Annexure 2: Seedling Resistance Test of AVT II against pathotypes of black rust (*Puccinia graminis tritici*) at Shimla during 2014-2015

S. No.	VARIETY	PATHOTYPES																			Gene postulation
		11	11A	15-1	21	21A-2	24A	34-1	40A	40-2	40-3	122	117-1	117-3	117-4	117-5	117-6	184	184-1	295	
		1	2	3	20	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	
Northern Hills Zone																					
1	HS562	MS	R	S	R	R	R	R	S	R	S	R	R	R	R	R	R	R	R	R	*Sr*8a+9b+
2	HPW251 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
3	HPW349 (C)	R	R	S	R	R	R	R	S	R	R	R	MR	R	R	R	R	R	R	R	*Sr*2+
4	HS375 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+5+31+
5	HS490 (C)	S	S	MS	R	R	R	R	MR	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+9b+
6	HS507 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*31+
7	HS542 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+5+8a+9b+11+
8	VL804 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+5+31+
9	VL829 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*5+31+
10	VL892 (C)	R	R	R	R	R	R	R	MS	R	MS	R	S	R	R	R	R	R	R	R	*Sr*2+
11	VL907 (C)	R	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	R	R	R	*Sr*2+31+
North Western Plain Zone																					
12	HD4730	R	R	R	R	R	S	R	R	R	MS	R	R	S	S	R	S	S	MR	R	*Sr*2+11+
13	MP1277	S	R	R	R	R	MS	R	MS	R	MR	R	R	R	S	MR	MR	R	R	MS	*Sr*2+7b+11+
14	WH1164	MR	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MR	R	*Sr*2+
15	DBW88 (C)	MS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+11+
16	DBW90 (C)	S	S	S	R	R	MR	R	MR	S	R	R	MS	R	MR	R	S	R	S	S	*Sr*2+13+
17	PBW621-50 (C)	S	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+
18	HD2967 (C)	MS	S	R	R	R	S	R	MR	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+8a+11+
19	HD3043	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-
20	HD3059 (C)	S	R	R	R	R	MS	R	MS	R	R	MS	MR	R	MR	R	R	R	S	MS	*Sr*2+11+*
21	HD3086 (C)	S	S	S	R	R	S	S	R	S	MS	S	MS	R	R	R	R	MR	S	MS	*Sr*2+7b+
22	PBW1644 (C)	MR	R	R	R	R	R	R	S	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+11+
23	PDW233 (C)	R	R	R	R	R	S	R	R	R	R	R	MS	R	S	R	S	S	S	R	*Sr*2+9e+
24	PDW291 (C)	R	R	R	R	R	MR	MR	R	R	MR	MR	R	MS	MS	R	S	R	MR	S	*Sr*2+9e+
25	PDW314 (C)	R	R	S	R	R	S	R	MR	S	S	R	S	S	S	R	S	MR	S	R	*Sr*2+9e+
26	WH1021 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
27	WH1080 (C)	R	R	MS	R	R	R	R	R	MR	MR	R	R	R	R	R	R	R	R	R	*Sr*2+9e+

S. No.	VARIETY	PATHOTYPES																			Gene postulation
		11	11A	15-1	21	21A-2	24A	34-1	40A	40-2	40-3	122	117-1	117-3	117-4	117-5	117-6	184	184-1	295	
		1	2	3	20	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	
28	WH1105 (C)	R	R	R	R	R	R	R	MR	R	R	R	S	R	R	R	R	R	S	R	*Sr*2+11+
29	WH1124 (C)	S	S	S	R	R	MS	R	R	S	MR	MS	MS	MR	R	R	R	R	R	S	*Sr*2+7b+
30	WH1142 (C)	R	R	S	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
North Eastern Plain Zone																					
31	C306 (C)	S	R	R	S	R	S	S	R	S	R	R	S	R	S	R	R	R	MR	R	-
32	HD2888 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+24+
33	K8027 (C)	S	R	R	R	R	S	R	MS	R	R	S	S	S	S	MS	S	S	S	S	*Sr*2+11+
Central Zone																					
34	HD4728 (D)	MS	R	R	R	R	S	MS	R	R	R	R	R	S	S	MR	S	S	MR	R	*Sr*2+11+
35	HD4730 (D)	R	R	R	R	R	S	MR	MS	R	R	R	S	S	S	MR	S	S	MR	R	*Sr*2+11+
36	GW322 (C)	MS	R	R	R	R	R	R	R	R	R	R	R	MR	R	R	R	R	R	S	*Sr*2+11+
37	HD2864 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-*
38	HD2932 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-
39	HI1544 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+24+R+
40	HI8498 (D) (C)	MR	R	R	MS	R	S	R	R	R	S	S	R	S	MR	MR	MS	S	MS	S	*Sr*2+11+
41	HI8737 (D) (C)	MR	R	MS	R	R	MS	R	MS	R	S	S	R	S	R	S	MS	R	MS	S	*Sr*2+9e+
42	MP3336 (C)	S	MS	MS	R	R	R	R	MR	R	R	R	R	MR	R	R	R	R	S	MR	*Sr*2+
43	MP4010 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+24+
44	MPO1215 (D) (C)	R	R	R	R	R	R	R	R	R	S	S	MR	R	-	R	S	R	R	R	*Sr*11+
Peninsular Zone																					
45	MACS3927 (D)	MS	R	R	R	R	MR	R	R	R	S	S	MS	S	R	R	MS	S	S	MR	*Sr*2+11+
46	NAW2030	R	R	R	R	R	R	S	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+24+
47	AKDW2997-16 (D) (C)	R	MR	S	S	S	MR	R	R	S	MS	S	MR	S	S	R	S	S	S	S	*Sr*2+7b+
48	DBW93 (I) (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
49	MACS6222 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
50	MACS6478 (C)	S	R	S	R	R	R	R	R	R	R	R	S	R	R	R	R	R	R	MS	-
51	NI5439 (C)	MS	R	R	R	R	S	R	R	R	R	R	S	R	R	R	R	R	R	R	*Sr*11+
52	NIAW1415(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
53	UAS347 (I) (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R	*Sr*2+7b+11+
54	UAS428 (D) (C)	R	R	R	R	R	S	R	R	R	S	R	R	S	R	MR	S	S	R	R	*Sr*2+11+

S. No.	VARIETY	PATHOTYPES																			Gene postulation
		11	11A	15-1	21	21A-2	24A	34-1	40A	40-2	40-3	122	117-1	117-3	117-4	117-5	117-6	184	184-1	295	
		1	2	3	20	4	5	6	7	8	9	10	12	13	14	15	16	17	18	19	
55	UAS446 (D) (I) (C)	S	R	R	R	R	S	R	R	R	R	R	MR	S	S	R	S	S	R	R	*Sr*2+11+
Special trial																					
56	HD2932+*Lr*19/*Sr*25	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+25+
57	MMBL283	S	R	S	R	R	MS	R	R	R	R	R	MS	MS	MR	R	S	R	R	R	-
58	PBW723	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+R
59	DBW14 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R	*Sr*2+
60	DDK1029 (C)	R	R	R	R	R	S	R	MS	R	R	R	R	R	R	R	S	MR	R	MR	*Sr*2+11+
61	HD2985 (C)	MR	R	R	R	R	R	R	R	R	R	R	MR	R	R	R	R	R	S	MS	*Sr*7b+
62	HI1563 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+R
63	HUW234 (C)	S	R	R	R	R	S	R	MR	R	S	MS	MS	R	S	R	R	S	S	S	*Sr*9b+11+
64	HW1098 (C)	R	R	R	R	R	R	R	R	R	MR	MR	R	R	R	R	MR	S	R	MS	*Sr*2+11+
65	K0307 (C)	R	R	R	R	R	R	R	R	R	R	R	MR	R	R	R	R	R	R	R	*Sr*2+
66	KARCHIA65 (C)	S	R	R	R	MR	MR	S	MR	S	MS	S	S	S	S	MS	S	S	S	S	-
67	KRL19 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+8b+9b+11+
68	KRL210 (C)	S	S	S	R	R	MS	R	R	S	MR	MR	R	R	R	R	R	S	S	S	*Sr*7b+
69	PBW343 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+31+
70	RAJ4083 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+11+
71	TL2942 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*2+R
72	TL2969 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R	*Sr*2+R
73	WH542 (C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Sr*31+