

Annexure 2. Adult plant response of AVT 1st year material against wheat rusts under field conditions (artificial inoculations) during 2015-16

Sr. No.	Variety	RUST RESPONSE (HIGHEST SCORE AND ACI)								Postulated Gene		
		Stem rust		Leaf rust				Stripe Rust		Sr	Lr	Yr
		HS	ACI	South		North		HS	ACI			
				HS	ACI	HS	ACI					
I. NORTHERN HILL ZONE												
1	HPW423	10S	7.6	40S	8.3	TMR	0.1	5S	0.9	Sr7b+11+	Lr13+	Yr2+
2	HPW424	30S	17.2	30S	8.7	60S	17.5	20S	5.5	Sr5+30+	Lr13+2a	Yr2+
3	HPW432	30S	16.8	60S	25.7	10S	1.9	10S	1.7	Sr11+	Lr13+10+	Yr2+
4	HPW433	20S	7.2	40S	8.3	10S	2.0	10S	3.7	Sr28+11+2+	Lr13+	-
5	HS622	20S	9.6	40S	8.7	TR	0.0	5S	0.6	Sr31+	Lr26+23+1+	Yr9+
6	HS623	10S	3.2	20S	5.1	TMS	0.1	10S	3.1	Sr2+	R	Yr2+
7	HS625	40S	14.4	40S	6.1	TMR	0.1	40S	7.6	Sr11+2+	Lr13+	R
8	HS626	20S	9.6	40S	9.1	10MS	1.0	10S	1.5	Sr8a+11+13+2+	Lr23+	YrA+
9	HS627	30S	18.0	20S	4.3	10S	1.5	40S*	5.1	Sr28+11+2+	Lr13+	Yr2+
10	HS628	20S	6.0	TR	0.1	5S	0.6	20S	2.6	Sr25+R	Lr19+	-
11	UP2954	20MS	9.6	10MR	0.6	10S	1.3	40S	10.0	Sr2+5+28+	Lr13+10+	R
12	UP2955	20MR	1.7	10S	1.5	5S	0.6	40S	10.0	Sr31+2+	Lr26+	Yr9+
13	VL1008	10MS	4.2	10MS	2.1	20S	2.5	40S*	5.5	Sr5+28+11+2+	Lr13+10+	R
14	VL1009	10S	4.6	40S	11.7	5MS	0.5	40S	4.8	R	Lr13+10+	-
15	VL1010	20S	12.8	20S	2.6	TR	0.0	60S	10.1	Sr13+2+	Lr13+10+1	-
16	VL3010	20MS	6.8	20S	8.7	TMR	0.1	40S	7.5	Sr8a+11+13+	Lr13+10+	Yr2+
17	VL3011	10S	2.8	20S	2.6	0	0.0	60S	9.5	Sr31+2+	Lr26+1+	Yr9+
18	VL3012	10S	4.6	30S	7.3	10MS	1.0	40S	5.5	Sr5+28+2+	Lr13+	Yr2+27+
II. NORTH WESTERN PLAIN ZONE												
19	DBW 172	30S	13.0	20MR	1.5	20S	2.6	60S	13.0	Sr5+28+2+	Lr13+3+	R
20	DBW 173	20MR	1.7	5MR	0.3	10S	1.3	40S	5.6	Sr31+2+	Lr26+10+3+	Yr9+A+
20. A	INFECTOR	100S	68.0	100S	72.5	100S	67.5	100S	70.0	-	-	-
21	DBW 179	40MS	10.2	5MR	0.5	0	0.0	20S	4.6	Sr5+8a+30+2+	Lr13+10+3+2a+	Yr2+
22	NW 6046	60S	37.6	40MS	6.6	20S	3.9	40S	5.5	Sr5+13+2+	Lr13+3+	Yr2+
23	PBW 725	40MR	8.0	20S	3.9	10S	2.5	5S	0.5	Sr7b+11+	Lr13+10+	R
24	PBW 737	40S	20.6	40S	14.0	5MR	0.5	10S	1.0	Sr7b+	Lr13+3+	Yr2+

Sr. No.	Variety	RUST RESPONSE (HIGHEST SCORE AND ACI)								Postulated Gene		
		Stem rust		Leaf rust				Stripe Rust		Sr	Lr	Yr
		HS	ACI	South		North		HS	ACI			
25	UP 2903	40S	17.0	30S	4.3	40S*	6.4	60S	15.8	Sr 8a+	Lr 13+	-
26	UP 2907	40S	22.4	10MS	3.3	10S	3.2	60S	18.8	Sr 30+5+	Lr 23+10+2a+	-
27	WH 1184	30S	17.6	10MS	3.4	10S	2.1	10S	1.2	Sr 7b+	Lr 23+1+	Yr 2+
III. NORTH EASTERN PLAIN ZONE												
28	HD 3184	40S	17.6	10MS	1.5	5S	1.1	60S	15.1	Sr 7b+	Lr 13+3+	R
29	HI 1612	40S	27.4	30S	7.3	5MS	1.0	10S	2.2	Sr 7b+2+	Lr 23+	Yr 2+
30	WH 1181	20MS	5.3	15MS	4.3	10S	2.1	40S*	4.7	Sr 28+2+	Lr 13+	Yr 2+
IV. CENTRAL ZONE												
31	HI 8774 (D)	5S	1.6	30MR	2.6	20S	3.0	5S	1.2	Sr 7b+2+	-	Yr 2+
32	PDW 344 (D)	40S	17.4	20MS	6.3	20S	3.8	5S	1.2	Sr 7b+	Lr 23+	-
V. PENINSULAR ZONE												
33	AKAW 4842	20MS	7.6	20S	3.7	0	0.0	100S	63.1	Sr 2+R	R	-
34	DBW 168	10MS	2.0	5S	1.8	TS	0.2	80S	29.7	Sr 31+2+	Lr 26+	Yr 9+
35	GW 477	10S	5.4	5MR	0.4	TMR	0.1	100S	64.5	Sr 2+R+	Lr 13+10+	Yr 2+
36	HI 8777 (D)	20S	12.0	TR	0.0	30S	4.7	40S	12.5	Sr 7b+	-	Yr 2+
37	KD 1418 (D)	30S	14.0	20S	4.4	30S	4.1	40S	13.6	Sr 7b+	Lr 13+	Yr 2+
38	MACS 4028 (D)	40S	12.8	40S	14.0	20S	5.1	80S	30.5	Sr 7b+	-	-
39	MACS 6660	20MS	7.2	40S	11.9	5S	0.9	80S	55.0	Sr 31+2+	Lr 26+23+	Yr 9+
40	NIAW 2495	40S	14.4	30S	8.9	TS	0.2	80S	60.0	Sr 8a+	Lr 13+	Yr 2+
40. A	INFECTOR	100S	88.0	100S	77.5	100S	68.8	80S	71.0	-	-	-
41	RKD 283 (D)	10S	4.0	20MR	1.3	5S	1.5	20S	9.3	Sr 7b+	Lr 23+	-
42	RKD 292 (D)	20MR	3.8	20MR	1.6	10MS	1.3	40S	11.8	Sr 7b+11+	Lr 23+	-
43	UAS 375	40S	10.6	40S	15.5	10S	1.8	60S	28.7	Sr 7b+2+	-	Yr 2+
44	UAS 459 (D)	20MR	2.8	5MS	1.3	5MR	0.3	20S	5.2	Sr 11+2+	-	-
VI. SPECIAL TRIAL (Dicocum and Sailinity and Alkalinity)												
45	DBW 214	20S	6.6	30S	11.8	30MS	6.0	60S	19.3	Sr 5+11+2+	Lr 13+	Yr A+
46	DBW 215	30S	11.0	40S	7.6	10S	1.8	60S	16.0	Sr 8a+	Lr 13+	Yr A+
47	DBW 216	20S	6.4	30S	5.8	40S	9.1	60S	12.5	Sr 5+11+	Lr 13+3+	Yr 2+
48	DBW 217	20S	5.7	5MR	0.3	20S	2.6	60S	14.0	Sr 7b+	Lr 13+	Yr 2+
49	DDK 1050	5MS	1.4	20MR	1.0	15S	3.1	80S	41.5	Sr 7b+11+	-	-

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		HS	ACI	South		North		HS	ACI			
				HS	ACI	HS	ACI					
50	DDK 1051	10MR	1.0	20MR	1.0	20S	3.1	60S	41.0	Sr 7b+	-	-
51	KA 1427	20S	10.1	60S	22.3	15MS	2.4	60S	25.0	Sr 11+	Lr 13+1+	-
52	MACS 5044	20S	4.5	20MR	1.5	20S	3.8	60S	38.8	Sr 11+	-	Yr 2+
53	MACS 5046	5S	1.7	20MR	1.0	20S	3.8	80S	45.8	Sr 11+	-	-
54	NW 6094	15MS	6.4	30S	8.5	20S	3.8	40S	11.7	Sr 31+2+	Lr 6+23+10+	Yr 9+
55	WH 1310	10MS	3.0	20S	3.6	0	0.0	5S	1.8	Sr 7b+2+	R	-
VII. SPECIAL TRIAL (TRITICALE)												
56	TL 3006	TR	0.1	20MR	1.3	20MR	1.0	20S	2.0	R	R	-
57	TL 3007	TS	0.5	5MS	1.0	20S	3.4	40S*	4.2	R	Lr 13+	-
58	TL 3008	TR	0.1	5MR	0.3	5MS	0.6	40S*	4.0	Sr 2+R+	Lr 10+	-
59	TL 3009	TR	0.1	TR	0.1	5MR	0.3	40S*	4.0	Sr 2+R+	Lr 23+	-
60	TL 3010	TMR	0.1	TR	0.0	5MS	0.5	20S	2.2	Sr 2+R+	-	-
60. A	INFECTOR	100S	86.0	100S	71.3	80S	65.0	100S	71.0	-	-	-
VIII. SPECIAL TRIAL (MABB/NIL (KB) ENTRIES/Biofortification trial)												
61	HPBW 01	40MS	18.0	30S	9.3	20S	5.5	60S	11.5	Sr 31+2+	Lr 26+23+10+	Yr 9+
62	HPBW 02	30S	14.8	40S	8.8	20S	4.3	60S	9.6	Sr 31+2+	Lr 26+23+10+	Yr 9+
63	HPPAU 05	20S	6.5	15MS	5.8	20S	9.1	5S	1.0	Sr 11+	Lr 13+	Yr 2+
64	HPPAU 08	30S	14.4	15MS	2.1	TS	0.2	60S	7.6	Sr 30+	Lr 23+2a+	-
65	HPPAU 10	30MS	13.6	20S	9.5	5MS	0.8	20S	2.6	Sr 7b	Lr 13+	Yr 2+
66	PBW 760	20S	5.2	5MS	1.1	0	0.0	TMS	0.1	Sr 31+2+	Lr 26+	Yr 9+2+
IX. SPECIAL TRIAL (Very Late Sown)												
67	DBW 218	20S	11.6	20S	5.7	5S	0.6	60S	11.5	Sr 5+8a+2+	Lr 13+	Yr 2+
68	DBW 219	30S	8.8	20S	4.3	10MR	0.8	60S	15.8	Sr 28+2+	Lr 13+1+	-
69	DBW 220	40S	11.6	5S	1.2	10S	1.3	20S	3.0	Sr 8a+2+	R	Yr 2+
70	HD 3236	20S	8.2	40S	11.9	10S	1.3	40S	11.1	Sr 31+2+	Lr 26+23+	Yr 9+
71	HI 1621	30MS	13.8	60S	21.6	15S	1.9	10S	2.9	Sr 8a+	Lr 13+	Yr 2+
72	PBW 756	10S	5.0	10MS	1.7	10S	1.5	40S	7.5	R	Lr 13+10+	R
73	PBW 757	20S	8.8	10S	1.4	0	0.0	5S	0.5	Sr 5+8a+2+	Lr 23+	R
74	WH 1215	20S	5.4	20S	4.8	5MR	0.4	40S	10.5	Sr 30+5+	Lr 23+1+2a+	R
75	WH 1216	5MS	1.7	40S	8.5	TR	0.0	20S	7.4	Sr 31+2+	Lr 26+	Yr 9+

Sr. No.	Variety	RUST RESPONSE (HIGHEST SCORE AND ACI)								Postulated Gene				
		Stem rust		Leaf rust				Stripe Rust						
		HS	ACI	South		North		HS	ACI	HS	ACI	<i>Sr</i>	<i>Lr</i>	<i>Yr</i>
				HS	ACI	HS	ACI							
X. AVTs for Summer sown (VHA)														
76	HS 580	20MR	2.5	60S	15.7	10S	1.5	40S	6.4	<i>Sr</i> 31+2+	<i>Lr</i> 26+1+	<i>Yr</i> 9+		
77	HS 590	40S	13.4	40S	14.6	5S	0.7	60S	18.0	<i>Sr</i> 5+28+	<i>Lr</i> 13+	R		
78	VL 3002	20S	5.7	40S	7.8	10S	1.3	20S	5.0	<i>Sr</i> 13+2+	<i>Lr</i> 13+	R		
79	VL 4001	TMR	0.2	TMR	0.1	0	0.0	60S	22.5	<i>Sr</i> 31+2+	<i>Lr</i> 26+10+	<i>Yr</i> 9+A+		
80	PBW 621	10S	2.0	5S	0.7	0	0.0	60S	19.5	<i>Sr</i> 11+	<i>Lr</i> 13+10+	<i>Yr</i> 2+		
80. A	INFECTOR	100S	88.0	100S	76.3	80S	65.0	100S	75.6	-	-	-		
81	HPW 393					-	-			-	-	-		
82	HPW 394					-	-			-	-	-		