-arid
TNA _v 49	Seliamedu	9.2586° N, 77.2363° E	Semi-arid
TNA _v 29	Narasingapuram-1	11.4333° N, 79.2833° E	Semi-arid
TNA _v 50	Narasingapuram-2	11.4333° N, 79.2833° E	Semi-arid
TNA _v 8	Namakkal-2	11.2287° N, 77.9797° E	Semi-arid
TNA _v 41	Namakkal	11.2287° N, 77.9797° E	Semi-arid
TNA _v 9	Periyakulam	9.5564° N, 77.6106° E	Semi-arid
TNA _v 27	Kanchipuram	12.8347° N, 79.7028° E	Coastal
TNA _v 63	Ottampatty	10.5119° N, 78.1317° E	Semi-arid
TNA _v 19	Killikulam-1	8.7611° N, 77.6944° E	Semi-arid
TNA _v 23	Pechiparai	9.8022° N, 77.8417° E	Semi-arid
TNA _v 17	DMAC-1	11.0168° N, 76.9558° E	Semi-arid

TNAv 15	Aranmanaithottam	11.2431° N, 78.2872° E	Semi-arid
TNAv 4	Palani	10.4500° N, 77.5167° E	Semi-arid
TNAv 20	Hosur	12.7411° N, 77.8297° E	Semi-arid
TNAv 18	Odaipatty	10.6289° N, 77.2856° E	Semi-arid
TNAv 30	Manikavaram	10.9836° N, 78.1875° E	Semi-arid
TNAv 14	Palaiyanoor	12.7208° N, 79.7167° E	Coastal
TNAv 34	Arugampalayam	11.1142° N, 77.5667° E	Semi-arid
TNAv 33	Chrompet	12.9381° N, 80.1808° E	Coastal
TNAv 28	Karamadai	10.9694° N, 77.2189° E	Semi-arid
TNAv 12	ECR, Chennai	13.0472° N, 80.2597° E	Coastal
TNAv 32	Erode	11.3410° N, 77.7172° E	Semi-arid
TNAv 56	Gobichettipalayam	11.4667° N, 77.4333° E	Semi-arid
TNAv 3	Sulur	11.1347° N, 76.8006° E	Semi-arid
TNAv 22	Pongampalli	10.9044° N, 78.0767° E	Semi-arid
TNAv 45	Subramanyavalasu	9.3306° N, 78.3100° E	Semi-arid
TNAv 25	Tenkasi-1	8.9583° N, 77.3167° E	Semi-arid
TNAv 42	Tenkasi-2	8.9583° N, 77.3167° E	Semi-arid
TNAv 31	Karur	10.9583° N, 78.0833° E	Semi-arid
TNAv 7	Sandhiyur-1	11.9000° N, 77.5500° E	Semi-arid
TNAv 40	Sandhiyur-2	11.9000° N, 77.5500° E	Semi-arid

Table S2. Analysis of variance (ANOVA) for morphological traits in 40 *Aloe vera* accessions

S. No.	Sources of Variation	Mean Sum of Squares		
		Replication	Genotype*	Error
1.	Plant height	15.678	132.155	27.499
2.	Plant width	45.602	177.831*	43.969
3.	Number of suckers	0.467	1.478	1.563
4.	Number of leaves	0.389	4.097*	1.898
5.	Leaf length	10.007	90.282*	16.205
6.	Leaf width	0.044	1.466*	0.399
7.	Leaf ratio	0.052	0.807*	0.244
8.	Yield	0.307	1.326*	0.548

Indicates significance at $P < 0.05$ level.

**Fig. S1. Scree plot showing the eigenvalues of principal components in the PCA of morphological traits in 40 *Aloe vera* accessions.**

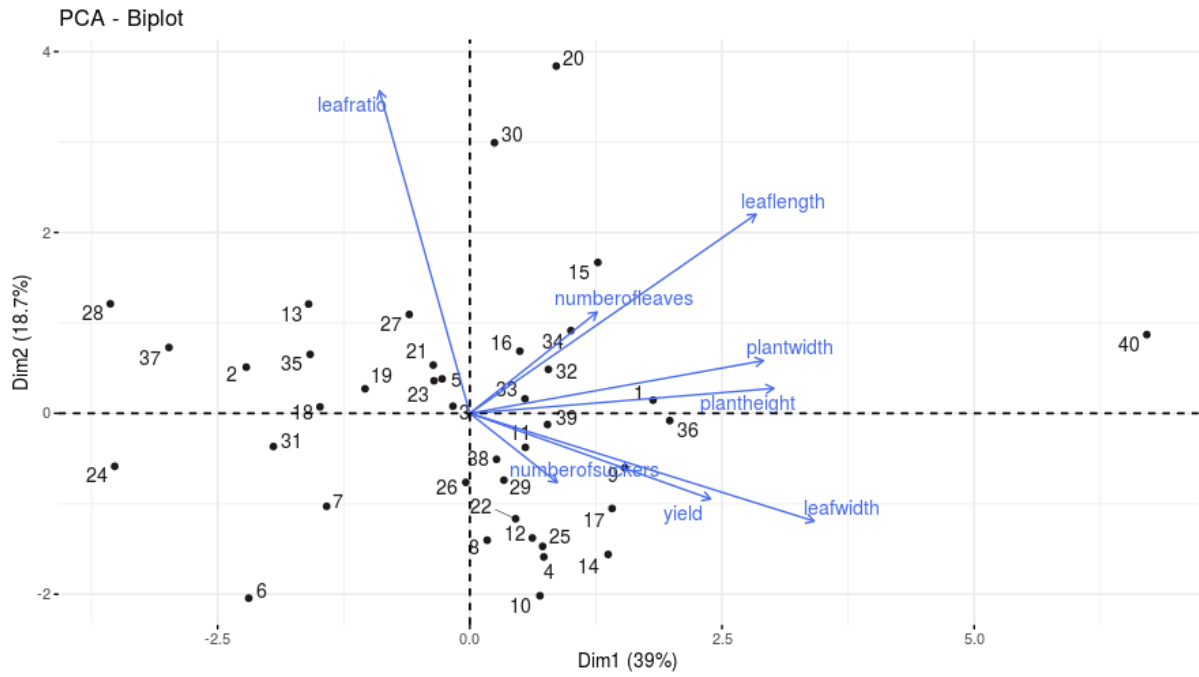


Fig. S2. PCA biplot showing the distribution of 40 *Aloe vera* accessions based on morphological traits.

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