Original Research Article

Correlation and Path Coefficient Analysis for Yield its attributes in Open Pollinated Seedling Progenies of Elephant foot yam *Amorphophallus paeoniifolius* (Dennst.)

ABSTRACT:

An experiment was conducted to study the correlation and path coefficient analysis in twenty four accessions and two varieties of open pollinated seedling progenies of elephant foot yam. Results for all quantitative characters indicated that the trait yield per hectare was significant and positively correlated with the quantitative characters at both genotypic and phenotypic levels. Yield per hectare has shown the significant and positive correlation with height of corm (cm), pseudo-stem height (cm), plant height (cm), thickness of pseudo-stem base (cm), breadth of largest leaflet (cm), diameter of corm (cm), number of leaflets per rachis , length of largest leaflet (cm), length of primary partition (cm), days to senescence at both genotypic and phenotypic levels. Path coefficient analysis revealed by plant height (cm) followed by diameter of corm (cm), length of cormel (cm), weight of cormels per plant (g) exhibited a very high positive direct effect on yield per hectare at genotypic level, but at phenotypic level the traits *viz.*, number of secondary partitions, number of primary partitions, plant height (cm), length of cormel (cm), diameter of corm (cm) revealed a very high positive direct effect on yield per hectare.

Key words: *Amorphophallus paeoniifolius* (Dennst.), Open Pollinated Seedling progenies, Correlation Analysis, Path Coefficient Analysis, Yield per hectare

1. INTRODUCTION:

Amorphophallus paeoniifolius (Dennst.) is a herbaceous, perennial, monoecious C_3 crop. It is basically a crop of South Eastern Asian origin. It serves as a source of protein as well as starch. It has been used as a local staple food in many countries like Philippines, Java, Indonesia, Sumatra, Malaysia, Bangladesh, India, China and South Eastern Asian countries. Owing to its production potential and popularity as a vegetable in various delicious Indian cuisines, it is commercially cultivated in India in the states of Andhra Pradesh, West Bengal, Gujarat, Kerala, Tamil Nadu, Maharashtra, Uttar Pradesh and Jharkhand. In the Northern and Eastern states of India local cultivars grown in wild form are generally being used for making vegetable pickles and indigenous for various ailments. The corms are usually eaten as vegetable after boiling or baking and are rich in calcium, (50 mg g^{-1}), phosphorus (34 mg g^{-1}) and vitamin A (260 IU g^{-1}).The leaves of elephant foot yam are used as a vegetable by local tribes in India because they contain high concentration of vitamin A. *A. paeoniifolius* possess powerful therapeutic action against piles and gastro-intestinal disorders (1). The corms are aperient, carminative and expectorant. The corm extract applied externally as an irritant to treat acute rheumatism, administered internally in the treatment of dysentery, diarrhoea, piles, haemorrhoids and in the formulation of indigenous medicines to cure inflammatory conditions and ophthalmia (2). It is an important tuber crop that offers excellent scope for adaptation as a cash crop due to its higher yield potential and longer shelf life than other vegetable crops.

Correlation coefficient measures the mutual relationship between two or more variables. Correlation coefficient between a pair of characters is either positive or negative and it may be high or low. Estimation of correlation coefficient among the yield contributing variables is necessary to understand the direction of selection and to maximize yield in the shortest period of time. Path coefficient analysis developed by (3) is a standardized partial regression analysis which specifies the relative importance and measures the direct influence of one variable upon another through the partitioning of the correlation coefficient into direct and indirect effects (4). The assessment of genetic divergence existing in the germplasm collection is very important for success of breeding programme leading to development of high yielding varieties of crop plant because optimum magnitude of parental diversity is required for selecting superior variety.

2. MATERIALS AND METHODS:

The study was conducted to work out the status of association of different yield traits and direct & indirect effects of these different traits on yield per hectare among 26 open pollinated seedling progenies of elephant foot yam *A. paeoniifolius* (Dennst.) at Horticultural Research Station, Kovvur, Dr. Y.S.R.H.U, Venkatramannagudem, West Godavari district, Andhra Pradesh.

The experimental materials comprised of 24 elephant foot yam *A. paeoniifolius* (Dennst.) accessions and two check varieties *viz.,* Gajendra and Sree padma. The experiment was laid out in an augmented block design, consisting of four blocks with six entries per each block. Observations were recorded on twenty three quantitative characters.

Table 1: Accessions and two check varieties of elephant foot yam *Amorphophallus paeoniifolius* (Dennst.) used for the experimentation.

S.No.	Accessions	S.No.	Accessions	S.No.	Accessions
1	OP/14-1	9	OP/14-21	17	OP/14-42
2	OP/14-2	10	OP/14-22	18	OP/14-44
3	OP/14-3	11	OP/14-24	19	OP/14-47
4	OP/14-6	12	OP/14-26	20	OP/14-57
5	OP/14-11	13	OP/14-27	21	OP/14-59
6	OP/14-12	14	OP/14-28	22	OP/14-61
7	OP/14-17	15	OP/14-31	23	OP/14-63
8	OP/14-20	16	OP/14-34	24	OP/14-65
	Varieties	25	Gajendra	26	Sree Padma

The experimental data recorded was subjected to statistical analysis. Correlation analysis was carried out as per (5).

- Genotypic correlation between traits X and Y:

$$r_{xy}(g) = \frac{\sigma^2 g(xy)}{\sqrt{\sigma^2 g(x) \cdot \sigma^2 g(y)}}$$

Where,

$\sigma^2 g\ (xy)$ = Genotypic covariance between X and Y

$\sigma^2 g(x)$ = Genotypic variance for X

$\sigma^2 g(y)$ = Genotypic variance for Y

- Phenotypic correlation between traits X and Y:

$$r_{xy}(p) = \frac{\sigma^2 p(xy)}{\sqrt{\sigma^2 p(y) \cdot \sigma^2 p(z)}}$$

Where,

$\sigma^2 p(xy)$ = Phenotypic covariance between X and Y

$\sigma^2 p(x)$ = Phenotypic variance for X

$\sigma^2 p(y)$ = Phenotypic variance for Y

The path coefficient analysis was carried out according to (3) and (4).

3. RESULTS AND DISCUSSION:

Estimates of phenotypic and genotypic correlation coefficient between different characters were given in (Table 2 and 3).Yield per hectare has shown the significant and positive correlation with height of corm (r_g = 0.764, r_p = 0.742), pseudo-stem height (r_g = 0.737, r_p = 0.717), plant height (r_g = 0.731, r_p = 707), thickness of pseudo-stem base (r_g = 0.725, r_p = 0.701), breadth of largest leaflet (r_g = 0.673, r_p = 0.657), diameter of corm (r_g = 0.569, r_p = 0.554), number of leaflets per rachis (r_g = 0.558, r_p = 0.545), length of largest leaflet (r_g = 0.524, r_g = 0.513), length of primary partition (r_g = 0.456, r_p = 0.444), days to senescence (r_g = 0.438, r_p = 0.426) at both genotypic and phenotypic levels. The correlation analysis revealed that corm yield per hectare was significantly and positively associated with several morphological traits, indicating their crucial role in yield determination. Traits such as height of corm, pseudo-stem height, plant height, and thickness of pseudo-stem base exhibited the highest positive correlations, suggesting that vigorous vegetative growth directly contributes to higher yield potential. Leaf-related characters like breadth and length of the largest leaflet, number of leaflets per rachis, and length of primary partition also showed moderate positive associations, reflecting the importance of a larger photosynthetic surface in yield formation. The higher genotypic correlations compared to phenotypic ones indicate a strong genetic control over these traits with limited environmental influence. The results are in accordance with (6), (7), (8), (9) and (10).

The path coefficient analysis was carried out from phenotypic and genotypic correlation coefficients to resolve direct and indirect effect of different characters on yield per hectare as presented in (Table 4 and 5). At genotypic level, a very high positive direct effect on yield per hectare was observed for plant height (7.517), length of cormel (2.661), diameter of corm (2.706), weight of cormels per plant (1.572) and very high negative indirect effect was observed for pseudo-stem height (-7.856), thickness of cormel (-2.136), number of cormels per corm (-1.990), thickness of pseudo-stem base (-1.650). At phenotypic level, secondary partitions (6.192), primary partitions (5.791), plant height (2.113), length of cormel (1.321), diameter of corm (1.249) exhibited a very high positive direct effect on yield per hectare. However, very high negative direct effect was observed for pseudo-stem height (-2.014) and thickness of cormel (-1.871). The path coefficient analysis showed that plant height, length and diameter of corm, and weight of cormels per plant exerted strong positive direct effects on yield per hectare at the genotypic level, indicating their direct contribution to yield improvement. Conversely, traits like pseudo-stem height, thickness of cormel, and number of cormels per corm showed high negative indirect effects, suggesting that their influence on yield is mediated through other traits. At the phenotypic level, number of primary and secondary partitions, plant height, and corm dimensions had high positive direct effects, highlighting their importance under field conditions. The negative direct effects of pseudo-stem height and cormel thickness suggest that excessive vegetative growth or thicker cormels may not proportionally enhance yield. The results are in accordance with the findings of (6) and (8).

4. CONCLUSION:

Corm yield per hectare exhibited a significant and positive correlation with all the characters studied at both genotypic and phenotypic levels. Notably, traits such as plant height, pseudo-stem height, pseudo-stem base thickness, number of leaflets per rachis, length of primary partition, size of the largest leaflet (length and breadth), days to senescence, and corm diameter showed a strong positive association with yield, indicating their importance in yield improvement. Path coefficient analysis further revealed that number of secondary partitions, number of primary partitions, plant height, corm diameter, cormel length, number of leaflets per rachis, and cormel weight exerted a substantial direct effect on corm yield. These findings emphasize that both vegetative vigor and corm morphological traits play a crucial role in determining yield potential. Therefore, these traits should be prioritized as key selection criteria in breeding programs aimed at enhancing corm yield.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

Table 2: Genotypic correlation among yield and its components in Elephant foot yam

	PH	PSH	TPB	LR	LLR	PP	SP	TP	LPP	BPP	DTS	HOC	DOC	CPC	WCP	LOC	TOC	ST	OX	YLD
PH	**1.000**	0.990 **	0.598**	0.021	0.276	0.087	--0.112	-0.065	0.360*	0.277	0.423**	0.635**	0.708**	-0.198	-0.143	-0.268	-0.193	-0.037	0.117	0.731**
PSH		**1.000**	0.596**	0.019	0.265	0.090	-0.114	-0.065	0.369*	0.291	0.402**	0.686**	0.731**	-0.217	-0.142	-0.271	-0.202	0.050	0.078	0.737**
TPB			**1.00**	0.060	0.794**	-0.091	0.061	0.275	0.633**	0.451*	0.251	0.510**	0.508**	-0.069	0.066	-0.079	-0.159	0.041	0.052	0.725**
LPR				**1.00**	0.094	-0.109	0.113	0.037	0.143	0.015	0.075	-0.080	0.023	0.214	0.165	0.245	0.272	0.265	-0.011	0.062
LLR					**1.00**	-0.047	0.032	0.388*	0.626**	0.435*	0.112	0.296	0.096	-0.008	0.135	-0.042	-0.218	-0.086	0.206	0.558**
PP						**1.00**	-0.998**	-0.742**	0.024	0.094	-0.370**	0.139	0.097	0.103	0.130	0.070	0.043	-0.092	-0.550	0.007
SP							**1.00**	0.751**	-0.048	-0.123	0.360**	-0.171	-0.132	-0.111	-0.140	-0.078	-0.052	0.299	0.550	-0.033
TP								**1.00**	0.004	-0.244	0.182	-0.148	-0.065	-0.230	-0.175	-0.160	-0.180	0.100	0.570	0.061
LPP									**1.000**	0.874**	0.097	0.299	0.270	0.095	0.115	0.134	0.057	0.068	-0.070	0.456**
BPP										**1.000**	-0.046	0.331	0.220	0.090	0.139	0.145	0.083	0.036	-0.194	0.322
DTS											**1.000**	0.252	0.214	0.136	-0.024	0.014	0.060	-0.050	0.400	0.438**
HOC												**1.000**	0.753**	-0.035	-0.009	-0.053	-0.027	0.102	-0.073	0.764**
DOC													**1.00**	-0.083	-0.071	-0.164	0.079	0.076	0.007	0.569**
CPC														**1.00**	0.912**	0.911**	0.912**	-0.090	0.025	0.035
WCP															**1.00**	0.782**	0.763**	-0.039	-0.019	0.007
LOC																**1.00**	0.864**	-0.032	-0.075	-0.056
TOC																	**1.00**	-0.004	0.005	-0.207
ST																		**1.00**	-0.080	-0.035
OX.																			**1.00**	0.043
YLD																				**1.00**

***significant at 5% , ** Significant at 1 %**

Table 3: Phenotypic correlation among yield and its components in Elephant foot yam

	PH	PSH	TPB	LR	LLR	PP	SP	TP	LPP	BPP	DTS	HOC	DOC	CPC	WCP	LOC	TOC	ST	OX	YLD
PH	**1.00**	0.989**	0.599**	0.022	0.275	0.087	-0.112	-0.058	0.359*	0.277	0.423*	0.635**	0.707**	-0.186	-0.142	-0.269	-0.194	-0.037	0.118	0.707**
PSH		**1.00**	0.596**	0.019	0.265	0.090	-0.114	-0.066	0.369*	0.290	0.402*	0.685**	0.731**	-0.211	-0.142	-0.271	-0.201	0.050	0.074	0.717**
TPB			**1.00**	0.060	0.794**	-0.091	0.061	0.273	0.633**	0.451**	0.251	0.510**	0.508**	-0.062	0.066	-0.079	-0.160	0.042	0.052	0.701**
LPR				**1.00**	0.095	-0.109	0.113	0.042	0.143	0.014	0.075	-0.079	0.022	0.208	0.166	0.244	0.271	0.264	-0.004	0.064
LLR					**1.00**	-0.047	0.032	0.381*	0.625**	0.435**	0.112	0.296	0.096	-0.010	0.135	-0.042	-0.218	-0.086	0.203	0.545**
PP						**1.00**	-0.998**	-0.727**	0.024	0.094	-0.370	0.139	0.097	0.100	0.130	0.070	0.043	-0.292	-0.538**	0.006
SP							**1.00**	0.736**	-0.048	-0.123	0.360*	-0.171	-0.132	-0.108	-0.140	-0.078	-0.052	0.293	0.538**	-0.032
TP								**1.00**	0.004	-0.239	0.178	-0.142	-0.065	-0.197	-0.167	-0.160	-0.184	0.100	0.575**	0.051
LPP									**1.00**	0.874**	0.097	0.299	0.270	0.092	0.115	0.134	0.057	0.068	-0.068	0.444*
BPP										**1.00**	-0.046	0.331	0.220	0.088	0.139	0.144	0.083	0.036	-0.189	0.313
DTS											**1.00**	0.252	0.214	0.132	-0.024	0.13	0.059	-0.050	0.390	0.426*
HOC												**1.00**	0.752**	-0.031	-0.009	-0.053	-0.027	0.112	-0.070	0.742**
DOC													**1.00**	-0.080	-0.071	-0.164	0.078	0.075	0.006	0.554**
CPC														**1.00**	0.889*	0.883**	0.882**	-0.084	0.017	-0.015
WCP															**1.00**	0.781**	0.759**	-0.038	-0.013	0.006
LOC																**1.00**	0.862**	-0.031	-0.074	-0.052
TOC																	**1.00**	-0.004	-0.006	-0.200
ST																		**1.00**	-0.076	-0.036
OX.																			**1.00**	0.060
YLD																				**1.00**

***significant at 5% , ** Significant at 1 %**

Table 4: Genotypic path among yield and its components in Elephant foot yam

	PH	PSH	TPB	LR	LLR	PP	SP	TP	LPP	BPP	DTS	HOC	DOC	CPC	WCP	LOC	TOC	ST	OX
PH	**7.517**	7.447	4.501	0.161	2.075	0.659	-0.849	-0.491	2.706	2.087	3.184	4.774	5.322	-1.499	-1.077	-2.021	-1.454	-0.283	0.882
PSH	-7.784	**-7.856**	-4.690	-0.153	-2.082	-0.708	0.902	0.516	-2.905	-2.286	-3.163	-5.389	-5.74	1.706	1.118	2.136	1.589	-0.394	-0.615
TPB	-0.988	-0.985	**-1.650**	-0.099	-1.311	0.150	-0.101	-0.455	-1.045	-0.744	-0.415	-0.842	-0.839	0.114	-0.109	0.130	0.263	-0.069	-0.086
LPR	-0.008	-0.776	-0.023	**-0.387**	-0.036	0.042	-0.044	-0.014	-0.055	-0.006	-0.029	0.031	-0.008	-0.083	-0.064	-0.095	-0.105	-0.102	0.004
LLR	0.451	0.433	1.299	0.155	**0.636**	-0.768	0.053	0.636	1.023	0.712	0.184	0.485	0.158	-0.014	0.220	-0.069	-0.357	-0.141	0.337
PP	1.530	1.572	-1.593	-1.916	-0.819	**0.744**	-17.41	-12.944	0.421	1.652	-6.470	2.436	1.697	1.801	2.271	1.221	0.760	-5.095	-9.610
SP	-2.099	-2.125	1.134	2.101	0.608	- 18.48	**0.851**	13.909	-0.888	-2.290	6.667	-3.172	-2.457	-2.064	-2.595	-1.450	-0.971	5.440	10.198
TP	0.058	0.058	-0.247	-0.034	-0.348	0.664	-0.673	**-0.895**	-0.003	0.219	-0.163	0.133	0.058	0.206	0.157	0.143	0.161	-0.090	-0.510
LPP	0.161	0.165	0.284	0.064	0.280	0.010	-0.021	0.001	**0.448**	0.392	0.043	0.134	0.121	0.042	0.051	0.060	0.025	0.030	-0.031
BPP	-0.098	-0.102	-0.159	-0.005	-0.153	-0.033	0.043	0.086	-0.308	**-0.353**	0.016	-0.116	-0.077	-0.031	-0.049	-0.051	-0.029	-0.012	0.068
DTS	0.310	0.295	0.184	0.055	0.082	-0.272	0.264	0.133	0.071	-0.033	**0.733**	0.185	0.157	0.100	-0.017	0.010	0.044	-0.036	0.293
HOC	-0.042	-0.045	-0.033	0.005	-0.019	-0.009	0.011	0.009	-0.019	-0.021	-0.016	**-0.066**	-0.049	0.002	0.006	0.003	0.001	-0.006	0.004
DOC	1.916	1.979	1.376	0.062	0.262	0.263	-0.359	-0.177	0.730	0.595	0.580	2.036	**2.706**	-0.223	-0.192	-0.444	0.212	0.204	0.017
CPC	0.395	0.432	0.137	-0.427	0.017	-0.205	0.221	0.459	-0.189	-0.179	-0.271	0.069	0.164	**-1.990**	-1.814	-1.813	-1.812	0.178	-0.050
WCP	-0.225	-0.223	0.104	0.260	0.212	0.204	-0.220	-0.276	0.181	0.219	-0.038	-0.014	-0.112	1.433	**1.572**	1.229	1.199	-0.061	-0.029
LOC	-0.715	-0.723	-0.210	0.653	-0.112	0.186	-0.208	-0.427	0.359	0.386	0.037	-0.140	-0.436	2.425	2.080	**2.661**	2.300	-0.084	-0.199
TOC	0.413	0.432	0.340	-0.582	0.467	-0.093	0.112	0.385	-0.122	-0.178	-0.128	0.057	-0.168	-1.945	-1.629	-1.845	**-2.136**	0.007	-0.011
ST	-0.020	0.027	0.022	0.144	-0.047	-0.159	0.160	0.055	0.037	0.019	-0.027	0.055	0.041	-0.048	-0.021	-0.017	-0.001	**0.546**	-0.043
OX.	-0.045	-0.030	-0.020	0.004	-0.080	0.215	-0.215	-0.222	0.027	0.076	-0.156	0.028	-0.002	-0.009	0.007	0.029	-0.002	0.031	**-0.391**
YLD	**0.731**	**0.737**	**0.725**	**0.062**	**0.558**	**0.007**	**-0.033**	**0.061**	**0.456**	**0.322**	**0.438**	**0.764**	**0.568**	**0.034**	**0.007**	**-0.055**	**-0.206**	**-0.035**	**0.042**

Negligible: 0.00-0.09, Low: 0.10-0.19, Moderate: 0.20-0.29, High: 0.30-0.99, Very high: >1.00

Table 5: Phenotypic path among yield and its components in Elephant foot yam

	PH	PSH	TPB	LR	LLR	PP	SP	TP	LPP	BPP	DTS	HOC	DOC	CPC	WCP	LOC	TOC	ST	OX
PH	**2.113**	2.092	1.266	0.046	0.583	0.185	-0.238	-0.122	0.760	0.586	0.894	1.342	1.495	-0.395	-0.301	-0.569	-0.410	-0.078	0.249
PSH	-1.994	**-2.014**	-1.201	-0.038	-0.533	-0.181	0.231	0.133	-0.744	-0.586	-0.811	-1.318	-1.473	0.426	0.287	0.547	0.405	-0.100	-0.149
TPB	-0.339	-0.338	**-0.567**	-0.034	-0.450	0.051	-0.034	-0.155	-0.358	-0.255	-0.142	-0.289	-0.288	0.035	-0.037	0.044	0.090	-0.023	-0.029
LPR	-0.006	-0.006	-0.001	**-0.029**	-0.002	0.003	-0.003	-0.001	-0.004	-0.005	-0.002	0.002	-0.007	-0.006	-0.004	-0.007	-0.008	-0.007	0.001
LLR	0.146	0.140	0.421	0.050	**0.530**	-0.024	0.017	0.202	0.332	0.231	0.059	0.157	0.051	-0.005	0.071	-0.022	-0.116	-0.045	0.108
PP	0.507	0.522	-0.528	-0.635	-0.271	**5.791**	-5.781	-4.213	0.139	0.548	-2.147	0.808	0.563	0.582	0.753	0.405	0.251	-1.691	-3.116
SP	-0.699	-0.710	0.379	0.702	0.203	-6.182	**6.192**	4.561	-0.297	-0.766	2.230	-1.061	-0.822	-0.672	-0.867	-0.485	-0.324	1.819	3.332
TP	0.011	0.012	-0.052	-0.008	-0.073	0.139	-0.140	**-0.191**	-0.008	0.045	-0.034	0.027	0.012	0.037	0.032	0.030	0.035	-0.019	-0.110
LPP	0.032	0.033	0.057	0.013	0.056	0.002	-0.004	0.004	**0.090**	0.079	0.008	0.027	0.024	0.008	0.010	0.012	0.005	0.006	-0.006
BPP	0.034	0.036	0.056	0.002	0.054	0.011	-0.015	-0.029	0.109	**0.124**	-0.005	0.041	0.027	0.011	0.017	0.018	0.010	0.004	-0.023
DTS	0.144	0.137	0.085	0.025	0.038	-0.126	0.122	0.061	0.033	-0.015	**0.341**	0.086	0.073	0.045	-0.008	0.004	0.020	-0.017	0.133
HOC	0.001	0.002	0.001	-0.002	0.009	0.004	-0.005	-0.004	0.009	0.009	0.007	**0.002**	0.002	-0.001	0.000	-0.002	-0.001	0.003	-0.002
DOC	0.883	0.913	0.635	0.028	0.121	0.121	-0.165	-0.081	0.337	0.274	0.267	0.939	**1.249**	-0.101	-0.089	-0.204	0.098	0.094	0.007
CPC	-0.013	-0.015	-0.004	0.014	-0.008	0.007	-0.007	-0.014	0.006	0.006	0.009	-0.002	-0.005	**0.071**	0.063	0.063	0.063	-0.006	0.001
WCP	-0.061	-0.061	0.029	0.072	0.058	0.056	-0.060	-0.072	0.050	0.060	-0.010	-0.003	-0.309	0.386	**0.433**	0.338	0.329	-0.016	-0.006
LOC	-0.355	-0.359	-0.104	0.323	-0.055	0.092	-0.103	-0.212	0.178	0.191	0.018	-0.070	-0.216	1.167	1.031	**1.321**	1.139	-0.042	-0.098
TOC	0.363	0.376	0.299	-0.507	0.409	-0.081	0.098	0.344	-0.106	-0.156	-0.112	0.050	-0.147	-1.651	-1.421	-1.613	**-1.871**	0.008	0.012
ST	-0.007	0.009	0.007	0.049	-0.016	-0.054	0.055	0.018	0.013	0.006	0.009	0.019	0.014	-0.015	-0.007	-0.006	-0.008	**0.188**	-0.014
OX.	-0.262	-0.016	-0.011	0.001	-0.045	0.119	-0.119	-0.127	0.015	0.042	-0.086	0.015	0.001	-0.003	0.003	0.016	0.001	0.017	**-0.222**
YLD	**0.707**	**0.717**	**0.701**	**0.064**	**0.545**	**0.006**	**-0.032**	**0.051**	**0.444**	**0.313**	**0.426**	**0.742**	**0.554**	**-0.015**	**0.006**	**-0.052**	**-0.220**	**-0.036**	**0.060**

Negligible: 0.00-0.09, Low: 0.10-0.19, Moderate: 0.20-0.29, High: 0.30-0.99, Very high: >1.00

PH : Plant Height, PSH: Pseudo-Stem Height, TPB: Thickness of Pseudo-stem Base, LP: Leaves per Rachis, LLR :LeafLets per Rachis, PP: Primary Partitions, SP: Secondary Partitions , TP: Tertiary Partitions, LPP: Length of Primary Partition, BPP: Breadth of Primary Partition, DTS: Days To Senescence , HOC: Height Of Corm, DOC: Diameter Of Corm, CPC: Cormels Per Corm, WCP : Weight of Cormels per Plant, LOC: Length Of Cormel, TOC: Thickness Of Cormel, ST: Starch , OX: Oxalates , YLD : Yield per Hectare

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