

Race specific APR in AVTs entries 2019-20

Table1: Seedling specific APR to stripe rust and leaf rust pathotypes to AVTs of wheat during 2019-20 at ICAR-IIWBR, RS, Shimla

S. No.	Variety/Line	Stripe rust pathotypes			Leaf rust pathotypes		
		110S119	238S119	46S119	77-5	77-9	104-2
I. Northern Hill Zone (NHZ)							
1	HS 507 (C)	20MR	40MS	5R	0	10R	0
2	HS 562 (C)	TR	5MR	5MS	40MS	20MR	0
3	HPW 349 (C)	10R	5MR	5MS	20MR	20MR	20MS
4	HS 668	10MS	10MS	20MS	10R	40MS	0
5	VL 907 (C)	10MR	20MS	10MS	0	TR	TMS
6	VL 2036	10MR	5S	10S	0	0	TR
7	HS 681	5R	10MR	5MS	0	10MR	0
8	VL 3022	5S	10S	5S	0	10R	0
9	HS 680	5MR	20S	TS	0	0	0
10	VL 3023	40MS	20S	20MS	40S	20MS	0
11	HPW 474	5MR	TMR	5MR	0	0	0
12	UP 3069	5MR	10MR	5MR	0	5R	0
13	HPW 473	5MR	20MR	5MR	60MS	20MS	-
14	VL 892 (C)	60S	20S	20S	10MR	TR	0
15	VL 3024	0R	0	0	0	TR	0
16	HS 490 (C)	20MS	40MS	10MS	0	0	0
17	HS 679	5MR	5MR	TMR	0	TR	0
II. North Western Plain Zone (NWPZ)							
18	DBW88 (C)	30MS	10MS	30MS	0	20MR	0
19	DBW187(I) (C)	10MR	10MR	5MS	0	10MR	0
20	HD2967 (C)	60S	60S	20S	0	40S	0
21	WH1105 (C)	5MS	20MS	10MS	0	0	0
22	DBW222(I) (C)	30MS	40MS	20S	0	TR	0
23	HD3086 (C)	5MR	TS	10S	60S	40S	0
24	PBW840M	5MR	10MS	10MS	0	0	0
25	PBW803	TMR	5MS	5MS	0	0	0
26	PBW550 (C)	5MS	20S	20S	0	0	0
27	HD3334	5MS	10MS	10MS	0	20R	0
28	HD3059 (C)	30MS	20MS	20S	0	10MR	-
29	HD3332	5MR	10R	5MR	0	10R	-
30	DBW173 (C)	5MR	5MS	5MS	0	10R	0
31	WH1021 (C)	80S	60S	60S	10MR	20MR	0
32	PBW811	5R	5MR	5MR	0	10R	0
33	DBW291	5MR	TMR	5MS	0	20MS	0
34	WH1264	5MR	TMS	20MS	0	0	-
35	PBW812	5MR	10MS	5MR	0	0	0
36	JKW261	10MS	20MS	10MS	0	0	0
37	DBW290	5MS	10MS	10S	0	0	0
38	PBW771(I) (C)	5MS	10S	5MS	0	0	0
39	PBW813	0	0	0	0	10MS	0
40	HD3331#WB	5MR	10MS	5S	20MS	20MS	0
41	HD3298*	5MR	5MS	5MS	0	0	5MR
42	WH1124 (C)	5MR	10MR	5MS	10MS	40MS	TR
43	UP3033	5MR	20MS	0	20MS	0	0
44	HUW838#WB	30MS	10MS	10MS	0	0	0

45	HD3043 (C)	20MS	20S	10S	40S	40MSS	0
46	PBW644 (C)	5MR	10S	10S	0	40S	0
47	DBW296	5MR	5MR	10MS	5R	TR	TR
48	HI1628(I) (C)	40S	TR	5MR	5MR	10S	0
49	WH1080 (C)	10MR	10MR	5S	0	0	0
50	JAUW672	TR	TR	5MR	10MR	10R	0
51	WH1142 (C)	10MR	5MS	5S	60MS	0	5MS
52	NIAW3170(I) (C)	40MS	20MS	20S	0	0	0
III. North Eastern Plain Zone (NEPZ)							
53	PBW804	5MR	10MS	10S	10R	TR	0
54	DBW187(I) (C)	10MR	10MR	5MS	0	10MR	0
55	K1006 (C)	40MS	60S	20S	5R	10R	0
56	DBW39 (C)	20MS	60S	20S	0	0	0
57	HD3249(I) (C)	5MR	20MR	5MR	0	10R	0
58	HD2733 (C)	40S	60S	40S	0	20MR	0
59	HD3171 (C)	20MS	40S	10S	0	40MS	0
60	HD2888 (C)	60MS	40MS	20MS	0	0	0
61	HD3293*	20MR	20MS	5MS	0	40MS	TR
62	K1317 (C)	0	TS	5S	0	20MR	0
63	HI1612 (C)	5MR	20MR	5S	0	0	TR
64	DBW252(I) (C)	5MR	40MS	5S	0	0	0
IV. Central Zone							
65	TAW155	5R	10MR	TS	0	TR	0
66	HI1636	80S	50S	10S	0	TR	-
67	MP1361	5MR	5MR	-	40MS	0	0
68	MACS6747	20MS	60S	-	0	0	0
69	HD3377 ^B	30MS	20S	10S	0	0	0
70	HI1637	60S	40MS	10S	-	0	0
71	RAJ4541 ^B	10MR	20MR	5MS	-	0	0
72	GW513	80S	80S	60S	0	0	0
73	GW322	40MS	40S	20MS	10MR	40S	0
74	HI1544	80S	60S	40S	0	0	0
75	HI1634 ^{Q*}	60MS	60MS	40S	0	0	0
76	HD2932	80S	80S	60S	20MS	60S	20MS
77	MP3336	80S	80S	30S	60S	0	0
78	HD2864	60S	60S	40S	0	0	0
79	CG1029*	60S	60S	40S	0	0	0
80	MPO1357(d)	5MR	20MR	5MR	0	0	0
81	HI8627(d)	5MR	20MS	5S	0	0	-
82	UAS466(d)(I)	TMR	5S	10MR	TS	0	0
83	UAS472(d)	10MR	40MS	20S	0	0	0
84	DBW110	20S	60S	40S	0	40MS	0
85	MP3288	10MR	40S	20S	0	0	0
86	HI 8823(d)	TR	20MS	20MR	0	0	0
87	DDW47(d)(I)	10MR	10MR	20MR	0	0	0
IV. Peninsular Zone (PZ)							
88	WHD964(d)	5MR	10MR	10MS	0	0	0
89	DDW48(d)Q*	5MR	10MR	10MS	0	0	-
90	MACS6222 (C)	30MR	20MS	20S	0	TR	0
91	MACS3949(d) (C)	TR	5MR	5MR	0	0	-
92	HI8818(d)	5MR	20MR	5MR	0	0	-
93	UAS428(d) (C)	TR	TMR	5MR	-	0	-
94	DDW49(d)Q*	10MS	40MS	10S	0	10MS	-

95	GW322 (C)	40MS	40S	20MS	10MR	40S	0
96	GW519	60S	60S	40S	0	0	0
97	HI1646	40MS	60MS	10S	-	10MS	0
98	HD3090 (C)	60S	60MS	40S	0	TR	0
99	RAJ4083 (C)	60MS	40MR	20S	0	20MS	-
100	UAS3008	30MS	60S	20S	0	0	0
101	MACS6749	60S	80S	60S	0	0	0
102	HD2932 (C)	80S	80S	60S	20MS	60S	20MS
103	HI1641	60S	60S	40S	0	0	0
104	HI1642	80S	80S	40S	0	0	0
105	HI1633*	60S	60MS	20S	0	0	0
106	MACS6752	80S	60S	40S	0	0	0
107	NIDW 1149(d)*	5MR	TR	0	0	0	-
108	UAS446(d) (C)	TR	TR	TMR	0	0	0
109	HI 1605 (C)	30MS	20S	10S	0	5R	0
110	MACS 4087(d)	5MS	20MS	20MS	0	0	-
111	MP 1358	TR	10MS	TR	0	10MR	0
112	AKDW 2997-16(d) (C)	0	TR	TMR	0	0	10R
113	HI8805(d)(I) (C)	TR	5MR	TMR	-	0	0
114	UAS 472(d)	10MR	40MS	20S	0	0	0
115	MPO 1357(d) ^Q	5MR	20MR	5MR	0	0	0
116	NIAW3170(I) (C)	40MS	20MS	20S	0	0	0
V. Special Trial (Dicoccum)							
117	MACS5055	20MR	40MR	10MS	20R	TR	TR
118	MACS6222 (aest.) (C)	30MR	20MS	20S	0	TR	0
119	DDK1029 (C)	40MR	60MS	40MS	0	5R	10R
120	MACS5054	40MR	60MS	40MS	5R	0	-
121	DDK1058	40MS	80MS	40MS	0	0	0
122	HW1098 (C)	40MS	60MS	5MS	0	0	0
123	DDK1059	40MS	60MS	40MS	0	5R	10R
VI. Special Trial (SPL-HYPT)							
124	DBW327	TR	10MS	0	0	10R	0
125	HD3086 (C)	5MR	TS	10S	60S	40S	0
126	DBW332	TR	5MR	0	0	0	0
127	DBW303*	10MR	40MR	5MR	TR	0	0
128	HD2967 (C)	60S	40S	10S	0	10R	0
129	DBW187(I) (C)	10MR	10MR	5MS	0	10MR	0
130	DBW329	40MS	20MR	5S	0	5MR	0
131	WH1252	10MR	10MS	5S	0	TR	0
132	HD3378	10MR	10MS	TMR	0	20MS	0
133	WH1270*	5MR	5MR	TMS	0	20MS	0
134	DBW333	5MR	10MR	TMR	5S	0	0
135	DBW330	5MR	20MS	5MS	0	20MS	0
136	DBW328	10MR	10MR	5MR	0	0	0
137	DBW331	5MR	20S	5S	0	0	0

Table 2: Race Specific APR in AVT entries (NHZ, NWPZ and NEPZ) against selective pathotypes of yellow and leaf rust at Ludhiana and Delhi centres during 2019-20.

S. No.	Entries	Yellow rust pathotypes				Leaf rust pathotypes		
		110S119		46S119		77-5		77-9
		Ludhiana	Delhi	Ludhiana	Delhi	Ludhiana	Delhi	Ludhiana
I. Northern Hill Zone (NHZ)								
1	HS 507 (C)	40S	TR	60S	TR	10S	0	20S
2	HS 562 (C)	10MS	5MS	5MS	5MR	10S	TR	0
3	HPW 349 (C)	10MS	5MS	10S	10MR	0	5S	0
4	HS 668	60S	TR	60S	0	0	5S	0
5	VL 907 (C)	40S	5MR	40S	10MR	0	TR	0
6	VL 2036	20S	5MR	10S	10S	0	5MR	0
7	HS 681	20S	TR	20S	0	5S	0	20S
8	VL 3022	40S	TR	40S	5MR	0	0	0
9	HS 680	40S	10MS	40S	10MR	0	0	0
10	VL 3023	40S	10MS	40S	10MS	0	0	0
11	HPW 474	10MS	5MS	5S	10MS	0	TR	0
12	UP 3069	10S	5S	5MS	5MS	10S	0	0
13	HPW 473	20MS	0	20S	0	0	5S	0
14	VL 892 (C)	0	20S	0	20S	0	0	40S
15	VL 3024	40S	0	60S	0	10S	0	0
16	HS 490 (C)	20S	5MR	5S	40MS	0	5MR	40S
17	HS 679	10MS	5MR	10S	10MS	0	0	40S
II. North Western Plain Zone (NWPZ)								
18	DBW88 (C)	60S	TR	40S	40S	0	0	0
19	DBW187(I) (C)	10S	TR	10S	5MR	0	0	0
20	HD2967 (C)	60S	60S	40S	60S	0	0	0
20A	Infector	-	100S	-	90S	-	80S	-
21	WH1105 (C)	60S	TR	20S	5MR	0	5MS	0
22	DBW222(I) (C)	60S	5MR	40S	10MR	0	0	0
23	HD3086 (C)	20S	5R	10S	5MR	0	0	20S
24	PBW840M	40S	5MR	40S	5MR	0	5MS	0
25	PBW803	20S	5MR	20S	5MR	0	0	5S
26	PBW550 (C)	60S	10MS	60S	10S	0	0	0
27	HD3334	20S	5MR	10S	5R	0	0	0
28	HD3059 (C)	40MS	5MR	40S	5MR	0	0	0
29	HD3332	10S	5R	10S	10S	0	5MR	0
30	DBW173 (C)	20S	5R	10S	5R	0	0	20S
31	WH1021 (C)	60S	60S	60S	60S	0	0	0
32	PBW811	5MR	TR	10S	TR	0	0	0
33	DBW291	10MS	0	20MS	0	20S	0	20S
34	WH1264	5S	5MS	10S	5MR	0	TR	20S
35	PBW812	20MS	5R	40S	TR	0	10S	10S
36	JKW261	40S	5MR	40S	5MR	0	TR	0
37	DBW290	40S	0	40S	5S	0	0	0
38	PBW771(I) (C)	10S	TR	5S	0	0	5MR	0
39	PBW813	0	0	0	0	0	0	0
40	HD3331	10MS	TR	5MS	5MR	10S	TR	20S
40A	Infector	-	90S	-	90S	-	80S	-

41	HD3298*	10S	TR	40S	TR	0	0	0
42	WH1124 (C)	10S	5MR	40S	5MR	20S	0	0
43	UP3033	40S	5S	40S	TMR	0	0	0
44	HUW838	20S	5MR	20S	TR	0	5S	0
45	HD3043 (C)	60S	5MR	40S	TMR	0	5S	40S
46	PBW644 (C)	40S	TR	40S	TMS	40S	0	40S
47	DBW296	5S	0	10S	0	0	5MR	0
48	HI1628(I) (C)	5S	10S	10S	10MS	0	0	0
49	WH1080 (C)	5S	5MR	40S	5MR	0	0	40S
50	JAUW672	5S	0	5S	TR	0	5MR	20S
51	WH1142 (C)	10MS	5MR	10S	5MR	0	5MS	40S
52	NIAW3170(I) (C)	40S	10MR	40S	40S	0	5MS	0
III. North Eastern Plain Zone (NEPZ)								
53	PBW804	5S	TR	10S	5MR	0	0	0
54	DBW187 (C)	10S	TR	10S	10MS	0	0	0
55	K1006 (C)	60S	40S	60S	40S	10S	TR	10S
56	DBW39 (C)	60S	10S	60S	60S	0	0	0
57	HD3249(I) (C)	10S	5R	20S	10MS	0	0	0
58	HD2733 (C)	80S	40S	60S	80S	0	10S	0
59	HD3171 (C)	60S	10MR	40S	10MR	20S	10MS	20S
60	HD2888 (C)	60S	40S	60S	20S	0	0	0
60A	Infector	-	90S	-	90S	-	80S	-
61	HD3293*	20S	5MR	60S	0	20S	80S	0
62	K1317 (C)	40S	0	10S	0	0	5S	0
63	HI1612 (C)	10S	5MR	20S	5MR	0	0	0
64	DBW252(I) (C)	40S	5MR	40S	0	0	TR	0

Table 3: Race Specific APR in AVT entries (CZ and PZ) against selective pathotypes of stem rust at Indore and Mahabaleshwar centers during 2019-20.

S. No.	Entries	Stem rust pathotypes			
		40A		117-6	
		Indore	Mahabaleshwar	Indore	Mahabaleshwar
IV. Central Zone					
1	TAW155	20MS	10S	10MS	10S
2	HI1636	10MR	10MR	5R	TR
3	MP1361	20MR	TMS	20MR	20S
4	MACS6747	20MR	TR	20MR	TR
5	HD3377	0	TR	0	TR
6	HI1637	5R	TR	5R	TR
7	RAJ4541	10MR	TMR	10MS	TR
8	GW513	10R	TMR	5R	TR
9	GW322	10MS	10MS	10MS	TR
10	HI1544	10R	TR	10R	TMR
11	HI1634*	10MR	TR	10MR	TR
12	HD2932	20MR	30S	10MS	20S
13	MP3336	10MR	TR	10MS	TS
14	HD2864	10R	TR	10MR	TMR
15	CG1029*	20MR	10MR	10MR	10R
16	MPO1357(d)	5MR	TMR	5MR	TR
17	HI8627(d)	5MS	TR	10S	TR
18	UAS466(d)(I)	10S	TMR	5S	20MS
19	UAS472(d)	10MR	10MS	5MR	5MR
20	DBW110	20MR	TMR	10MS	TR
21	MP3288	20MR	TMR	20R	10MR
22	HI 8823(d)	5R	10MS	5MS	TR
23	DDW47(d)(I)	10MR	TR	20S	10MS
V. Peninsular Zone (PZ)					
24	WHD964(d)	40S	TS	20MS	30S
25	DDW48(d) *	20S	TMR	20S	TR
26	MACS6222 (C)	20MR	TR	5MR	TMR
27	MACS3949(d) (C)	10MS	TMS	20S	TR
28	HI8818(d)	5MR	TMR	TMR	TR
29	UAS428(d) (C)	10MR	TR	5MR	TMS
30	DDW49(d) *	40S	TS	40S	TS
31	GW322 (C)	10S	10S	20MS	10S
32	GW519	20MR	TMR	5MR	TR
33	HI1646	20S	TS	20S	10S
34	HD3090 (C)	20R	TR	20MR	TR
35	RAJ4083 (C)	10MR	TS	20R	TR
36	UAS3008	10S	TMS	20S	TS
37	MACS6749	5R	TR	20MR	TR
38	HD2932 (C)	10S	10MS	20MR	TS
39	HI1641	5R	TR	10R	TR
40	HI1642	10R	10MR	10R	TR
41	HI1633*	10MR	TR	5R	TR
42	MACS6752	10MR	TMR	10R	TMR
43	NIDW 1149(d)*	5MS	TRE	20MS	10MR
44	UAS446(d) (C)	10MS	TMR	40MS	TMR

45	HI 1605 (C)	20S	10S	5MR	10MS
46	MACS 4087(d)	10MS	TMS	40S	TS
47	MP 1358	5MR	TMR	0	TR
48	AKDW 2997-16(d) (C)	20S	TR	20S	TMS
49	HI8805(d)(I) (C)	5MR	TR	10S	TR
50	UAS 472(d)	5MR	TMR	TS	TR
51	MPO 1357(d)	10MR	TMR	5S	TR
52	NIAW3170(I) (C)	20MR	10MR	10MS	TR