

standard checks.

Pungsanbyeo, Iri 358, Suweon 307, and Milyang 23, all without *Bph 1*, were moderately resistant to biotype 2 at 11 DI. Baekunchalbyeo, Hangangchalbyeo, and Milyang 57, with *Bph 1*, were moderately susceptible or susceptible to biotype 2 (Table 1).

In another experiment, 50 2d- or 3d-instar BPH nymphs were caged in circular plastic tubes (5 × 30 cm) on individual plants of each variety 25 days after seeding. There were four replications for each variety. Pungsanbyeo was moderately susceptible to biotype 1 at 4 DI, susceptible at 10 DI, and was killed within the next 5 days. It was moder-


Table 2. Damage reactions of different rice varieties to BPH biotypes 1 and 2. Korea, 1982.

Biotype	Variety	Resistance	Damage rating ^a	
			4 DI	10 DI
1	Pungsanbyeo	None	M	S
	Baekunchalbyeo	<i>Bph 1</i>	R	MR
	Milyang 63	<i>bph 2</i>	MR	MR
2	Pungsanbyeo	None	MR	MS
	Baekunchalbyeo	<i>Bph 1</i>	S	S
	Milyang 63	<i>bph 2</i>	R	R

^aDI = days after infestation, R = resistant, S = susceptible, MR = moderately resistant, MS = moderately susceptible.

ately resistant to biotype 2 at 4 DI and moderately susceptible at 10 DI. Baekunchalbyeo with *Bph 1* was readily killed and considered extremely susceptible to biotype 2. Milyang 63 with *bph 2* had resistance to biotypes 1 and 2

(Table 2).

Varieties without resistance genes were more susceptible to biotype 1 than to biotype 2. Capacity of the two biotypes to attack different rice varieties differs. 

Differences between seedling bulk and population buildup tests of varietal resistance to whitebacked planthopper

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For the seedling bulk test, 10 varieties were sown in 15-cm-long rows in plastic boxes (10 × 10 × 50 cm) in the greenhouse. One-week-old seedlings, 20 per variety, were infested with 6-8 whitebacked planthopper (*Sogatella furcifera* H.) nymphs each. Plant reactions were graded 7, 10, 13, 15, and 23 days after infestation (DAI), according to the

Standard Evaluation System for Rice.

For the population buildup test, the same 10 varieties were transplanted in wagner pots (20 × 15 cm) in the field on 27 May and 5 pairs of planthoppers/pot were caged on 6 July. Insects were counted 20, 30, 40, and 60 days after infestation.

Results between the seedling bulk test and the population buildup test were different. In the seedling bulk test, 5 varieties were moderately resistant or resistant 7 days after infestation (Table 1). All were susceptible or moderately susceptible at 23 DAI. In the population buildup test, all varieties except Nampungbyeo had high insect buildups (Table 2).


Final rating by the seedling bulk test should be made after there is no further increase in damage. 

Table 1. Variety reaction to whitebacked planthopper as measured by the seedling bulk test in Korea.

Variety	Reaction ^a at indicated days after infestation				
	7 d	10 d	13 d	15 d	23 d
Nampungbyeo	MR	I	I	MS	MS
Jinjubyeo	MR	I	MS	S	S
Suweon 295	S	S	S	S	S
Milyang 30	S	S	S	S	S
Suweon 305	S	S	S	S	S
Suweon 301	MR	MR	I	I	S
Mityang 23	MR	I	MS	MS	S
Baekunchalbyeo	R	MR	MR	MR	MS
Suweon 299	I	MS	MS	S	S
Suweon 298	I	MS	MS	S	S

^aS = susceptible, MS = moderately susceptible, I = immediate, MR = moderately resistant, R = resistant.

Table 2. Population buildup of whitebacked planthopper on rice plants infested at 40 days after transplanting in pots in Korea.

Variety	Population (no.) at indicated days after infestation								Damage ^a
	20 d		30 d		40 d		60 d		
	Nymph	Adult	Nymph	Adult	Nymph	Adult	Nymph	Adult	
Nampungbyeo	152	0	23	190	0	43	0	18	3
Jinjubyeo	148	0	15	118	86	64	19	30	2
Suweon 295	154	0	12	114	220	104	67	37	5
Milyang 30	64	0	17	148	234	68	76	19	8
Suweon 305	108	0	21	57	266	100	214	82	4
Suweon 301	120	0	38	146	270	321	47	102	7
Milyang 23	94	0	12	114	286	61	158	21	5
Baekunchalbyeo	120	0	16	118	710	212	358	40	9
Suweon 299	98	0	13	154	760	100	52	60	8
Suweon 298	122	0	36	108	930	111	380	117	9

^a0 = no damage, 9 = hopperburned.