

Supplementary Table S6 | Heat-stress tolerant and susceptible bread wheat accessions identified based on grain yield along with important physiological and yield contributing traits.

Sl. No.	Accession	CC		CTD (°C)		NDVI		MSI (%)		PW (0-10 scale)		LR (0-10 scale)		GFP (days)		FLA (cm ²)		Plant Height (cm)		PL (cm)		SL (cm)		TGW (g)		Grain Yield (g/m ²)		
		NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	NS	HS	
(a)	Highly tolerant																											
1.	IC566223	26.0	23.4	8.7	7.2	0.720	0.639	68.0	70.2	8.0	8.0	6.0	7.0	35.0	25.0	41.3	30.3	120.5	109.2	37.9	36.6	13.4	12.0	40.4	34.7	604.3	598.1	
2.	IC335792	22.4	19.8	5.4	6.3	0.627	0.479	72.1	59.7	8.5	8.0	8.0	8.0	32.5	28.0	25.9	14.2	84.9	80.7	29.4	29.9	9.4	9.3	34.0	29.9	593.4	539.4	
3.	EC576707	24.0	20.3	5.0	8.0	0.557	0.452	76.2	48.0	4.0	7.0	5.0	5.0	32.0	29.0	33.7	21.6	134.0	118.2	50.8	44.9	11.5	10.8	33.8	32.4	579.2	534.7	
4.	IC535176	26.9	23.3	6.3	9.0	0.624	0.509	77.1	50.4	4.5	6.0	5.0	6.0	33.5	30.0	50.9	29.7	122.2	112.2	54.1	53.8	12.7	11.5	47.1	45.0	593.9	532.1	
5.	IC529207	32.2	32.1	4.7	6.2	0.680	0.549	56.5	63.2	10.0	10.0	7.0	8.0	28.0	26.5	40.8	31.7	117.5	99.2	34.5	30.2	13.5	12.1	39.3	35.7	604.9	527.4	
6.	IC128454	30.7	30.0	5.6	8.9	0.647	0.479	69.8	54.8	7.0	8.0	5.0	6.0	28.5	24.0	39.8	30.5	111.9	92.5	40.5	31.9	12.6	10.8	34.9	29.1	546.0	538.1	
7.	IC393878	24.0	20.6	9.0	6.1	0.560	0.477	70.5	67.3	7.0	8.0	6.0	7.0	39.5	31.5	30.7	22.3	106.0	103.9	43.8	34.1	11.9	10.7	49.3	43.9	633.7	516.7	
8.	IC416018	26.5	20.7	6.7	8.6	0.602	0.473	60.6	55.0	6.0	7.0	9.0	9.0	36.0	29.0	34.2	14.4	89.5	87.4	33.4	28.1	11.1	11.5	47.1	37.6	605.9	508.1	
9.	IC446713	22.4	23.5	6.7	9.2	0.610	0.505	63.2	49.8	4.5	5.0	4.0	5.0	35.5	29.0	36.1	25.8	128.5	124.5	52.9	45.1	10.2	9.4	46.6	41.7	545.2	505.4	
10.	IC265318	32.9	22.0	5.0	6.5	0.595	0.512	70.0	49.6	6.5	8.0	7.0	8.0	37.0	30.5	33.4	24.6	98.9	90.5	35.6	32.5	11.9	10.3	38.5	36.4	508.0	504.1	
11.	EC574731	32.8	24.2	2.7	6.5	0.617	0.549	69.3	47.2	6.5	7.0	5.0	7.0	30.0	24.5	41.3	31.8	100.2	97.5	36.9	33.0	10.5	9.9	45.2	37.6	549.2	500.7	
(b)	Tolerant																											
12.	IC543425	28.1	24.0	5.6	6.9	0.634	0.505	69.7	59.7	8.5	9.0	9.0	9	34.5	29.0	28.9	18.0	103.7	92.2	38.9	32.6	12.0	10.4	39.7	31.9	508.0	498.0	
13.	EC534487	25.5	23.2	6.6	10.9	0.632	0.494	67.3	58.7	7.0	8.0	6.0	7.0	33.0	29.0	39.3	20.1	106.4	94.0	32.7	31.1	11.5	11.1	47.7	37.6	609.9	496.1	
14.	IC416019	27.4	17.2	7.0	7.2	0.614	0.440	70.7	59.6	6.5	7.0	9.5	10.0	35.5	27.5	33.5	17.1	88.7	84.7	29.5	28.3	10.7	9.4	49.1	36.8	542.5	490.1	
15.	IC290191	25.2	25.5	3.4	5.9	0.632	0.438	55.7	60.2	4.0	5.0	4.5	6.0	32.5	25.5	35.1	26.6	111.4	106.2	45.4	43.7	12.3	12.1	39.7	34.5	522.2	482.7	
16.	IC252653	33.1	24.0	4.1	6.3	0.597	0.482	66.9	55.9	7.5	8.0	6.0	7.0	33.5	26.5	34.0	18.0	115.4	99.2	43.7	38.1	10.7	11.0	37.5	28.5	613.4	481.4	
17.	IC401976	30.2	28.6	5.8	8.3	0.652	0.519	65.2	52.0	8.0	8.0	6.0	6.0	36.0	30.5	77.0	45.7	100.9	91.0	38.4	37.5	15.1	12.9	49.7	45.2	510.5	478.1	
18.	IC252348	28.3	26.8	5.7	9.8	0.643	0.507	69.0	61.0	6.5	8.0	4.5	5.0	32.5	27.0	45.0	29.8	123.5	110.0	44.9	38.4	12.8	12.6	46.9	41.9	488.0	476.7	
19.	IC542578	21.2	17.0	4.4	6.1	0.614	0.480	53.6	61.2	6.5	7.0	6.5	7.0	32.0	26.5	29.8	18.6	106.5	95.7	36.3	32.8	10.4	10.2	43.2	35.5	566.9	474.1	
20.	IC539221	30.9	26.1	6.2	10.2	0.637	0.538	67.1	45.7	1.5	2.0	4.5	5.0	33.5	29.0	65.5	32.5	124.9	121.4	46.3	43.9	14.1	13.5	51.8	46.6	593.2	468.7	
21.	IC075240	29.4	23.9	6.6	9.0	0.627	0.569	58.6	50.3	4.5	6.0	4.0	5.0	35.0	28.0	38.6	25.9	126.0	125.4	53.5	46.5	11.1	9.3	44.7	39.9	501.9	460.1	
22.	IC539531	34.2	26.0	5.7	9.4	0.635	0.473	77.1	59.3	7.0	8.0	6.0	6.0	37.0	31.5	61.9	27.0	90.5	85.4	35.8	35.4	12.3	11.0	48.5	42.6	517.2	452.1	
23.	IC443661	31.0	24.5	7.3	10.7	0.697	0.532	71.8	49.3	6.0	6.0	6.5	7.0	34.0	29.0	52.8	28.0	100.5	89.7	39.0	33.4	13.9	13.4	41.1	39.2	523.2	413.4	
(c)	Susceptible																											
24.	IC443640	20.9	19.5	6.7	6.8	0.592	0.437	66.3	61.4	6.0	6.0	5.5	6.0	33.0	29.0	39.0	31.7	106.7	96.2	35.8	33.0	11.2	10.0	41.8	37.4	625.5	456.4	
25.	IC535717	32.0	26.0	6.9	6.9	0.574	0.430	64.6	53.3	8.0	8.0	5.5	6.0	36.0	31.0	37.2	27.4	108.5	102.5	40.5	36.1	11.8	10.0	43.4	38.0	649.0	464.1	

26.	IC573461	38.5	27.8	4.3	4.8	0.594	0.480	50.0	59.2	6.0	6.0	5.0	6.0	36.5	29.5	40.7	21.9	99.4	94.2	38.4	31.3	11.3	10.3	52.2	31.1	654.9	462.7
27.	IC252999	24.9	18.4	6.3	4.7	0.592	0.315	67.7	54.2	7.0	8.0	5.5	7.0	37.5	26.0	36.4	26.8	101.2	93.4	41.0	38.5	11.7	11.1	39.6	34.4	627.5	443.7
28.	IC572925	21.3	20.4	3.6	5.2	0.592	0.404	58.0	57.6	5.5	6.0	5.0	5.0	33.5	30.0	33.1	24.6	99.5	93.4	34.6	33.5	11.0	9.6	42.1	35.8	634.2	446.1
29.	EC576175	24.5	21.1	8.9	6.7	0.603	0.517	66.6	63.1	4.0	6.0	7.0	7.0	34.5	28.5	29.6	16.1	131.4	124.0	47.6	41.6	10.1	8.1	44.4	38.1	661.7	456.7
30.	EC277134	26.5	23.8	8.8	6.8	0.597	0.530	66.4	62.1	9.0	9.0	8.0	8.0	35.0	29.5	25.9	16.7	103.0	95.2	35.5	35.9	11.1	10.5	48.0	35.3	680.4	464.7
31.	IC252619	24.5	22.8	6.8	6.8	0.650	0.445	72.6	66.2	7.5	7.0	6.5	7.0	35.0	26.5	37.0	24.5	102.9	85.0	39.1	34.3	13.0	12.5	40.2	32.2	659.5	441.7
32.	IC252414	32.7	27.1	8.3	5.8	0.594	0.499	70.1	61.1	7.5	7.0	5.0	5.0	36.5	28.0	38.9	23.8	107.4	100.2	39.2	33.5	13.7	12.6	46.6	37.4	605.5	403.1
33.	IC144911	28.1	20.8	4.4	5.9	0.592	0.467	52.8	53.2	8.5	9.0	6.5	7.0	33.0	29.5	35.9	18.2	108.5	97.9	38.8	37.9	11.5	10.6	35.0	31.1	648.9	425.4
34.	IC252431	25.5	30.6	7.1	8.2	0.682	0.510	73.2	59.1	1.5	2.0	6.5	7.0	32.5	26.5	34.7	24.2	108.0	87.2	33.9	30.6	10.7	9.9	37.7	33.0	739.5	478.4
(d) Highly Susceptible																											
35.	EC190899	30.3	16.5	6.8	5.8	0.572	0.354	56.9	57.0	6.5	7.0	6.0	7.0	36.5	30.0	34.2	22.3	101.0	94.7	43.1	37.5	11.9	9.7	41.1	33.1	732.4	448.7
36.	IC443694	20.5	19.9	8.2	6.5	0.613	0.445	63.1	57.9	7.0	8.0	7.5	8.0	36.0	30.0	26.9	17.6	108.0	100.7	40.8	36.2	11.8	11.3	37.7	31.9	630.9	387.7
37.	IC529242	30.3	29.1	7.4	7.5	0.672	0.505	69.8	64.9	3.0	4.0	4.5	7.0	33.5	25.0	36.8	19.1	105.9	91.4	40.4	34.2	11.2	9.6	40.5	30.7	600.9	369.1
38.	IC553599	25.2	19.7	8.6	6.4	0.582	0.465	68.0	63.3	6.0	6.0	4.0	4.0	35.5	29.5	41.9	24.6	98.9	92.2	35.1	33.2	11.4	9.9	42.4	39.3	685.7	424.7
39.	IC524299	29.8	25.7	4.3	5.1	0.615	0.474	66.7	70.6	6.5	7.0	4.5	7.0	37.0	29.0	33.3	19.8	106.2	95.7	34.7	28.5	11.1	10.8	50.5	34.1	709.5	422.7
40.	EC576066	32.6	26.1	8.8	6.5	0.597	0.483	69.7	64.5	8.5	9.0	5.5	6.0	31.0	25.5	36.1	27.8	110.7	101.7	36.8	36.0	13.0	9.9	40.4	34.8	646.2	376.4
41.	CUO/79/ Pru11A	29.0	22.4	9.5	7.3	0.600	0.552	63.7	66.9	9.0	9.0	7.5	8.0	33.0	28.5	38.3	24.4	112.2	106.5	42.3	37.8	12.9	12.4	52.1	40.7	741.0	423.4
42.	EC576585	23.1	19.8	8.2	6.6	0.607	0.365	69.7	54.3	6.5	7.0	5.0	5.0	36.5	28.5	37.2	31.3	131.9	127.0	53.2	48.1	11.8	10.9	48.5	44.7	637.5	353.7
43.	IC536050	21.8	21.1	6.5	4.8	0.579	0.325	71.1	64.8	6.5	7.0	5.5	6.0	36.5	26.0	27.9	20.7	100.9	86.7	33.4	27.2	9.8	8.7	41.4	36.2	538.9	292.4
44.	IC277741	23.8	17.6	5.6	8.4	0.673	0.565	77.5	58.3	5.0	6.0	4.0	4.0	34.5	29.5	54.0	21.3	133.9	113.4	41.7	39.2	13.3	12.4	38.0	35.8	802.5	416.1
(e) National check varieties																											
45.	Raj3765 (C1)	22.4	21.2	8.6	7.1	0.635	0.470	56.3	63.5	5.8	6.6	5.2	5.4	35.1	28.6	42.1	30.4	99.9	91.9	38.1	33.4	11.7	10.9	43.0	38.7	552.5	472.0
46.	HD2932 (C2)	25.4	24.0	8.8	7.0	0.625	0.491	69.3	62.5	7.9	8.5	6.9	7.9	35.5	28.9	30.6	19.9	98.3	90.0	35.6	31.9	11.2	10.6	41.7	36.6	614.7	458.8
47.	WR544 (C3)	25.4	25.3	7.7	6.7	0.580	0.404	64.6	60.0	5.3	6.0	4.8	5.2	38.2	30.7	42.6	33.4	105.2	101.3	44.5	41.0	11.8	10.7	44.6	37.7	655.1	472.1
48.	HD2967 (C4)	31.9	34.0	9.2	8.0	0.658	0.558	64.0	66.3	7.8	8.0	6.7	6.4	33.7	28.8	33.0	25.1	99.9	90.8	33.7	31.3	10.9	10.0	44.9	36.2	665.2	518.7
	Minimum	17.4	13.5	2.6	4.4	0.542	0.315	50.0	43.7	1.0	2.0	2.5	4.0	24.0	23.5	21.9	14.2	84.9	73.2	29.4	27.0	8.7	8.1	30.0	24.9	300.0	176.7
	Maximum	38.5	37.2	9.7	12.0	0.722	0.642	77.5	72.6	10.0	10.0	9.5	10.0	39.5	32.0	77.0	51.7	150.9	127.0	60.1	53.8	15.6	13.5	52.2	46.6	802.5	598.1
	Pop mean	26.8	22.7	6.2	6.9	0.624	0.484	66.6	59.4	6.2	6.9	5.8	6.5	34.2	28.1	37.4	23.8	106.6	96.9	39.2	35.1	11.7	10.6	41.5	35.5	562.2	423.6
	LSD (5%)	2.5	2.3	1.7	1.5	0.033	0.032	5.0	4.7	0.8	0.8	0.6	0.7	2.0	1.9	4.2	3.1	4.9	4.8	2.9	2.2	0.6	0.5	2.1	2.6	49.0	21.0

NS: Non stressed environment; **HS:** Heat stressed environment; **LSD:** Least significant difference at 0.05 level of probability; **CC**-Chlorophyll content, **CTD**-Canopy temperature depression, **NDVI**-Normalized difference vegetation index, **MSI**-Membrane stability index, **PW**-Plant waxiness, **LR**-Leaf rolling, **GFP**-Grain filling period, **FLA**-Flag leaf area, **PL:** Peduncle length; **SL**-Spike length, **TGW**-1000-grains weight..