

Supplementary Table 1 Different genotypes of apple used in present studies

Apple genotypes	Varietal designation	Year of planting	Rootstock
Pinova	M1	2021	M <sub>9</sub>
Golden Clone-B	M2	2021	M <sub>9</sub>
Golden Delicious Reinders	M3	2021	M <sub>9</sub>
Granny Smith	M4	2021	M <sub>9</sub>
Sunhari	M5	2021	M <sub>9</sub>
Anna	P1	2021	M <sub>9</sub>
Red velox	P2	2021	M <sub>9</sub>
Red Chief	P3	2021	M <sub>9</sub>
Gala Redlum	P4	2021	M <sub>9</sub>
Red Chief Camspur	P5	2021	M <sub>9</sub>
Red Gold	P6	2021	M <sub>9</sub>

Supplementary Table 2 Eleven genotypes were studied as per the following crossing plan

Maternal parent	Pinova	Golden Clone-B	Golden Delicious Reinders	Granny Smith	Sunhari
Pollen parent	(M1)	(M2)	(M3)	(M4)	(M5)
Anna (P1)	M1P1	M2P1	M3P1	M4P1	M5P1
Red Velox (P2)	M1P2	M2P2	M3P2	M4P2	M5P2
Red Chief (P3)	M1P3	M2P3	M3P3	M4P3	M5P3
Gala Redlum (P4)	M1P4	M2P4	M3P4	M4P4	M5P4
Red Chief Camspur (P5)	M1P5	M2P5	M3P5	M4P5	M5P5
Red Gold (P6)	M1P6	M2P6	M3P6	M4P6	M5P6

Supplementary Table 3 Effect of pollen source on fruit colour (a\*) and fruit colour (b\*) of different apple cultivars

Pollen parent (♂)	Anna (P1)	Red Velox (P2)	Red Chief (P3)	Gala Redlum (P4)	Red Chief Camspur (P5)	Red Gold (P6)	Mean	Anna (P1)	Red Velox (P2)	Red Chief (P3)	Gala Redlum (P4)	Red Chief Camspur (P5)	Red Gold (P6)	Mean
Maternal parent (♀)														
Pinova (M1)	-6.52	-6.59	-6.68	-6.57	-6.51	-6.64	-6.58	21.94	22.78	26.30	22.89	25.21	23.21	23.72
Golden Clone-B (M2)	-9.51	-9.12	-9.59	-9.41	-9.53	-9.06	-9.37	33.12	29.60	30.46	30.58	31.27	35.24	31.71
Golden Delicious Reinders (M3)	-10.54	-11.14	-10.59	-10.83	-10.10	-11.46	-10.77	41.08	42.21	44.41	43.31	40.80	44.54	42.72
Granny Smith (M4)	-14.15	-13.55	-14.19	-14.48	-14.22	-14.44	-14.17	38.37	39.9	36.43	38.06	39.88	36.17	38.13
Sunhari (M5)	-7.32	-7.10	-6.24	-6.67	-6.55	-7.46	-6.89	35.92	36.11	38.88	34.07	32.92	37.84	35.95
Mean	-9.60	-9.50	-9.45	-9.59	-9.38	-9.81		34.08	34.12	35.29	33.78	34.01	35.40	
CD ( $P \leq 0.05$ )														
Maternal parent (M)				0.56							1.36			
Pollen parent (P)				N/A							N/A			
M × P				N/A							3.35			