

Genetic diversity among coloured cotton genotypes in relation to their fibre colour and ploidy level based on SSR markers

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Electronic Supplementary Material (ESM)

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Table S1. List of the colour cotton genotypes used for estimating the genetic diversity

No.	Genotype	Species name	Fibre colour	Ploidy level
G1	RAHCC-1001	<i>Gossypium hirsutum</i>	dark brown	tetraploid (AADD) ($2n = 4x = 52$) tetraploid brown coloured cotton (TBCC)
G2	RAHCC-1002	<i>Gossypium hirsutum</i>	dark brown	
G3	RAHCC-1003	<i>Gossypium hirsutum</i>	dark brown	
G4	RAHCC-1004	<i>Gossypium hirsutum</i>	dark brown	
G5	RAHCC-1005	<i>Gossypium hirsutum</i>	dark brown	
G6	RAHCC-1006	<i>Gossypium hirsutum</i>	dark brown	
G7	RAHCC-1007	<i>Gossypium hirsutum</i>	dark brown	
G8	RAHCC-1008	<i>Gossypium hirsutum</i>	dark brown	
G9	RAHCC-1009	<i>Gossypium hirsutum</i>	medium brown	
G10	RAHCC-1010	<i>Gossypium hirsutum</i>	medium brown	
G11	RAHCC-1011	<i>Gossypium hirsutum</i>	medium brown	
G12	RAHCC-1012	<i>Gossypium hirsutum</i>	medium brown	
G13	RAHCC-1013	<i>Gossypium hirsutum</i>	medium brown	
G14	RAHCC-1014	<i>Gossypium hirsutum</i>	medium brown	
G15	RAHCC-1015	<i>Gossypium hirsutum</i>	medium brown	
G16	RAHCC-1016	<i>Gossypium hirsutum</i>	light brown	diploid (AA) ($2n = 2x = 26$) diploid brown coloured cotton (DBCC)
G17	RAHCC-1017	<i>Gossypium hirsutum</i>	light brown	
G18	RAHCC-1018	<i>Gossypium hirsutum</i>	light brown	
G19	RAHCC-1019	<i>Gossypium hirsutum</i>	light brown	
G20	RAHCC-1020	<i>Gossypium hirsutum</i>	light brown	
G21	RAHCC-1021	<i>Gossypium hirsutum</i>	light brown	
G22	RACC-109	<i>Gossypium arboreum</i>	dark brown	
G23	RACC-110	<i>Gossypium arboreum</i>	dark brown	
G24	RACC-114	<i>Gossypium arboreum</i>	dark brown	
G25	RACC-115	<i>Gossypium arboreum</i>	medium brown	
G26	RACC-116	<i>Gossypium arboreum</i>	medium brown	
G27	RACC-126	<i>Gossypium arboreum</i>	medium brown	
G28	RACC-134	<i>Gossypium arboreum</i>	light brown	
G29	RACC-180	<i>Gossypium arboreum</i>	light brown	
G30	RACC-181	<i>Gossypium arboreum</i>	light brown	
G31	RACC-182	<i>Gossypium arboreum</i>	light brown	
G32	BGDS-1033	<i>Gossypium hirsutum</i>	white	tetraploid (AADD) ($2n = 4x = 52$) tetraploid white coloured cotton (TWCC)
G33	BGDS-1063	<i>Gossypium hirsutum</i>	white	

TBCC – tetraploid brown coloured cotton genotypes; DBCC – diploid brown coloured cotton genotypes; TWCC – tetraploid white coloured cotton genotypes

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Table S2. List of the SSR primers used for the genetic diversity analysis

No.	Primer code		Sequence (5'–3')	Base	Trait
1	BNL-3590	F:	TCTTCCCTCTCTTTCTCTTTTCG	22	lint percent
		R:	ACACGGAAGACCAACCAAGT	20	
2	BNL-1604	F:	AGAGGGAGTAAAGATTTGGGG	21	fibre strength
		R:	TCCAGTTCTTTTTCGCTTGG	20	
3	NAU-3308	F:	AATGGCTCTTCTCCTCCTTT	20	lint percent
		R:	GCGTATTCCTCGTTACTCGT	20	
4	JESPR-204	F:	CTCCAGGTTCAATGGTCTG	19	lint percent
		R:	GCCATGTTGGACAAGTAGTC	20	
5	CIR-221	F:	GAAGTAACCAACCACCTC	18	lint percent
		R:	ATCTTGCTCATTATATCC	19	
6	BNL-1672	F:	TGGATTTGTCCCTCTGTGTG	20	lint percent
		R:	AACCAACTTTTCCAACACCG	20	
7	CIR-307	F:	GACTTGAAAAGATTACACAC	20	fibre strength
		R:	GAATTTGCTGGCTCT	15	
8	JESPR-153	F:	GATTACCTTCATAGGCCACTG	21	fibre strength
		R:	GAAAACATGAGCATCCTGTG	20	
9	TMB-1618	F:	GGGAATTGAACCCAAGACCT	20	fibre strength
		R:	GTGAAAGGGGAGGTTCAACA	20	
10	JESPR-274	F:	GCCCACTCTTTCTTCAACAC	20	micronaire value
		R:	TGATGTCATGTGCCTTGC	18	
11	DC-40052	F:	CATGCAGCCTACTATGCC	18	seed cotton weight/boll
		R:	TAACGCCCCAACATTATCC	18	
12	DC-20076	F:	ACCAAAAAACATACCCAAA	18	seed cotton weight/boll
		R:	GGAATTAGTTGTTAAGTTGAA	21	
13	CGR-5399	F:	GTTGGTGAAAGACCAGGCAT	20	lint yield
		R:	GTGTTAGAGAAACGCCTCGC	20	
14	CGR-5258	F:	AACCAGTCTGGAAGATGGCA	20	number of bolls/plant
		R:	CCTGAACGTCATCACCTCT	20	
15	CGR-5423	F:	AGAACCATTGCGGGTCATAG	20	fibre elongation
		R:	GACCGGTTAGTGGAATGGA	20	
16	CGR-5541	F:	ATCAATTGGTGAGGAAGCA	20	fibre elongation
		R:	CACAAACCAAATAAACAGCCTC	22	
17	HAU-1321	F:	ACTCAGGGAATGATGCAAAT	20	fibre strength/ fibre elongation
		R:	CCGGTTCACTCTCTCTCACT	20	
18	NAU-2277	F:	GAAGTAGCCACATGATGCAC	20	lint percent
		R:	TTGTTGAGGCATTAGTTTGC	20	
19	NAU-2508	F:	TGGAGGAGGGTGTAACATCT	20	fibre uniformity
		R:	GGCATTCAAGGAGATGAGTT	20	
20	SHIN-1343	F:	TGGATTTAAGGTGCCTTTGG	20	micronaire value
		R:	CGAAGAGTCCGAAACTTTGAA	21	
21	DPL-0441	F:	CTGTTACATTTGCTGGTGTGAGAT	24	fibre length/ micronaire value
		R:	TCCCTGCACCTTTTCATACATTTAG	24	
22	NAU-0998	F:	CTCTCTCTCACACACGCACT	20	lint percent
		R:	CTGGCCAAGTGACACAATTA	20	

Table S2 to be continued

No.	Primer code		Sequence (5'–3')	Base	Trait
23	BNL-1395	F:	AAGCAGCCAAGAAATACCGA	20	lint percent
		R:	TCGATAACGGCTACAGTAATCT	22	
24	NAU-2658	F:	ACCGGACAATATGGGTAAAA	20	lint percent
		R:	CAACAAGTACATGCACAGCA	20	
25	DC-40182	F:	AAAATACTAAAGTCGATAGAATTGC	25	fibre length
		R:	ACCGTTCCAAATAGGGTC	18	
26	HAU-1417	F:	CAAAACTTGTTGCTCTTCCA	20	fibre strength
		R:	TAACTGAAACCCCAAAAGGA	20	
27	BNL-3790	F:	TTCAGAAATGTGTTAGACTAGCTGG	24	fibre strength
		R:	AAAGAAGGAAGTGTGGGCAG	20	
28	CGR-5867	F:	CTTCTTCCGCCACGTAAGTC	20	fibre strength
		R:	CCCAACCAAGAACCCAATC	19	
29	BNL-1231	F:	TAATAAAAGGGAAAAGGAAAGAGTT	24	fibre strength
		R:	TATGGCTCTAGAATATTCCTCG	23	
30	BNL-2572	F:	GTCCTATTAATAAAATTGTTAATTTAGCC	29	fibre length
		R:	CGATGTAAATCAATCAGGTCA	22	
31	BNL-1440	F:	CCGAAATATACTTGTCATCTAAACG	25	fibre length
		R:	CCCCCGGACTAATTTTCAA	20	
32	DPL-0555	F:	TAGAGGCTTCACTAGCAGTGTGTTG	24	fibre length
		R:	GCCAGTGTTCTTTGATATTGGTAAG	25	
33	CGR-5167	F:	GCAACTCCAAATGTGCGATGA	20	number of bolls/plant
		R:	AGCCATGAAAGGATTAGGCA	20	
34	HAU-0591	F:	AAACATTTAGGGGGCTTTTTT	20	fibre length
		R:	TGATACAATCAGGCAAAACACA	21	
35	HAU-1430	F:	AGGCAACGAAATACTCCAAA	20	fibre length
		R:	TTGAAGTGTCGTAGGTGGTG	20	
36	SHIN-1400	F:	AACAGGGAGGTATTGGGTTCT	21	micronaire value
		R:	CTTGTTTCAAGTTTGTGCCTTG	22	
37	CGR-5282	F:	AGGCTCCTTATGACGTGGG	19	micronaire value
		R:	ACCTCCTTCCCTCACACCTT	20	
38	CGR-6378	F:	CCATGTTGGATATGGCTACG	20	micronaire value
		R:	AACCCTCAACCAACCTTGAA	20	
39	NAU-2437	F:	CTTGAAAAAGGAAGAGCAG	20	fibre uniformity
		R:	TTAAAAGACCAAAGGCAAGG	20	
40	JESPR-153	F:	GATTACCTTCATAGGCCACTG	20	fibre strength
		R:	GAAAACATGAGCATCCTGTG	20	
41	BNL-3479	F:	AGTGGGTTGGACTTTCATGC	20	number of bolls/plant
		R:	CACGGGCTTTTTTTTTTTTCA	20	
42	BNL-3452	F:	TGTAAGTGAAGCAGCCGTACG	20	ginning outturn (%)
		R:	GCCAAAGCAGAGTGAGATCC	20	
43	BNL-2544	F:	GCCGAAACTAAAACGTCCAA	20	lint index
		R:	TCCTTACTCACTAAGCAGCCG	21	
44	CGR-5565	F:	GCCATTAACCCATTAGGCAA	20	seed index
		R:	GCCATTGGAGCTTATAAGGATG	22	

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Table S2 to be continued

No.	Primer code		Sequence (5'–3')	Base	Trait
45	NAU3735	F:	AATACCCGGTTTCAGTTTCA	21	brown colour
		R:	CTCAGCTCACATTCACCAAG	20	
46	NAU1043	F:	GTATCCGCCCAAAATAAAG	20	brown colour
		R:	GCATCGTGAGAGAAAGTGAA	20	
47	NAU2862	F:	CAACAGCATCAGCTGAAAAC	20	brown colour
		R:	AAGAAAACACAGCAACAGCA	20	
48	NAU5433	F:	CTTAGGATGGCCGAATAAAA	20	brown colour
		R:	CAAGTGCTCCACCACAAAT	19	
49	NAU5434	F:	AAAAGAACTTACGGCACAGG	20	brown colour
		R:	AAATCACTGGCACTGGAATC	20	
50	NAU2968	F:	CCCATTTTCGTTCTTATCGTT	20	brown colour
		R:	CCATTACAGTCACCTGCATC	20	