Table 1 Details of genotypes along with their pedigree

Sr. no.	Genotype	Pedigree
1	PBW-773	FRANCOLIN#1*2/KIRITATI
2	PBW-763	PBW621/3/YR10/6*AVOCET//4*PBW343/4/2*PBW621/5/PBW621/3/YR15/6*AVOCET//4*PBW343/4/2*PBW621
3	FLW-22	WH542/Lr28//WH542/China 8440002
4	HD-3043	PJN/BOW//OPATA*2/3CROC_1/Ae.squarrosa (224)//OPATA
5	FLW-16	UP2338/*Triticum spelta album*
6	DBW-173	KAUZ/AA//KAUZ//PBW602
7	DBW-150	DBW 16/GW 322
8	PBW-719	UP 2556/PBW 543
9	GW-463	GW 496/KLP 010
10	WH-147	E-4870/C-303/C-286/C-283/4/S-339/PV-18
11	WH-1123	NI5663/RAJ3765//K9330
12	FLW-10	WH542/Moro
13	MP-3288	DOVE/BUC/DL 788-2
14	C-306	REGENT 1974/3*CHZ//*2C591/3/P19/C281
15	JWS-825	NA
16	WH-1164	RL 604/4*NAC//2*PASTOR
17	LOK-54	Raj 3777/WH671
18	RAJ-	WR989/PBW587

	4480	
19	DBW-14	RAJ3765/PBW-343
20	HD-2967	ALD/CUC//URES/HD2160M/HD2278
21	HI-1625	GAINT3/HW2045
22	KBRL-79-2	CMH77.308/*6WH542
23	UP-2981	CHYAK/PAURAQ
24	WB-2	*T.dicoccon* CI 9309/A.SQUARROSA (409)/3/MILAN/S87230/BAV92/4/ 2*MILAN/S87230//BAV92-(SPL-WB)
25	GW-477	GW366/BOW898
26	RWP-2017-21	Selection from Nach (NAC/TH.AC//3*PVN/3/MIRLO/BVC/4/2* PASTOR/3/ KACHU/6/KACHU)
27	PBW-766	NAC/TH.AC//3*PVN/3/MIRLO/BUC/4/2*PASTOR/5/KACHU/6/KACH U
28	DBW-136	HUW548/Mv 231-98
29	PBW-771	PBW550//YR15/6*AVOCET/3/2*PBW550
30	PBW-769	ATTILA/3*BCN/3/CROC_1/AE.SQUARROSA (224)//OPATA/4/CHIBIA // PRLII/CM65531/3/SKAUZ/BAV92/4/MUNAL#1
31	PBW-681	UP2338/KALYANSONA

32	WH-1184	HD2850/WH147
33	NI-5439	NI 8883/MP1055
34	DBW-71	PRINIA/UP2425
35	ESWYT 18-115	KSW/SAUAL//SAUAL/3/TRCH/HUIRIVIS#1/5/UP2338*2/SHAMA/3/M ILAN/KAUZ//CHIL/CHUM18/4/UP2338*2/SHAMA
36	ESWYT 18-122	KIRITATI/WBLL1//2*BLOUK #1*2/3/KACHU #1/KIRITATI//KACHU
37	ESWYT 18-116	BORL14*2/7/MUU/5/WBLL1*2/4/YACO/PBW65/3/KAUZ*2/TRAP//K AUZ/6/WBLL1*2/SHAMA
38	ESWYT 18-147	ONIX/KBIRD//BORL14/3/ONIX/KBIRD
39	ESWYT 18-121	WBLL1*2/BRAMBLING//WBLL1*2/BRAMBLING/3/2*BORL14
40	WH-1158	PBW 65/2*PASTOR
41	WH-1021	NYOT 95/SONAK
42	WH-789	NA
43	WH-1129	CS/TH.CS//3*PVN/3/MIRLO/BUC/4/MILAN/5/TILHI
44	WH-542	JUP/BJY”S”/Ures

45	WH-1153	P15065/LH1750 (03-04)
46	WH-1131	MUNIA/CHTO//AMSEL
47	WH-1182	KLDR/PEWIT1//MILAN/DUCULA
48	WH-1132	PBW 65/2*PASTOR
49	WH-157	NP876/S308//CNO/8156
50	WH-1152	PBW 65/2*PASTOR
51	WH-1063	BARBET 1 Selection
52	WH-1160	WAXWING*2/VIVITSI
53	WH-1151	RL6043/4*NAC//PASTOR
54	WH-1124	MUNIA/CHTO//AMSEL
55	WH-1100	PBW 65/2*PASTOR
56	WH-1188	CNO79//PF70354/MUS/3/PASTOR/4/BAU92/5/FRETZ/KUKUNA/ /FRE TZ/6/MILAN/KAUZ//PRINIA/3/BAV92
57	WH-	SIRKKU/PRINIA/4/CL689//ESDA/KAUZ/3/BJY/COC//PRL/BOW

	1186	
58	WH-1062	Neaver/WL 2926//SW 89.3064
59	WH-1192	BECARD#1/4KIRITATI/3/2*SERI1B*2//KAUZ*3/BOW
60	WH-1175	FILIN/2*PASTOR//BERKUT/3/PASTOR/2*SITTA
61	HD-3086	DBW14/HD2733//HUW468
62	DBW-221	36IBWSN284/22ESWYT28
63	WH-1235	METSO/ER2000/5/2*SERI*3//RL6010/4*YR/3/PASTOR/4/BAV92
64	WH-730	CPAN 2092/Improved Lok-1
65	HD-3219	PBW343/HD2879
66	HI-1628	FRET2*2/4/SNITRAP#1/3/KAUZ*2/TRAP//KAUZ/5/PFAU/WEAVER// BRAMBLING
67	WH-711	S 308/ CHR//KAL
68	PBW-752	PBW621/4/PBW343//YR10/6*AVOCET/3/3*PBW343/5/PBW621
69	HI-1621	W15.92/4/PASTOR//HXL7573/2*BAU/3/WBLL1
70	WH-1105	MILAN/S87230//BABAX

71	HD-2932	KAUZ/STAR//HD2643
72	WH-1142	OEN/Ae.Sq.(TAUS)/FCT/3/2*WEAVER
73	WH-1179	OASIS/SKAUZ//4*BCN/3/3*PASTOR
74	DBW-233	CHIBIA//PRLII/CM65531/3/SKAUZ/BAV92/4/MUNAL#1
75	RW-5	RAJ 4014/WH730
76	PBW-762	YR5/6*AVOCET//2*PBW550
77	WH-1202	D67.2/PARANA66.270//AE.SQ.(320)/3/CUNNINGHAM
78	HD-2888	C-306/T.SPHAEROCOCCUM//HW2004
79	RAJ-3765	HD 2402/VL 639
80	WH-1138	PBW65*2/Pastor

Supplementary Table 2 Using 60.00% likelihood grouping of genotypes in 4 sub-populations by STRUCTURE software

Population	Genotypes
A	WH-1123, DBW-173, PBW-763, PBW-773, FLW-22
B	WH-1124, WH-1100, WH-1188, WH-1186, WH-1175, HD-3219, PBW-771, KBRL-79-2, DBW-136, DBW-221, WH-730, WH-1192, PBW-762
C	WH-1132, WH-1158, WH-542, WH-157, DBW-14, WH-1152, WH-1153, JWS-825, WH-1160, DBW-150, WH-1142, WH-1182
D	ESWYT 18-47, ESWYT 18-116, RWP-2017-21, UP-2981, PBW-752, PBW-769, NI-5439, PBW-766