

April 2025]

Supplementary Table 1 Parentage details of the studied bread wheat genotypes

Genotype	Parentage/Identity	Reaction			Additional trait
		YR	LR	SR	
IC261932	SRB-79	S*	-	-	-
IC532880	WIC-447	S	-	-	-
IC536321	NC-59610	S	-	-	-
EC609338	07A37	S	-	-	-
Res5	-	S	-	-	-
Res37	-	S	-	-	-
Res38	-	S	-	-	-
IC0640204	Sel. From Fitis	R	R	T	DT
Genotypes studied for multiple rust resistance					
WAP2206	29 th SAWYT-305	T	R	R	-
WAP2207	20 th HTWYT-31	R	R	T	Long spikes
WAP2208	20 th HTWYT-41	T	-	-	-
WAP2210	20 th HTWYT-32	-	-	-	High TKW (>50g)
WAP2211	29 th SAWYT-310	-	R	-	-
WAP2212	29 th SAWYT-320	-	R	-	High TKW (>50g)

*R, Resistant; S, Susceptible; T, Tolerant; DT, Drought tolerant; YR, Yellow rust; LR, Leaf rusts; SR, Stem rusts.

Supplementary Table 2 Segregation ratio for stripe rust in F₂ at Karnal and Durgapura

Cross	Location	Observed		Expected		Seg. ratio	$\chi^2_{(c)}$
		Res.	Sus.	Res.	Sus.		
C-1	L ₁	236	62	224	74	3:1	2.59
C-1	L ₂	243	65	231	77	3:1	2.49
C-2	L ₁	244	68	234	78	3:1	1.71
C-2	L ₂	231	93	243	81	3:1	2.37
C-3	L ₁	231	61	219	73	3:1	2.63
C-3	L ₂	212	64	207	69	3:1	0.48
C-4	L ₁	248	92	255	85	3:1	0.77
C-4	L ₂	224	64	216	72	3:1	1.19
C-5	L ₁	239	87	245	81	3:1	0.59
C-5	L ₂	247	63	233	77	3:1	3.39
C-6	L ₁	221	59	210	70	3:1	2.30
C-6	L ₂	233	88	241	80	3:1	1.07
C-7	L ₁	253	69	241	81	3:1	2.38
C-7	L ₂	232	64	222	74	3:1	1.80

χ^2 (T), 3.84 at 5% level of significance; Res, Resistant; Seg, Segregating; Sus, Susceptible and C, Calculated value.

Supplementary Table 3 SRT analysis of novel bread wheat sources against stripe rust pathotypes

Stripe rust	Genotype	110S119	238S119	110S84	T	46S119
	WAP2206	0;	0;	0;	0;	0;
	WAP2207	0;	0;	0;	0;	0;
	WAP2208	0;	0;	0;	0;	0;
	WAP2210	0;	3+	0;	0;	3+
	WAP2212	33+	3+	0;	0;	0;
Leaf rust	Genotype	12–5	77–1	77–5	77–9	104–2
	WAP2206	;-	3+	33+	;-	;-
	WAP2207	;1	;1	33+	;	;12
	WAP2208	;-	33+	33+	;1	;-
	WAP2210	0;	3	3+	;1	;1
	WAP2212	;-	;1	2–3	33+	2–3
Stem rust	Genotype	11	21A-2	117–6	40A	122
	WAP2206	0;	;-	0;	2-	0;
	WAP2207	0;	;-	0;	;	0;
	WAP2208	33+	;-	;-	0;	0;
	WAP2210	22+	0;	0;	3	0;
	WAP2212	0;	0;	0;	3+	;-