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Correlation and path coefficient analysis for cob yield and its component traits in baby corn (*Zea mays* L.)

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Abstract
Cob yield per plant is a complex quantitative trait governed by several interrelated component characters. The present investigation was conducted to assess the nature and magnitude of association among yield and its contributing traits and to determine their direct and indirect effects through correlation and path coefficient analysis in baby corn. The experimental material comprised 75 crosses and 28 parents (25 lines and 3 testers), evaluated at Rajendranagar, Jagityal and Kampasagar locations, along with pooled analysis. Genotypic correlations were generally higher than phenotypic correlations, indicating strong inherent associations among traits, with environmental influence reducing phenotypic expression.

Cob yield per plant showed significant positive association with number of cobs per plant, cob weight, baby corn length, plant height and ear height, whereas it exhibited negative association with days to 50 per cent tasseling and silking across locations and in pooled analysis. Among the yield components, number of cobs per plant and cob weight recorded the strongest and most consistent positive association with cob yield per plant. Path coefficient analysis revealed that number of cobs per plant exerted the highest positive direct effect on cob yield per plant at Rajendranagar, Jagityal and in pooled analysis, while cob weight had the highest direct effect at Kampasagar. Baby corn length and days to 50 per cent silking showed positive direct effects, whereas days to 50 per cent tasseling had a negative direct effect. The low residual effects indicated adequate explanation of yield variation by the traits studied. The results suggest that selection for higher number of cobs per plant, greater cob weight, longer baby corn length and early flowering would be effective for yield improvement in baby corn.

Keywords: Baby corn, cob yield per plant, correlation analysis, path coefficient analysis

Introduction
Maize (*Zea mays* L.) is one of the most important cereal crops owing to its wide adaptability, high productivity and diverse uses as food, feed, fodder and industrial raw material and cultivated on more than 200 million hectares and contributing nearly 1.24 billion tonnes to global food production in 2023-2024 (FAOSTAT, 2024). The rising demand for vegetables from both human and livestock populations has increased the need for enhanced production of baby corn (Kumar *et al*., 2013; Sankar *et al*., 2023). Among the diversified forms of maize, baby corn, harvested at an immature stage before fertilization, has emerged as a high-value vegetable crop due to its short duration, multiple pickings and increasing market demand. Under improved agronomic practices, baby corn yields range from 7 to 10 t ha^{-1}, making it suitable for intensive cropping systems and higher farm profitability.

Cob yield in baby corn is a complex quantitative trait governed by several interrelated morphological and phenological characters. Correlation analysis provides insight into the magnitude and direction of associations between yield and its component traits, while path coefficient analysis partitions these associations into direct and indirect effects, enabling identification of characters with true causal influence on yield. Therefore, the present study was undertaken to assess phenotypic and genotypic correlations and path coefficients among yield and yield-related traits in baby corn across multiple environments, with the objective of identifying key characters for improving cob yield per plant.

Materials and Methods

The present investigation was undertaken to study phenotypic and genotypic correlations and path coefficients among yield and yield-related traits in baby corn (*Zea mays* L.) across three environments. The experimental material consisted of 105 genotypes, comprising 75 F_1 hybrids, 28 parents and two checks (DMR-1142 and DMR-1144). The parental lines included CM-104, CM-115, CM-119, CM-201, BML-5016, BML-5118-3, BML-5160, BML-5161, BML-5219, BML-5222, BML-5342, QPM-57-1, BML-5063-1, BML-5204-3, BML-5121, BML-5212, BML-5347-2, QPM-33, QPM-63-1, BML-5204-5-2-1, BML-5207, BML-5204-1-8, QPM-49, QPM-69-2 and QPM-62, while BML-6, BML-13 and CM-131 were used as testers. The parents were crossed in a Line × Tester design to generate 75 hybrids.

The experiment was conducted during the kharif season at three locations: College Farm, Rajendranagar; RARS, Jagityal; and ARS, Kampasagar, Telangana. The trials were laid out in a Randomized Block Design with three replications at each location. Each genotype was grown in a single 4 m row with a spacing of 60 × 20 cm. Observations were recorded for all traits following standard procedures. Correlation coefficients were estimated to determine associations among traits, and path coefficient analysis was performed to partition correlations into direct and indirect effects on cob yield per plant. Analyses were carried out for individual environments and pooled over locations.

Table 1: List of the maize inbred lines & crosses used in the study

Parent & Crosses	CM-104 X BML-6	BML-5342 X CM-131	BML-5204-1-8 X BML-13
Parents	CM-104 X BML-13	QPM-57-1 X BML-6	BML-5204-1-8 X CM-131
Lines	CM-104 X CM-131	QPM-57-1 X BML-13	QPM-49 X BML-6
CM-104	CM-115 X BML-6	QPM-57-1 X CM-131	QPM-49 X BML-13
CM-115	CM-115 X BML-13	BML-5063-1 X BML-6	QPM-49 X CM-131
CM-119	CM-115 X CM-131	BML-5063-1 X BML-13	QPM-69-2 X BML-6
CM-201	CM-119 X BML-6	BML-5063-1 X CM-131	QPM-69-2 X BML-13
BML-5016	CM-119 X BML-13	BML-5204 - 3 X BML-6	QPM-69-2 X CM-131
BML-5118-3	CM-119 X CM-131	BML-5204 - 3 X BML-13	QPM-62 X BML-6
BML-5160	CM-201 X BML-6	BML-5204 - 3 X CM-131	QPM-62 X BML-13
BML-5161	CM-201 X BML-13	BML-5121 X BML-6	QPM-62 X CM-131
BML-5219	CM-201 X CM-131	BML-5121 X BML-13	DMR-1142
BML-5222	BML-5016 X BML-6	BML-5121 X CM-131	DMR-1144
BML-5342	BML-5016 X BML-13	BML-5212 X BML-6	
QPM-57-1	BML-5016 X CM-131	BML-5212 X BML-13	
BML-5063-1	BML-5118-3 X BML-6	BML-5212 X CM-131	
BML-5204 - 3	BML-5118-3 X BML-13	BML-5347-2 X BML-6	
BML-5121	BML-5118-3 X CM-131	BML-5347-2 X BML-13	
BML-5212	BML-5160 X BML-6	BML-5347-2 X CM-131	
BML-5347-2	BML-5160 X BML-13	QPM-33 X BML-6	
QPM-33	BML-5160 X CM-131	QPM-33 X BML-13	
QPM-63-1	BML-5161 X BML-6	QPM-33 X CM-131	
BML-5204-5-2-1	BML-5161 X BML-13	QPM-63-1 X BML-6	
BML-5207	BML-5161 X CM-131	QPM-63-1 X BML-13	
BML-5204-1-8	BML-5219 X BML-6	QPM-63-1 X CM-131	
QPM-49	BML-5219 X BML-13	BML-5204-5-2-1 X BML-6	
QPM-69-2	BML-5219 X CM-131	BML-5204-5-2-1 X BML-13	
QPM-62	BML-5222 X BML-6	BML-5204-5-2-1 X CM-131	
Testers	BML-5222 X BML-13	BML-5207 X BML-6	
BML-6	BML-5222 X CM-131	BML-5207 X BML-13	
BML-13	BML-5342 X BML-6	BML-5207 X CM-131	
CM-131	BML-5342 X BML-13	BML-5204-1-8 X BML-6	

Results and Discussion

Phenotypic and genotypic correlation coefficients among yield and its component traits were estimated across Rajendranagar, Jagtial, Kampasagar and in pooled analysis. In general, genotypic correlations were higher than phenotypic correlations, indicating strong inherent genetic associations, though their phenotypic expression was reduced due to environmental influence.

Days to 50 per cent tasseling showed a strong positive phenotypic correlation with days to 50 per cent silking at all locations (0.9291to -0.9484) and in pooled analysis (0.9317). However, it exhibited significant negative phenotypic correlations with cob yield per plant at Rajendranagar (-0.2062), Jagityal (-0.2419), Kampasagar (-0.1137) and pooled analysis (-0.1927), suggesting the adverse effect of delayed flowering on yield. Days to 50 per cent silking also recorded significant negative correlations with cob yield per plant across locations (-0.1179 to -0.2549) and in pooled analysis (-0.2010). Plant height exhibited significant positive phenotypic correlations with ear height, baby corn length, cob weight, number of cobs per plant and cob yield per plant at all locations, with a strong association with cob yield per plant in pooled analysis (0.6361). Ear height was similarly positively correlated with cob yield per plant across environments (0.5329-0.6765) and in pooled analysis (0.5927).

Baby corn length showed a significant positive phenotypic correlation with cob yield per plant at Rajendranagar (0.6525), Jagtial (0.7716), Kampasagar (0.4969) and pooled analysis (0.5954), mainly through its strong association with cob weight. Baby corn girth exhibited mostly non-significant correlations with cob yield per plant across locations. Cob weight showed a highly significant positive phenotypic correlation with cob yield

per plant at Rajendranagar (0.6899), Jagityal (0.8420), Kampasagar (0.7405) and pooled analysis (0.7661). Number of cobs per plant recorded the highest positive association with cob yield per plant across all locations (0.6489-0.8996) and in pooled analysis (0.8207), indicating its primary role in yield determination. Overall, cob yield per plant was positively associated with number of cobs per plant, cob weight, baby corn length, plant height and ear height, and negatively associated with days to 50 per cent tasseling and silking.

Path coefficient analysis revealed that days to 50 per cent tasseling exerted a negative direct effect on cob yield per plant across locations and in pooled analysis (-0.0428), confirming the detrimental effect of delayed flowering. Although days to 50 per cent silking exhibited a small positive direct effect (0.0510), its overall association with yield was negative due to strong negative indirect effects through tasseling and number of cobs per plant. Plant height and ear height showed low to moderate direct effects on cob yield per plant; however, their positive correlations with yield were mainly due to substantial indirect effects via cob weight and number of cobs per plant. Baby corn length exhibited a consistent positive direct effect on cob yield per plant, particularly in pooled analysis (0.0611), along with strong indirect effects through cob weight.

Cob weight exerted a high and consistent positive direct effect on cob yield per plant across locations (0.4658-0.7279) and in pooled analysis (0.5295), establishing it as a major yield determinant. Number of cobs per plant recorded the highest positive direct effect on cob yield per plant at Rajendranagar (0.7817), Jagityal (0.6297) and in pooled analysis (0.6603), while at Kampasagar it ranked second after cob weight (0.6743). The residual effects were low at Rajendranagar (0.1983), Jagityal (0.1016), Kampasagar (0.0836) and in pooled analysis (0.0183), indicating that the traits included adequately explained the variation in cob yield per plant. Correlation and path coefficient analyses indicated that number of cobs per plant and cob weight were the most important traits contributing directly to cob yield per plant, followed by baby corn length. Negative direct effects of flowering traits highlight the importance of earliness. Hence, selection for genotypes with higher number of cobs per plant, heavier cobs, longer baby corn and early flowering would be most effective for improving cob yield in baby corn.

Table 2: Phenotypic (P) and Genotypic (G) correlations for 8 characters at Rajendranagar location

Source		Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	0.9291 **	-0.1439 *	-0.1881 **	0.2136 **	-0.1071	0.0463	-0.3370 **	-0.2062**
	G	0.9954**	-0.1884**	-0.2561**	0.3153**	-0.3304**	0.0633	-0.4239**	-0.2792**
Days to 50% silking	P	1.0000	-0.2179 **	-0.2687 **	0.1905 **	-0.1010	-0.0155	-0.3665 **	-0.2549**
	G	1.0000	-0.2691**	-0.3351**	0.2631**	-0.2450**	-0.0396	-0.4571**	-0.3573**
Plant height (cm)	P		1.0000	0.8662 **	0.5009 **	-0.0429	0.6621 **	0.3602 **	0.6185**
	G		1.0000	0.9150**	0.5607**	-0.1276	0.7606**	0.3909**	0.6893
Ear height (cm)	P			1.0000	0.3160 **	-0.0371	0.5563 **	0.4260 **	0.6056**
	G			1.0000	0.3573	-0.0779	0.6246	0.4468	0.6525**
Baby corn length (cm)	P				1.0000	-0.1632 **	0.7726 **	-0.0314	0.4033**
	G				1.0000	-0.3744**	0.8463**	-0.0343	0.4342**
Baby corn girth (cm)	P					1.0000	-0.0623	-0.0304	-0.0420
	G					1.0000	-0.2970**	-0.0353	-0.1764**
Cob weight (g)	P						1.0000	0.2099 **	0.6899**
	G						1.0000	0.2345**	0.7070**
Number of cobs per plant	P							1.0000	0.8249**
	G							1.0000	0.8607**

Table 3: Phenotypic (P) and Genotypic (G) correlations for 8 characters at Jagityal location

Source		Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	0.9484 **	-0.2074 **	-0.2957 **	-0.0922	-0.1239 *	-0.1900 **	-0.2367**	-0.2419**
	G	1.0003**	-0.2504**	-0.3687**	-0.1173*	-0.2583**	-0.2409**	-0.2723**	-0.2800**
Days to 50% silking	P	1.0000	-0.2089 **	-0.2840 **	-0.1232 *	-0.1232 *	-0.1971 **	-0.2187**	-0.2304**
	G	1.0000	-0.2359**	-0.3520**	-0.1490**	-0.2442**	-0.2625**	-0.2514**	-0.2727**
Plant height (cm)	P		1.0000	0.8348 **	0.6356 **	0.1365 *	0.6723 **	0.6328**	0.7260**
	G		1.0000	0.9162**	0.7234**	0.3609**	0.8507**	0.6994**	0.8240**
Ear height (cm)	P			1.0000	0.5448 **	0.1855 **	0.6521 **	0.5765**	0.6765**
	G			1.0000	0.6054 **	0.4061**	0.7994**	0.6141**	0.7402**
Baby corn length (cm)	P				1.0000	0.0473	0.8411 **	0.5291**	0.7716**
	G				1.0000	0.1831 **	0.9456**	0.5680**	0.8061**
Baby corn girth (cm)	P					1.0000	0.1182 *	0.0728	0.1044
	G					1.0000	0.4073 **	0.1091	0.2451**
Cob weight (g)	P						1.0000	0.5407 **	0.8420**
	G						1.0000	0.6420**	0.8616**
Number of cobs per plant	P							1.0000	0.8966**
	G							1.0000	0.9351**

Table 4: Phenotypic (P) and Genotypic (G) correlations for 8 characters at Kampasagar location

Source		Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50 tasseling	P	0.9211**	-0.0998	-0.0435	0.1318 *	0.0555	0.0899	-0.2914 **	-0.1137*
	G	0.9800**	-0.1205*	-0.0740	0.1579**	0.1521**	0.1127*	-0.3546**	-0.1581**
Days to 50% silking	P	1.0000	-0.1198*	-0.0594	0.1309 *	0.0718	0.0940	-0.3006 **	-0.1179*
	G	1.0000	-0.1630**	-0.1054	0.1813**	0.1560**	0.1341*	-0.3754**	-0.1569**
Plant height (cm)	P		1.0000	0.9001**	0.5105 **	-0.0855	0.4588 **	0.2259 **	0.5009**
	G		1.0000	0.9912 **	0.5604	-0.1801**	0.5532	0.2526**	0.5851**
Ear height (cm)	P			1.0000	0.5337 **	-0.1061	0.4895 **	0.2351 **	0.5329**
	G			1.0000	0.5843**	-0.1729**	0.6211**	0.2377**	0.6236**
Baby corn length (cm)	P				1.0000	0.1512 **	0.7333 **	-0.1115 *	0.4969**
	G				1.0000	0.3087	0.8322**	-0.1331*	0.5242**
Baby corn girth (cm)	P					1.0000	-0.0027	-0.0025	-0.0013
	G					1.0000	0.0038	-0.0866	-0.0554
Cob weight (g)	P						1.0000	-0.0232	0.7405**
	G						1.0000	-0.0368	0.6997**
Number of cobs per plant	P							1.0000	0.6489**
	G							1.0000	0.6844**

Table 5: Phenotypic (P) and Genotypic (G) correlations for 8 characters at pooled location

Source		Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	0.9317 **	-0.1534 **	-0.1825 **	0.0779 *	-0.0619	-0.0288	-0.2871 **	-0.1927**
	G	0.9962**	-0.3120**	-0.3952**	0.1161**	-0.2985**	-0.1044	-0.4338**	-0.2799**
Days to 50% silking	P	1.0000	-0.1857 **	-0.2159 **	0.0645 *	-0.0524	-0.0462	-0.2952**	-0.2010**
	G	1.0000	-0.3492**	-0.4322**	0.0845*	-0.2668	-0.1440	-0.4774	-0.3265**
Plant height (cm)	P		1.0000	0.8585 **	0.5557 **	0.0106	0.6076 **	0.4448**	0.6361**
	G		1.0000	0.9752	0.7336	0.0054	0.9112	0.8128	0.9646**
Ear height (cm)	P			1.0000	0.4593 **	0.0151	0.5637 **	0.4336**	0.5927**
	G			1.0000	0.6424	-0.0191	0.8746	0.8386	0.9535**
Baby corn length (cm)	P				1.0000	0.0281	0.7879 **	0.1850**	0.5954**
	G				1.0000	-0.0815	0.9008	0.3635	0.7266**
Baby corn girth (cm)	P					1.0000	0.0291	0.0179	0.0373
	G					1.0000	-0.0293	-0.0739	-0.0767
Cob weight (g)	P						1.0000	0.2983 **	0.7661**
	G						1.0000	0.6534	0.9287**
Number of cobs per plant	P							1.0000	0.8207**
	G							1.0000	0.8833**

* Significant at 5 percent level; ** significant at 1 percent level

P represents phenotypic correlation coefficient G represents genotypic correlation coefficient

Table 6: Phenotypic (P) and Genotypic (G) Path coefficients for 8 characters at Rajendranagar location

Source		Days to 50% tasseling	Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob Weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	-0.0347	0.0464	-0.0014	-0.0007	0.0042	-0.0019	0.0240	-0.2422	-0.2063
	G	-0.0751	0.0690	-0.0016	0.0059	0.0062	-0.0024	0.0338	-0.3152	-0.2792
Days to 50% silking	P	-0.0323	0.0499	-0.0022	-0.0009	0.0037	-0.0018	-0.0080	-0.2634	-0.2549
	G	-0.0747	0.0693	-0.0022	0.0078	0.0052	-0.0018	-0.0211	-0.3398	-0.3573
Plant height (cm)	P	0.0050	-0.0109	0.0099	0.0031	0.0098	-0.0009	0.3436	0.2589	0.6185
	G	0.0141	-0.0187	0.0083	-0.0212	0.0111	-0.0009	0.4059	0.2906	0.6893
Ear height (cm)	P	0.0065	-0.0134	0.0086	0.0035	0.0062	-0.0006	0.2886	0.3061	0.6056
	G	0.0192	-0.0232	0.0076	-0.0232	0.0071	-0.0006	0.3333	0.3322	0.6525
Baby corn length (cm)	P	-0.0074	0.0095	0.0050	0.0011	0.0196	-0.0028	0.4009	-0.0226	0.4033
	G	-0.0237	0.0182	0.0047	-0.0083	0.0198	-0.0027	0.4517	-0.0255	0.4342
Baby corn girth (cm)	P	0.0037	-0.0050	-0.0005	-0.0001	-0.0032	0.0174	-0.0323	-0.0218	-0.0420
	G	0.0248	-0.0170	-0.0011	0.0018	-0.0074	0.0072	-0.1585	-0.0263	-0.1764
Cob Weight (g)	P	-0.0016	-0.0008	0.0066	0.0020	0.0152	-0.0011	0.5189	0.1508	0.6899
	G	-0.0047	-0.0027	0.0063	-0.0145	0.0167	-0.0021	0.5337	0.1744	0.7070
Number of cobs per plant	P	0.0117	-0.0183	0.0036	0.0015	-0.0006	-0.0005	0.1089	0.7187	0.8249
	G	0.0318	-0.0317	0.0033	-0.0104	-0.0007	-0.0003	0.1252	0.7435	0.8607

Table 7: Phenotypic (P) and Genotypic (G) Path coefficients for 8 characters at Jagityal location

Source		Days to 50% tasseling	Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob Weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	-0.0566	0.0511	0.0033	0.0046	-0.0061	-0.0006	-0.0885	-0.1491	-0.2419
	G	-0.6878	0.6797	0.0548	-0.1879	-0.1565	-0.0684	0.2862	-0.2001	-0.2800
Days to 50% silking	P	-0.0537	0.0539	0.0034	0.0044	-0.0082	-0.0006	-0.0918	-0.1377	-0.2304
	G	-0.6880	0.6794	0.0517	-0.1795	-0.1988	-0.0647	0.3119	-0.1847	-0.2727
Plant height (cm)	P	0.0117	-0.0113	-0.0160	-0.0130	0.0422	0.0007	0.3132	0.3985	0.7260
	G	0.1722	-0.1603	-0.2191	0.4670	0.9653	0.0956	-1.0108	0.5140	0.8240
Ear height (cm)	P	0.0167	-0.0153	-0.0134	-0.0156	0.0362	0.0009	0.3038	0.3631	0.6765
	G	0.2536	-0.2392	-0.2007	0.5098	0.8077	0.1076	-0.9499	0.4512	0.7402
Baby corn length (cm)	P	0.0052	-0.0066	-0.0102	-0.0085	0.0664	0.0002	0.3918	0.3332	0.7716
	G	0.0806	-0.1012	-0.1585	0.3086	1.3343	0.0485	-1.1236	0.4174	0.8061
Baby corn girth (cm)	P	0.0070	-0.0066	-0.0022	-0.0029	0.0031	0.0051	0.0550	0.0458	0.1044
	G	0.1776	-0.1659	-0.0791	0.2070	0.2443	0.2649	-0.4840	0.0801	0.2451
Cob Weight (g)	P	0.0108	-0.0106	-0.0108	-0.0102	0.0559	0.0006	0.4658	0.3405	0.8420
	G	0.1657	-0.1783	-0.1863	0.4075	1.2617	0.1079	-1.1883	0.4717	0.8616
Number of cobs per plant	P	0.0134	-0.0118	-0.0101	-0.0090	0.0352	0.0004	0.2519	0.6297	0.8996
	G	0.1873	-0.1708	-0.1532	0.3130	0.7579	0.0289	-0.7628	0.7348	0.9351

Table 8: Phenotypic (P) and Genotypic (G) Path coefficients for 8 characters at Kampasagar location

Source		Days to 50% tasseling	Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob Weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	0.0120	-0.0004	0.0011	-0.0003	0.0052	-0.0002	0.0654	-0.1965	-0.1137
	G	0.2099	-0.2290	0.0926	-0.0549	0.0343	-0.0101	0.0584	-0.2592	-0.1581
Days to 50% silking	P	0.0110	-0.0004	0.0013	-0.0004	0.0051	-0.0003	0.0684	-0.2027	-0.1179
	G	0.2057	-0.2337	0.1253	-0.0782	0.0394	-0.0104	0.0694	-0.2744	-0.1569
Plant height (cm)	P	-0.0012	0.0001	-0.0111	0.0065	0.0200	0.0004	0.3339	0.1523	0.5009
	G	-0.0253	0.0381	-0.7684	0.7357	0.1219	0.0120	0.2864	0.1847	0.5851
Ear height (cm)	P	-0.0005	0.0000	-0.0100	0.0072	0.0210	0.0005	0.3563	0.1585	0.5329
	G	-0.0155	0.0246	-0.7616	0.7422	0.1271	0.0115	0.3216	0.1738	0.6236
Baby corn length (cm)	P	0.0016	-0.0001	-0.0056	0.0038	0.0393	-0.0007	0.5338	-0.0752	0.4969
	G	0.0331	-0.0424	-0.4306	0.4336	0.2175	-0.0206	0.4308	-0.0973	0.5242
Baby corn girth (cm)	P	0.0007	0.0000	0.0009	-0.0008	0.0059	-0.0043	-0.0020	-0.0017	-0.0013
	G	0.0319	-0.0364	0.1384	-0.1283	0.0671	-0.0667	0.0020	-0.0633	-0.0554
Cob Weight (g)	P	0.0011	0.0000	-0.0051	0.0035	0.0288	0.0000	0.7279	-0.0156	0.7405
	G	0.0237	-0.0313	-0.4251	0.4610	0.1810	-0.0003	0.5177	-0.0269	0.6997
Number of cobs per plant	P	-0.0035	0.0001	-0.0025	0.0017	-0.0044	0.0000	-0.0169	0.6743	0.6489
	G	-0.0744	0.0877	-0.1941	0.1764	-0.0290	0.0058	-0.0190	0.7311	0.6844

Table 9: Phenotypic (P) and Genotypic (G) Path coefficients for 08 characters at pooled location

Source		Days to 50% tasseling	Days to 50% silking	Plant height (cm)	Ear height (cm)	Baby corn length (cm)	Baby corn girth (cm)	Cob Weight (g)	Number of cobs per plant	Cob yield per plant (g)
Days to 50% tasseling	P	-0.0428	0.0475	-0.0025	0.0057	0.0048	-0.0005	-0.0153	-0.1896	-0.1927**
	G	0.2712	-0.2839	-0.0776	0.0303	-0.0077	0.0106	-0.0594	-0.1634	-0.2799**
Days to 50% silking	P	-0.0399	0.0510	-0.0030	0.0067	0.0039	-0.0005	-0.0244	-0.1949	-0.2010**
	G	0.2702	-0.2849	-0.0869	0.0331	-0.0056	0.0095	-0.0820	-0.1798	-0.3265**
Plant height (cm)	P	0.0066	-0.0095	0.0164	-0.0268	0.0339	0.0001	0.3217	0.2937	0.6361**
	G	-0.0846	0.0995	0.2487	-0.0748	-0.0489	-0.0002	0.5188	0.3061	0.9646**
Ear height (cm)	P	0.0078	-0.0110	0.0140	-0.0312	0.0280	0.0001	0.2985	0.2863	0.5927**
	G	0.1072	0.1232	0.2426	-0.0767	0.0428	0.0007	0.4980	0.3159	0.9535**
Baby corn length (cm)	P	-0.0033	0.0033	0.0091	-0.0143	0.0611	0.0002	0.4172	0.1222	0.5954**
	G	0.0315	-0.0241	0.1825	-0.0493	-0.0667	0.0029	0.5129	0.1369	0.7266**
Baby corn girth (cm)	P	0.0026	-0.0027	0.0002	-0.0005	0.0017	0.0087	0.0154	0.0118	0.0373
	G	-0.0810	0.0760	0.0014	0.0015	0.0054	-0.0355	-0.0167	-0.0278	-0.0767
Cob Weight (g)	P	0.0012	-0.0024	0.0099	-0.0176	0.0481	0.0003	0.5295	0.1970	0.7661**
	G	-0.0283	0.0410	0.2267	-0.0671	-0.0601	0.0010	0.5694	0.2461	0.9287**
Number of cobs per plant	P	0.0123	-0.0151	0.0073	-0.0135	0.0113	0.0002	0.1580	0.6603	0.8207**
	G	-0.1177	0.1360	0.2022	-0.0643	-0.0242	0.0026	0.3720	0.3766	0.8833**

P represents phenotypic correlation coefficient G represents genotypic correlation coefficient

* Significant at 5 percent level; ** significant at 1 percent level

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