

Annexure 1: Adult plant response of AVT IInd year material against wheat rusts under field conditions (artificial inoculations) during 2014-15												
Sr. No.	Variety	RUST RESPONSE (HIGHEST SCORE AND ACI)								Postulated Gene		
		Stem rust		Lear rust				Stripe Rust		Sr	Lr	Yr
		HS	ACI	South		North		HS	ACI			
				HS	ACI	HS	ACI					
I. NORTHERN HILL ZONE												
1	HS 562	30S	16.6	60S	17.4	20S	8.0	40S	13.0	Sr8a+9b+	Lr23+	YrA+
2	HPW 251 (C)	10S	2.8	20MR	2.6	10S	2.4	80S	33.0	Sr2+31+	Lr23+26+	Yr9+
3	HPW 349 (C)	30S	7.5	20S	7.5	10S	3.4	40S	15.8	Sr2+	Lr10+13+	Yr2+
4	HS 375 (C)	10MS	1.9	30S	10.7	20S	5.1	60S	36.8	Sr2+5+31+	Lr1+26+34+	Yr9+18+
5	HS 490 (C)	20MS	5.6	10MS	3.1	10S	1.8	60S	18.1	Sr2+9b+	Lr23+	-
6	HS 507 (C)	10MR	0.7	15MR	1.1	10MS	1.0	60S	9.8	Sr31+	Lr1+26++	Yr9+
7	HS 542 (C)	20MR	1.3	5S	1.3	10S	1.3	40S	12.0	Sr2+5+8a+9b+11+	Lr10+13+	Yr2+
8	VL 804 (C)	20MS	4.3	15MS	3.4	60S	15.6	60S	27.0	Sr2+5+31+	Lr26+34+	Yr9+18+
9	VL 829 (C)	10S	2.0	20S	6.4	20MS	5.0	60S	28.6	Sr5+31+	Lr26+34+	Yr9+18+
10	VL 892 (C)	20S	6.6	20S	8.1	60S	8.2	80S	25.4	Sr2+	Lr10+13+	YrA+
11	VL 907 (C)	10S	2.9	15MR	2.1	40S	6.5	40S	14.5	Sr2+31+	Lr26+	Yr9+18+
II. NORTH WESTERN PLAIN ZONE												
12	HD 4730	10S	3.6	20MR	2.1	5MR	0.4	20S	3.3	Sr2+11+	R	Yr2+
13	MP 1277	20S	12.6	10S	2.4	10MS	1.6	40S	12.3	Sr2+7b+11+	Lr13+	-
14	WH 1164	20S	6.0	40S	11.1	10MS	1.2	40S	13.2	Sr2+	Lr10+13+	-
15	DBW 88 (C)	10S	4.0	20S	6.4	10MS	1.6	60S	20.2	Sr2+11+	Lr3+10+13+	-
16	DBW 90 (C)	40S	14.3	20S	5.7	20S	4.0	40S	12.7	Sr2+13+	Lr3+10+13+	-
17	DPW 621-50 (C)	20MS	4.1	5S	2.1	5S	0.6	40S	19.0	Sr2+	Lr10+13+	-
18	HD 2967 (C)	20MS	6.6	10MS	3.2	10S	1.9	60S	22.7	Sr2+8a+11+	Lr23+	Yr2+
19	HD 3043 (C)	10MS	3.1	20S	7.3	20MS	3.5	60S	18.0	-	Lr23+	R
20	HD 3059 (C)	20MS	3.2	20S	5.9	10MS	1.1	60S	22.3	Sr2+11+*	Lr13+*	R
20. A	INFECTOR	100S	74.3	100S	71.4	100S	71.3	100S	82.0	-	-	-
21	HD 3086 (C)	40S	26.6	10S	3.4	20S	4.4	80S	16.0	Sr2+7b+	Lr3+10+13+	Yr2+
22	PBW 644 (C)	25S	9.9	20S	6.9	5S	1.3	40S	13.5	Sr2+11+	Lr1+13+	Yr2+
23	PDW 233 (C)	60S	9.8	20S	7.6	0	0.0	40S	8.0	Sr2+9e+	Lr23+	-
24	PDW 291 (C)	60S	13.6	15MS	2.9	10MS	1.5	60S	10.8	Sr2+9e+	Lr23+	-
25	PDW 314 (C)	60S	16.2	5S	1.3	10S	1.3	40S	4.7	Sr2+9e+	Lr23+	Yr2+
26	WH 1021 (C)	15S	5.0	15MR	2.1	10S	1.8	80S	37.4	Sr2+31+	Lr1+26+	Yr9+
27	WH 1080 (C)	10S	3.5	10MS	1.9	10S	1.8	60S	16.5	Sr2+9e+	Lr13+	Yr2+
28	WH 1105 (C)	20S	5.2	20S	6.2	5S	0.7	40S	11.8	Sr2+11+	Lr13+	Yr2+

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		Stem rust		Lear rust				Stripe Rust				
				South		North						
		HS	ACI	HS	ACI	HS	ACI	HS	ACI	Sr	Lr	Yr
29	WH 1124 (C)	30S	15.7	20S	6.9	30S	5.0	60S	21.1	Sr2+7b+	Lr10+13+	Yr2+
30	WH 1142 (I) (C)	20MS	6.5	30MS	13.3	20S	6.0	30S	12.6	Sr2+31+	Lr26+26+	Yr9+
III. NORTH EASTERN PLAIN ZONE												
31	C 306 (C)	20MS	9.3	40MS	9.6	40S	25.6	60S	25.1	-	Lr34+	Yr18+
32	HD 2888 (C)	10MS	3.2	15MS	2.3	5S	0.8	80S	26.9	Sr2+24+	Lr24+	Yr2+
33	K 8027 (C)	60S	23.1	40S	20.0	60S	25.0	80S	34.0	Sr2+11+	Lr13+	Yr2+
IV. CENTRAL ZONE												
34	HD 4728 (d)	5MS	1.2	5S	1.0	5MS	0.5	20S	3.0	Sr2+11+	R	Yr2+
35	HD 4730 (d)	20S	4.5	10S	3.1	5MS	0.6	60S	10.5	Sr2+11+	R	-
36	GW 322 (C)	15S	5.7	20S	9.2	40S	8.8	70S	52.0	Sr2+11+	Lr13+	-
37	HD 2864 (C)	20S	5.4	10S	2.6	20S	8.8	60S	43.0	-*	R	Yr2+
38	HD 2932 (C)	20S	7.3	40S	13.9	20S	6.9	60S	46.0	-	Lr13+	-
39	HI 1544 (C)	5MR	0.6	5MR	0.6	60S	9.4	80S	48.2	Sr2+24+R+	Lr24+	Yr2+
40	HI 8498 (D) (C)	40S	8.9	5S	2.3	5MS	0.6	60S	7.1	Sr2+11+	Lr23+	Yr2+
40. A	INFECTOR	100S	74.3	100S	64.3	100S	70.0	100S	81.0	-	-	-
41	HI 8737 (D)(I) (C)	30MR	5.6	5S	1.6	5MR	0.3	60S	7.7	Sr2+9e+	Lr23+	Yr2+
42	MP 3336 (C)	20S	4.1	40S	9.6	60S	8.8	60S	33.0	Sr2+	Lr13+	Yr2+
43	MP 4010 (C)	20S	4.2	10MS	1.9	90S	12.5	90S	45.0	Sr2+24+	Lr24+	Yr2+
44	MPO 1215 (d) (C)	20S	7.7	10MR	1.2	TMR	0.1	40S	5.0	Sr11+	Lr23+	-
V. PENINSULAR ZONE												
45	MACS 3927 (d)	20S	13.0	20MS	6.3	20MS	3.6	60S	11.1	Sr2+11+	-	R
46	NIAW 2030	40S	9.1	5S	1.5	80S	11.5	80S	65.0	Sr2+24+	Lr24+	Yr2+
47	AKDW 2997-16(d) (C)	30S	10.3	40S	8.1	20MS	2.6	60S	13.9	Sr2+7b+	-	-
48	DBW 93 (I) (C)	40S	6.1	40S	7.5	60S	10.6	60S	32.4	Sr2+31+	Lr123+26+	Yr9+
49	MACS 6222 (C)	10S	2.5	20S	4.0	40S	6.3	60S	36.4	Sr2+31+	Lr1+26+	Yr9+27+
50	MACS 6478 (C)	40MS	11.9	40S	8.6	20S	3.5	80S	31.3	-	Lr1+23+	Yr2+
51	NI 5439 (C)	40S	17.1	60S	37.1	80S	15.0	100S	75.0	Sr11+	Lr34+	Yr2+18+
52	NIAW 1415 (C)	10S	3.3	10S	2.2	80S	10.3	100S	65.0	Sr2+31+	Lr26+	Yr9+
53	UAS 347 (I) (C)	40MS	11.7	60S	12.4	5MS	0.5	60S	19.2	Sr2+7b+11+	Lr10+13+	Yr2+
54	UAS 428 (d) (C)	20S	4.8	40S	11.2	10MS	1.1	40S	8.3	Sr2+11+	Lr23+	-
55	UAS 446 (d) (I) (C)	40S	10.7	10S	3.0	5MS	0.6	40S	6.0	Sr2+11+	R	Yr2+
VII. SPECIAL TRIAL												
56	(HD 2932 + Lr 19/Sr25)	20S	6.1	5S	1.4	40MS	4.5	60S	34.2	Sr2+25+	Lr19+	Yr2+

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		Stem rust		Lear rust				Stripe Rust				
				South		North						
		HS	ACI	HS	ACI	HS	ACI	HS	ACI	Sr	Lr	Yr
57	MMBL 283	40S	15.3	50S	17.0	20S	2.5	60S	28.8	-	-	-
58	PBW 723	30MR	2.5	10MS	1.6	10S	1.3	20S	6.4	Sr2+R	R	-
59	DBW 14 (C)	20S	5.4	30S	9.6	60S	8.8	60S	25.4	Sr2+	Lr23+	-
60	DDK 1029 (C)	20S	4.1	20MR	1.4	80S	10.3	80S	40.0	Sr2+11+	Lr13+	-
60. A	INFECTOR	100S	71.4	100S	75.7	100S	67.5	100S	83.0	-	-	-
61	HD 2985 (C)	40S	21.7	40S	18.2	40S	9.8	60S	31.8	Sr7b+	Lr23+	Yr2+
62	HI 1563 (C)	10S	1.9	TS	0.2	40S	6.3	80S	34.8	Sr2+R	R	Yr2+
63	HUW 234 (C)	40S	26.4	60S	26.0	20S	5.6	60S	31.0	Sr9b+11+	Lr14a+	Yr2+
64	HW 1098 (C)	20MR	2.0	10MS	2.3	60S	8.1	60S	38.0	Sr2+11+	-	-
65	K 0307 (C)	15S	4.8	60S	16.4	30S	6.3	60S	22.1	Sr2+	Lr1+23+	Yr2+
66	Kharchia 65 (C)	70S	37.4	80S	46.5	90S	60.0	100S	74.0	-	-	-
67	KRL 19 (C)	30S	9.9	40S	11.5	80S	22.5	100S	57.0	Sr2+8b+9b+11+	Lr13+	-
68	KRL 210 (C)	40S	23.1	20S	9.6	50S	13.8	40S	14.5	Sr7b+	Lr10+13+	-
69	PBW 343 (C)	20S	7.3	40S	21.9	100S	21.0	100S	63.0	Sr2+31+	Lr26+	Yr9+
70	Raj 4083 (C)	20S	4.3	40S	7.5	20S	3.8	80S	25.0	Sr2+11+	Lr23+	Yr2+
71	TL 2942 (C)	5S	1.1	TMR	0.1	5MR	0.4	10S	2.3	Sr2+R	Lr10+13+	-
72	TL 2969 (C)	5S	1.2	5S	0.7	TMS	0.1	20S	2.5	Sr2+R	Lr23+	-
73	WH 542 (C)	10S	3.0	40S	11.2	20S	3.8	80S	28.0	Sr31+	Lr23+26+34+	Yr9+
73. A	INFECTOR	100S	74.3	100S	75.7	100S	72.5	100S	79.0	-	-	-