Table 1: Seedling response, $\operatorname{Yr}$ genes in AVT I and II against the pathotypes of Puccinia striiformis (wheat stripe/yellow rust) during 2019-20 at ICAR-IIWBR, RS, Flowerdale, Shimla

| S. no. | Variety / Line | Pathotype |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \hat{\theta} \\ & \stackrel{\theta}{E} \end{aligned}$ | $\begin{aligned} & \underset{\sim}{7} \\ & \underset{\sim}{\infty} \\ & \underset{\sim}{\infty} \end{aligned}$ | F | $\begin{aligned} & \text { ơ } \\ & \text { 0n } \\ & \exists \end{aligned}$ | $\underset{\sim}{n}$ | $\begin{aligned} & \text { N } \\ & \text { O } \\ & \end{aligned}$ | $\begin{aligned} & \text { + } \\ & \underset{\sim}{\infty} \\ & \underset{\sim}{\infty} \end{aligned}$ | $\begin{aligned} & \underset{+}{\infty} \\ & \underset{\theta}{\theta} \end{aligned}$ | $\stackrel{9}{7}$ | $\begin{aligned} & \text { J } \\ & \stackrel{N}{2} \end{aligned}$ | 0 | 8 | $$ | $\rightarrow$ | $\cdots$ | Z | Yr gene/s |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |  |
| 1 | HS 507 (C) | R | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 2 | HS 562 (C) | S | S | S | R | R | S | R | R | S | R | S | R | R | S | S | S | YrA+ |
| 3 | HPW 349 (C) | S | S | S | R | R | S | MS | MS | S | R | S | MX | R | MS | S | MS | Yr2+ |
| 4 | HS 668 | R | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 5 | VL 907 (C) | S | S | R | R | R | R | MS | R | R | R | R | R | R | R | R | R | Yr9+ |
| 6 | VL 2036 | S | S | S | R | R | MS | S | S | R | R | S | R | R | R | MS | R | Yr2+ |
| 7 | HS 681 | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 8 | VL 3022 | MS | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 9 | HS 680 | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 10 | VL 3023 | S | S | R | R | R | S | R | R | S | R | R | R | R | R | R | R | Yr9+A+ |
| 11 | HPW 474 | S | S | MS | R | R | MS | MS | R | R | R | R | R | MS | R | R | R | Yr2+ |
| 12 | UP 3069 | MS | S | MR | R | R | R | R | R | MS | R | R | R | R | R | R | R | YrA+ |
| 13 | HPW 473 | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | YrA+ |
| 14 | VL 892 (C) | R | S | S | R | R | MS | MS | R | R | R | MS | R | MS | R | MS | R | Yr2+ |
| 15 | VL 3024 | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 16 | HS 490 (C) | R | S | MR | R | R | MS | R | R | R | R | MS | R | R | R | R | R | YrA+ |
| 17 | HS 679 | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 18 | DBW88 (C) | S | S | MS | R | R | R | MS | R | R | R | R | R | R | R | R | R | Yr2+ |
| 19 | DBW187(I) (C) | S | S | S | MS | R | S | MS | MS | S | R | S | R | S | S | MR | R | Yr2+ |
| 20 | HD2967 (C) | S | S | S | R | R | S | MS | R | S | R | S | R | R | S | S | R | Yr2+ |
| 21 | WH1105 (C) | S | S | MS | R | R | R | MS | R | R | R | R | R | R | R | R | R | Yr2+ |
| 22 | DBW222(I) (C) | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 23 | HD3086 (C) | S | S | S | R | R | MS | MS | MS | S | R | S | R | R | R | S | R | Yr2+ |
| 24 | PBW840M | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9 + A+ |
| 25 | PBW803 | S | S | S | R | R | R | MS | R | MS | R | MS | R | R | R | MS | R | Yr2+ |
| 26 | PBW550 (C) | S | S | R | R | R | S | S | S | R | R | R | R | R | R | R | R | Yr9+ |
| 27 | HD3334 | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 28 | HD3059 (C) | S | S | R | MS | R | S | MS | R | MS | R | MS | R | R | R | R | R | Yr2+ |
| 29 | HD3332 | S | S | S | MS | R | S | S | MS | S | R | S | R | R | MS | S | R | Yr2+ |
| 30 | DBW173 (C) | S | S | R | R | R | MS | S | R | R | R | R | R | R | R | R | R | Yr9+ |
| 31 | WH1021 (C) | S | S | R | R | R | S | S | R | R | R | R | R | R | R | R | R | Yr9+ |
| 32 | PBW811 | S | S | S | MS | R | S | S | S | S | R | S | R | R | R | S | R | Yr2+ |
| 33 | DBW291 | S | S | MS | R | R | MS | MS | R | R | R | R | R | R | R | R | R | Yr2+ |


| 34 | WH1264 | MS | S | S | R | R | S | MS | R | S | R | S | R | R | R | MS | R | Yr2+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 35 | PBW812 | S | S | S | R | R | S | MS | R | MS | R | S | R | R | R | MR | R | Yr2+ |
| 36 | JKW261 | S | S | S | R | MS | MS | S | S | R | R | MS | MR | MS | S | R | R | - |
| 37 | DBW290 | S | S | S | R | R | S | MS | R | S | R | S | R | MS | R | S | R | Yr2+ |
| 38 | PBW771(I) (C) | S | S | R | R | R | S | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 39 | PBW813 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 40 | HD3331\#WB | S | S | S | MS | R | S | S | MS | R | S | MS | R | MS | R | MS | R | Yr2+ |
| 41 | HD3298* | S | S | MS | R | R | S | MS | R | R | R | MS | R | R | R | R | R | Yr2+ |
| 42 | WH1124 (C) | S | S | S | R | R | R | MS | R | S | R | S | R | MS | R | MS | R | Yr2+ |
| 43 | UP3033 | S | S | R | R | R | S | S | R | R | R | R | R | R | R | R | R | Yr9+ |
| 44 | HUW838\#WB | S | R | MS | R | R | R | MS | MS | S | R | R | R | R | R | R | R | Yr2+ |
| 45 | HD3043 (C) | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 46 | PBW644 (C) | S | S | R | S | R | R | S | S | R | S | S | R | MS | R | R | R | Yr2+ |
| 47 | DBW296 | S | S | S | R | R | S | S | S | S | R | S | R | R | R | S | R | Yr2+ |
| 48 | HI1628(I) (C) | S | S | S | MS | R | S | S | S | S | R | S | R | MS | MS | S | R | Yr2+ |
| 49 | WH1080 (C) | S | S | S | R | R | S | S | R | S | R | S | MS | R | R | S | R | Yr2+ |
| 50 | JAUW672 | S | S | S | R | R | S | R | R | MS | R | S | R | R | R | S | R | YrA+ |
| 51 | WH1142 (C) | S | S | R | R | R | R | S | R | S | R | R | R | R | R | R | R | Yr9+ |
| 52 | $\begin{aligned} & \text { NIAW3170(I) } \\ & \text { (C) } \end{aligned}$ | S | S | S | S | R | S | S | S | S | MS | S | MR | MS | S | S | R | - |
| 53 | PBW804 | S | S | S | R | MR | S | S | S | S | R | S | MS | R | S | S | R | - |
| 54 | DBW187 (C) | S | S | S | MS | R | S | MS | MS | S | R | S | R | S | S | MR | R | Yr2+ |
| 55 | K1006 (C) | S | S | S | S | MR | S | S | S | S | S | MS | MS | MS | R | S | MS | - |
| 56 | DBW39 (C) | S | S | R | R | R | S | MS | R | S | R | R | R | R | R | R | R | Yr9+ |
| 57 | HD3249(I) (C) | S | S | S | R | R | S | S | MS | S | R | S | R | R | S | S | R | Yr2+ |
| 58 | HD2733 (C) | S | S | R | R | R | S | S | MR | S | R | R | R | R | R | R | R | Yr9+18+ |
| 59 | HD3171 (C) | S | S | R | MS | R | MS | S | R | MS | R | MS | R | R | R | R | R | Yr2+ |
| 60 | HD2888 (C) | S | S | S | R | R | S | R | R | MS | R | R | R | MR | R | MS | R | - |
| 61 | HD3293* | S | S | S | R | R | S | R | R | MS | R | R | R | R | R | R | R | Yr2+ |
| 62 | K1317 (C) | S | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 63 | HI1612 (C) | S | S | S | R | R | S | S | MR | S | R | MS | R | R | MS | S | R | Yr2+ |
| 64 | DBW252(I) (C) | S | S | R | R | R | S | S | R | MS | R | S | R | R | R | R | R | Yr2+ |
| 65 | WHD964(d) | S | S | MS | R | MS | MR | S | MS | S | RS | MS | R | R | R | R | R | - |
| 66 | DDW48(d)Q* | S | S | MS | R | R | MR | MR | MS | R | R | R | R | R | R | R | R | Yr2+ |
| 67 | MACS6222 (C) | S | S | MR | R | R | S | S | S | S | R | S | R | R | R | R | R | Yr2+ |
| 68 | MACS3949(d) <br> (C) | S | S | S | R | MS | R | MS | R | S | R | S | R | R | R | R | R | Yr2+ |
| 69 | HI8818(d) | S | S | MS | R | R | S | S | R | R | R | S | R | R | R | R | R | Yr2+ |
| 70 | UAS428(d) (C) | S | S | S | MS | MR | MS | S | S | S | S | S | R | S | R | S | S | - |
| 71 | DDW49(d)Q* | S | S | MS | MS | S | MS | S | MS | MS | R | S | MS | R | R | R | R | - |
| 72 | GW322 (C) | S | R | S | MS | MS | S | S | S | S | S | MS | MS | R | MS | R | S | - |
| 73 | GW519 | S | S | S | S | R | S | S | S | S | S | S | R | S | MS | S | R | Yr2+ |
| 74 | HI1646 | S | S | S | R | R | S | S | R | MS | R | S | R | R | R | S | R | Yr2+ |
| 75 | HD3090 (C) | S | S | R | R | R | R | S | S | R | R | R | R | R | R | R | R | Yr9+ |
| 76 | RAJ4083 (C) | S | S | S | MS | R | S | S | S | R | MS | R | R | R | R | S | R | Yr2+ |


| 77 | UAS3008 | S | S | S | S | R | MS | S | S | S | R | MS | R | R | R | S | R | Yr2+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 78 | MACS6749 | S | S | S | S | MS | S | S | S | S | MS | S | MS | MS | R | S | R | - |
| 79 | HD2932 (C) | S | S | S | S | R | S | S | S | S | R | S | R | R | S | S | R | - |
| 80 | HI1641 | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | - |
| 81 | HI1642 | S | S | S | MR | R | S | R | R | S | R | S | R | R | S | S | R | YrA+ |
| 82 | HI1633* | S | S | R | R | R | MS | S | S | S | R | R | R | R | R | R | R | Yr9+ |
| 83 | MACS6752 | S | S | MS | S | MS | S | S | S | S | S | S | S | S | S | S | S | - |
| 84 | NIDW1149(d)* | MS | MS | S | S | R | S | S | S | MS | S | S | R | R | R | R | R | Yr2+ |
| 85 | UAS446(d) (C) | MS | S | MR | R | MS | MR | MS | R | S | R | MS | MR | R | R | R | R | - |
| 86 | HI 1605 (C) | S | S | R | S | R | MS | R | MS | R | R | R | R | R | R | R | R | Yr2+ |
| 87 | MACS 4087(d) | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | - |
| 88 | MP 1358 | S | S | S | S | R | S | R | R | R | R | MS | R | R | R | R | R | YrA+ |
| 89 | AKDW 2997- 16(d) (C) | MS | S | S | S | S | S | S | MS | S | S | S | MS | MS | S | S | MR | - |
| 90 | HI8805(d)(I) (C) | S | S | MS | R | MS | S | S | R | S | R | MS | R | R | R | R | R | - |
| 91 | UAS 472(d) | S | S | MS | R | MR | MS | S | MS | S | R | S | MS | R | R | R | R | Yr2+ |
| 92 | MPO1357(d) ${ }^{\text {Q }}$ | S | S | MS | R | R | R | MS | MR | MS | R | R | R | R | R | R | R | Yr2+ |
| 93 | NIAW3170(I) (C) | S | S | S | S | R | S | S | S | S | R | S | MS | MR | S | S | R | - |
| 94 | MACS5055 | S | MS | MS | MS | MS | MS | S | MS | MS | MS | MS | MS | MS | MR | MS | MR | - |
| 95 | $\begin{aligned} & \text { MACS6222 } \\ & \text { (aest.) (C) } \end{aligned}$ | S | S | MR | R | R | S | S | S | S | R | S | R | R | R | R | R | Yr2+ |
| 96 | DDK1029 (C) | MS | MS | MS | MS | S | MS | S | MS | S | MS | S | MS | MS | MR | MS | MR | - |
| 97 | MACS5054 | MS | MS | MS | MS | S | MS | S | MS | S | MS | S | MS | MS | MR | MS | R | - |
| 98 | DDK1058 | MR | MS | MS | MS | MS | MS | MS | S | MS | MS | MS | MS | MR | MS | MS | R | - |
| 99 | HW1098 (C) | MS | MS | MS | R | R | R | R | MS | R | MR | R | R | R | R | R | R | Yr2+ |
| 100 | DDK1059 | MS | MS | MS | MS | S | MS | MS | MS | S | S | S | MS | MS | MR | MS | R | - |
| 101 | DBW327 | S | S | MS | S | R | S | MS | R | R | R | S | R | MS | MS | R | R | Yr2+ |
| 102 | HD3086 (C) | S | S | S | R | R | S | S | R | MS | R | S | R | R | R | MS | R | Yr2+ |
| 103 | DBW332 | S | S | R | R | R | MS | R | R | R | R | S | R | R | R | R | R | YrA+ |
| 104 | DBW303* | S | S | R | R | R | MS | MS | R | R | R | MS | R | R | R | R | R | Yr2+ |
| 105 | HD2967 (C) | S | S | S | R | R | S | R | R | MS | R | S | R | S | S | S | R | Yr2+ |
| 106 | DBW187* | S | S | S | MS | R | S | MS | MS | S | R | S | R | S | S | MR | R | Yr2+ |
| 107 | DBW329 | S | S | MS | MS | R | MS | MS | R | R | R | R | R | R | R | R | R | Yr2+ |
| 108 | WH1252 | S | S | S | R | R | S | S | MS | R | R | S | R | R | MS | R | R | Yr2+ |
| 109 | HD3378 | S | S | S | S | MS | S | S | S | S | R | S | MS | MS | S | S | MS | - |
| 110 | WH1270* | S | S | S | R | R | R | S | MS | S | R | S | R | R | R | R | R | Yr2+ |
| 111 | DBW333 | S | S | MR | R | R | MS | MS | R | MS | R | S | R | R | MS | R | R | Yr2+ |
| 112 | DBW330 | S | S | S | MS | R | S | S | S | S | R | S | R | R | R | R | R | Yr2+ |
| 113 | DBW328 | S | S | MR | R | R | MS | MR | R | MS | R | S | R | MS | R | R | R | Yr2+ |
| 114 | DBW331 | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 115 | TAW155 | S | S | MS | R | R | MS | MS | R | MS | R | S | R | R | R | R | R | Yr2+ |
| 116 | HI1636 | S | S | S | S | S | S | S | S | S | MR | S | R | MS | S | S | MR | - |
| 117 | MP1361 | S | R | S | MR | R | MS | R | R | S | S | MS | R | MR | R | R | R | Yr2+ |
| 118 | MACS6747 | S | S | S | MS | MR | S | S | MS | MS | S | MS | MS | S | MS | S | MS | - |
| 119 | HD3377 ${ }^{\text {B }}$ | S | S | MS | MS | R | MS | R | R | R | S | MS | R | R | MS | R | R | Yr2+ |


| 120 | HI1637 | S | S | S | MS | R | S | S | S | S | R | S | MS | R | S | S | R | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 121 | RAJ4541 ${ }^{\text {B }}$ | S | S | S | MS | R | S | MS | S | S | MS | S | R | R | S | S | R | Yr2+ |
| 122 | GW513 | S | S | R | MS | R | MS | S | S | R | S | MR | R | S | MS | R | R | Yr2+ |
| 123 | GW322 | S | S | S | S | MR | S | S | S | MS | R | MS | MR | MS | R | R | R | - |
| 124 | HI1544 | S | S | R | S | MR | MR | S | S | MS | S | MS | MS | S | MS | MS | MS | - |
| 125 | HI1634 ${ }^{\text {® }}$ | S | S | R | R | R | S | S | S | S | R | R | R | R | R | R | R | Yr9+ |
| 126 | HD2932 | S | S | S | S | R | S | S | S | S | R | S | R | R | S | S | R | - |
| 127 | MP3336 | S | S | S | S | R | MS | S | S | S | MR | S | MS | MS | S | S | MS | - |
| 128 | HD2864 | S | S | S | S | R | S | S | S | S | R | S | R | MR | S | MS | MS | Yr2+ |
| 129 | CG1029* | S | S | S | S | R | S | S | MS | S | R | S | R | MR | MR | S | R | Yr2+ |
| 130 | MPO1357(d) | S | S | MS | R | R | R | MS | MR | MS | R | R | R | R | R | R | R | Yr2+ |
| 131 | HI8627(d) | S | S | MS | R | R | R | MS | R | S | R | MR | R | R | R | R | R | Yr2+ |
| 132 | UAS466(d)(I) | S | S | R | R | R | R | R | R | S | R | MR | R | R | R | R | R | - |
| 133 | UAS472(d) | S | S | S | R | R | MR | MS | MS | S | R | MS | R | R | R | S | R | Yr2+ |
| 134 | DBW110 | S | - | S | R | R | R | S | S | R | R | S | R | R | R | S | R | Yr2+ |
| 135 | MP3288 | S | S | MS | R | R | MS | S | S | MS | R | MR | MR | R | R | MS | R | Yr2+ |
| 136 | HI 8823(d) | S | S | S | R | MR | R | S | MS | S | R | S | R | R | MR | R | R | - |
| 137 | DDW47(d)(I) | S | S | MR | R | MS | R | R | R | S | R | R | R | R | R | R | R | - |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

