Annexure 1. Seedling Resistance Test of AVT-II against pathotypes of brown rust (*Puccinia triticina*) at Shimla during 2015-16

S. NO.	Variety/Line	PATHOTYPES																											Postulated genes
		11	12	12-2	12-3	12-5	12-7	12-8	77	77-1	77-2	77-5	77-7	77-8	77-9	77-10	77-12	77A-1	104-2	104-3	104B	106	104-4	107-1	108-1	162	162-2	162A	
I - Northern Hill Zone																													
1	HPW251(C)	R	R	R	R	S	R	R	R	MS	R	S	S	R	S	R	R	R	MR	R	R	R	R	R	R	MS	R	R	*Lr*26+23+
2	HS375(C)	R	R	R	R	R	R	R	R	S	R	S	S	R	R	MR	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*26+34+
3	HS490(C)	R	R	S	R	S	R	R	R	R	R	MR	S	R	MS	MS	R	R	MR	S	R	R	R	R	R	S	R	R	*Lr*23+
4	HS507(C)	R	R	R	R	R	R	R	R	S	S	S	S	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*26+1+
5	HS542(C)	R	R	R	R	S	R	S	S	S	R	S	S	R	S	S	MX	S	R	R	R	R	S	R	R	MS	S	R	*Lr*13+10+
6	VL829(C)	R	R	R	R	S	S	R	R	R	S	MS	S	S	MX	R	R	R	R	S	R	R	R	R	R	R	R	R	*Lr*26+34+
7	VL892(C)	R	R	S	R	R	S	R	R	R	MS	S	S	R	S	MS	R	R	MS	MS	R	R	R	R	R	S	R	R	*Lr*13+10+
II. North Western Plain Zone																													
8	DBW88(C)	R	R	R	S	R	R	S	R	S	S	S	S	MS	S	S	R	R	R	R	R	R	R	R	R	S	S	R	*Lr*13+10+3+
9	DBW90(C)	R	R	R	R	R	S	R	R	S	R	S	S	MR	S	S	R	R	S	S	MS	R	R	R	R	S	S	S	*Lr*13+10+3+
10	HD3043(C)	R	R	R	R	R	S	R	R	R	R	S	S	R	S	MS	MX	R	S	S	R	R	MS	R	R	R	S	R	*Lr*23+
11	HD2967(C)	R	R	MS	R	MS	S	R	R	R	R	S	R	R	S	MS	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*23+
12	HD3059(C)	R	R	R	R	R	S	S	R	S	S	S	S	R	S	S	R	R	R	R	MS	R	R	R	R	R	S	R	*Lr*13+
13	HD3086(C)	R	R	R	R	R	S	R	MS	S	S	S	S	R	S	S	R	R	S	S	S	R	S	R	R	S	S	S	*Lr*13+10+3+
14	PBW644(C)	R	R	R	R	R	R	R	R	S	S	S	S	R	S	S	S	R	S	S	MS	R	MS	R	MS	R	R	R	*Lr*13+
15	WH1021(C)	R	R	R	R	R	R	R	R	S	R	S	S	R	MR	S	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*26+
16	WH1080(C)	R	R	R	R	S	S	S	R	S	S	S	S	R	S	S	R	S	S	S	S	R	S	R	R	S	S	S	*Lr*13+
17	WH1105(C)	R	R	R	R	S	R	R	S	S	S	S	S	R	S	S	R	S	R	R	R	R	R	M	R	R	MS	R	*Lr*13+
18	WH1124(C)	R	R	S	R	R	S	R	R	S	S	S	S	R	S	S	R	R	S	S	S	R	R	R	R	R	S	S	*Lr*13+10+
19	WH1142(I)(C)	R	R	R	R	R	S	R	R	S	R	S	S	R	MS	R	S	R	S	S	MS	R	MS	R	R	S	R	R	*Lr*26+23+
III. North Eastern Plain Zone																													

S. NO.	Variety/Line	PATHOTYPES																											Postulated genes
		11	**12**	**12-2**	**12-3**	**12-5**	**12-7**	**12-8**	**77**	**77-1**	**77-2**	**77-5**	**77-7**	**77-8**	**77-9**	**77-10**	**77-12**	**77A-1**	**104-2**	**104-3**	**104B**	**106**	**104-4**	**107-1**	**108-1**	**162**	**162-2**	**162A**	
20	HD3171	R	R	S	M	MR	S	R	R	S	S	S	S	R	S	MX	S	R	S	S	R	R	MS	R	R	S	R	S	*Lr*13+
21	K1317	R	R	R	R	R	S	R	M	S	S	S	S	MX	S	S	R	S	S	S	R	R	MS	R	S	R	R	R	-
22	C306(C)	S	M	S	MX	R	S	R	S	S	R	S	S	S	S	S	S	S	S	S	S	MR	S	R	S	S	R	S	-
23	DBW39(C)	R	R	R	R	S	R	S	R	R	R	S	R	R	R	R	R	R	MR	R	R	R	S	R	R	S	R	R	*Lr*26+23+10+
24	HD2733(C)	R	R	M	S	S	S	R	R	S	R	S	M	R	S	R	S	R	S	S	MS	R	S	R	R	S	R	R	*Lr*26+3+
25	HD2888(C)	R	R	S	R	R	R	R	R	S	R	MR	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	R	-
26	K8027(C)	S	S	S	S	S	S	S	S	S	S	S	S	R	S	MS	S	MR	S	S	S	S	S	MS	S	MS	R	S	*Lr*13+
27	K0307(C)	R	R	R	R	R	S	S	S	S	S	S	S	R	S	S	R	R	MS	S	R	R	S	R	R	R	R	R	*Lr*23+
28	K1006(C)	R	R	R	R	R	R	R	MS	MS	S	S	S	R	MR	S	R	R	S	S	MS	R	R	R	R	R	R	R	*Lr*13+
IV. Central Zone																													
29	HI8759(D)	S	R	S	R	S	S	M	R	R	MS	R	R	R	MS	R	R	R	S	S	S	S	MS	R	R	S	R	R	-
30	HD4728(D)(I)(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	-
31	HI8498(D)(C)	R	R	S	R	S	S	S	R	R	MS	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	R	R	S	*Lr*23+
32	HI8737(D)(C)	R	R	R	R	S	S	R	R	R	R	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	R	R	S	*Lr*23+
33	MPO1215(D)(C)	R	NG	NG	NG	NG	NG	S	R	NG	R	MR	NG	R	NG	R	R	R	MS	R	R	R	NG	R	R	R	R	NG	*Lr*23+
V. Peninsular Zone																													
34	MACS3949(D)	S	R	R	R	S	MR	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	R	R	R	R	R	R	R	-
35	HI1605	R	R	S	S	S	S	S	S	R	R	MS	R	R	S	MS	MS	MS	S	S	R	R	S	S	MR	S	S	S	*Lr*13+
36	AKDW2997-16 (D)(C)	R	R	R	R	S	S	S	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MS	R	R	S	S	S	-
37	DBW93(C)	R	R	R	R	MS	R	R	R	MS	R	R	MS	MS	R	R	MS	R	R	R	MS	R	R	R	R	R	R	R	*Lr*26+23+
38	HD2932(C)	R	R	S	S	S	S	S	S	S	S	S	S	R	S	MS	S	S	S	S	S	R	S	S	S	R	S	S	-
39	MACS6222(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*26+1+

S. NO.	Variety/Line	PATHOTYPES																											Postulated genes
		11	**12**	**12-2**	**12-3**	**12-5**	**12-7**	**12-8**	**77**	**77-1**	**77-2**	**77-5**	**77-7**	**77-8**	**77-9**	**77-10**	**77-12**	**77A-1**	**104-2**	**104-3**	**104B**	**106**	**104-4**	**107-1**	**108-1**	**162**	**162-2**	**162A**	
40	MACS6478(C)	R	R	R	R	R	R	R	R	R	R	MS	S	R	S	MS	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*23+1+
41	NI5439(C)	MS	S	S	S	R	S	S	R	S	S	S	MS	S	S	S	R	R	S	S	S	S	S	R	S	S	S	S	*Lr*34+
42	NIAW1415(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	R	R	R	R	NG	R	*Lr*26+1+
43	NIAW34(C)	R	R	S	M	S	S	S	S	S	S	S	S	R	S	S	S	MS	S	S	S	R	S	R	R	S	S	S	-
44	NIDW295(D)(C)	R	R	R	MS	MR	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-
45	RAJ4083(C)	R	R	S	R	MS	MS	R	R	S	R	S	S	R	S	MS	R	MR	S	M	MR	R	R	R	R	R	R	R	*Lr*23+
46	UAS428(D)(C)	S	M	S	R	S	S	R	R	R	R	MS	R	R	R	R	R	R	S	S	S	S	R	S	R	S	S	R	*Lr*23+
47	UAS446(D)(C)	R	R	R	R	R	S	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*23+
VI. Southern Hills Zone																													
48	HW2044(C)	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	-
49	HW5216(C)	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	-
50	CoW(W)-1(C)	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	-
VII. Special Trial (MABB-IR-LS-CZ/PZ/WB)																													
51	HD3209	R	R	R	R	R	R	R	R	R	R	MS	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	-
52	PBW723	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*26+
53	WB2	R	R	S	R	S	S	R	S	MS	S	S	S	R	S	R	R	S	R	R	R	R	R	R	R	R	R	R	*Lr*13+
54	DBW14(C)	R	R	MS	S	S	S	S	R	S	R	S	R	R	S	R	R	S	S	R	MS	R	MS	R	R	R	R	R	*Lr*23+
55	DBW71(C)	R	R	R	R	S	S	R	R	S	R	S	S	R	S	R	S	R	S	S	R	R	S	R	R	R	R	R	*Lr*26+
56	DDK1029(C)	S	MS	R	MX	S	MS	R	R	R	R	R	R	R	S	R	R	R	MS	R	R	MS	R	R	S	S	R	R	*Lr*13+
57	DPW621-50(C)	R	R	R	S	S	S	S	R	S	S	S	S	S	S	S	R	R	R	R	R	R	R	R	R	R	S	R	*Lr*13+10+
58	GW322(C)	R	R	R	R	S	S	R	S	S	R	S	S	R	MS	S	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*13+
59	HD2864(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
60	HW1098(C)	S	R	R	R	S	MS	R	S	R	S	R	R	R	S	R	R	R	R	R	R	S	S	R	R	S	R	R	-

S. NO.	Variety/Line	PATHOTYPES																											Postulated genes
		11	**12**	**12-2**	**12-3**	**12-5**	**12-7**	**12-8**	**77**	**77-1**	**77-2**	**77-5**	**77-7**	**77-8**	**77-9**	**77-10**	**77-12**	**77A-1**	**104-2**	**104-3**	**104B**	**106**	**104-4**	**107-1**	**108-1**	**162**	**162-2**	**162A**	
61	Kharchia 65(C)	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	MR	S	S	S	S	S	-
62	KRL19(C)	R	R	R	S	S	S	S	S	S	S	MS	S	R	S	MS	MS	S	MS	MS	S	R	S	R	R	S	S	S	*Lr*13+
63	KRL210(C)	R	R	S	R	R	S	R	S	S	S	S	S	R	S	S	MX	MS	S	S	S	R	S	R	R	S	S	S	*Lr*13+10+
64	MP3336(C)	R	R	S	S	S	S	R	R	S	S	S	S	MS	S	S	S	MR	S	S	S	R	S	R	R	S	R	R	*Lr*13+
65	PBW343(C)	R	R	R	R	S	S	R	S	R	R	S	R	R	S	MS	MS	R	MS	MS	R	R	S	R	R	R	MS	R	*Lr*26+
66	TL2942(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*13+10+
67	TL2969(C)	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	*Lr*23+
68	WR544(C)	R	R	R	R	R	R	R	R	MS	S	S	S	R	S	MS	R	MR	R	R	R	R	R	R	R	R	R	R	*Lr*13+1+