

Table 1 Reaction of gene donors, recurrent parent, and resistant and susceptible checks against BPH biotype-4 present at Directorate of Rice Research Hyderabad India.

| Donars/introgression lines        | Parents / Acc no.  | Gene present | Over the years BPH damage score in 0-9 scale |      |      |      |      |      |      |      | Reaction |
|-----------------------------------|--|--------------|--|------|------|------|------|------|------|------|----------|
|                                   |  |              | 2007   | 2006 | 2005 | 2003 | 2001 | 1999 | 1997 | Mean |          |
| ASD7                              | Acc 6303   | <i>bph2</i>  | 7.0  | NA   | 9.0  | 8.7  | 6.0  | 8.6  | 9.0  | 8.1  | S        |
| Babawee                           | Acc 8978   | <i>bph4</i>  | 5.0  | NA   | NA   | 4.9  | 3.8  | 5.4  | 3.9  | 4.6  | MR       |
| ARC 10550                         | Acc 12507  | <i>bph5</i>  | 5.0  | 4.5  | 7.3  | NA   | 3.9  | NA   | NA   | 5.1  | MR       |
| T12                               | Acc 56989  | <i>bph7</i>  | 9.0  | NA   | 7.6  | 8.5  | 4.1  | 5.7  | 6.1  | 7.6  | S        |
| Chinsaba                          | Acc 33016  | <i>bph 8</i> | 7.0  | NA   | 8.7  | 8.7  | 7.7  | 8.7  | 8.3  | 8.2  | S        |
| IR54751-2-44-15-24-3              | IR1529-680-3-2*2 /<br><i>O.officinalis//</i><br>IR1529-680-3-2 | <i>bph11</i> | NA   | NA   | NA   | NA   | NA   | NA   | 4.7  | 4.7  | MR       |
| IR 54751-2-34-10-6-2              | IR1529-680-3-2*2 /<br><i>O.officinalis//</i><br>IR1529-680-3-2 | <i>bph12</i> | NA   | NA   | 8.2  | NA   | NA   | 6.9  | 7.8  | 7.6  | S        |
| Acc. 106412                       | <i>O rufipogon</i>   |              | 2.0  | 1.6  | 1.8  | NA   | NA   | NA   | NA   | 1.8  | R        |
| IR 73678-6-9-B                    | IR 64/ <i>O rufipogon</i> // 2*IR 64                           |              | 1.9  | 2.3  | 2.0  | NA   | NA   | NA   | NA   | 2.1  | R        |
| IR 64<br>(Recurrent parent)       |  |              | 4.6  | 3.8  | 4.2  | 3.6  | 5.5  | 3.4  | 3.8  | 4.1  | MR       |
| PTB 33<br>(Resistant check)       |  |              | 1.2  | 1.9  | 2.1  | 1.3  | 1.2  | 1.2  | 1.1  | 1.4  | R        |
| BPT 5204<br>(Susceptible variety) |  |              | 9.0  | 9.0  | 9.0  | 9.0  | NA   | NA   | NA   | 9.0  | S        |
| TN 1<br>(Susceptible check)       |  |              | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  | 9.0  | S        |

R: Resistance, MR: Moderately resistance, S: Susceptible, NA: Not screened

Table 2 Inheritance of BPH resistance in F<sub>2</sub> generation of the cross between introgression line and recurrent and susceptible parents.

| Cross                   | Segregation in F <sub>2</sub> generation |           |             |       | $\chi^2$ | P value   |
|-------------------------|--|-----------|-------------|-------|----------|-----------|
|                         | Total plants                             | Resistant | Susceptible | Ratio |          |           |
| BPT5204 x IR73678-6-9-B | 193                                      | 55        | 138         | 1:3   | 1.259    | 0.30-0.20 |
| IR64 x IR73678-6-9-B    | 495                                      | 205       | 290         | 7:9   | 1.1      | 0.30-0.20 |
| BPT5204 x IR64          | 230                                      | 62        | 168         | 1:3   | 0.469    | 0.70-0.50 |
| Babawee x IR73678-6-9-B | 520                                      | 238       | 282         | 7:9   | 0.87     | 0.50-0.30 |