Table :1. Seedling response of AVT I and II against the pathotypes of Puccinia striiformis tritici ( wheat yellow rust) during 2018-19 at ICAR-IIWBR, RS, Shimla

|  |  | Pathotypes |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { S. } \\ \text { NO. } \end{gathered}$ | Variety/line | $\begin{aligned} & \stackrel{\circ}{2} \\ & \stackrel{\circ}{6} \end{aligned}$ | - $\stackrel{\square}{\overline{5}}$ | $\begin{aligned} & \text { or } \\ & \stackrel{\sim}{5} \\ & \underset{N}{2} \end{aligned}$ | $\begin{aligned} & \text { N} \\ & \text { N } \\ & \underset{\sim}{2} \end{aligned}$ | $\begin{aligned} & \mathbf{\infty} \\ & \infty \\ & \end{aligned}$ | $\begin{aligned} & \text { + } \\ & \text { © } \\ & \stackrel{1}{2} \end{aligned}$ | $\vdash$ | Q | ¢ | $\stackrel{\infty}{\infty}$ | 㮩 | 8 | \% | צ | - | - | ¢ | $z$ |  |
|  |  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |  |
| 1 | HPW349 (C) | S | S | S | S | R | S | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 2 | VL907 (C) | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 3 | HS507 (C) | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 4 | HS652 | S | S | S | S | MS | S | S | S | R | R | R | S | MS | S | R | S | R | R | - |
| 5 | HS562 (C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | seed |
| 6 | VL892 (C) | R | S | S | S | R | MS | MS | R | R | R | R | R | R | R | MS | S | R | R | YrA+ |
| 7 | HS490 (C) | S | S | S | MS | R | R | MS | R | R | R | R | R | R | MS | R | R | R | R | YrA+ |
| 8 | HPW468 | S | S | S | S | R | S | S | S | R | S | R | R | R | S | R | S | R | R | Yr2+ |
| 9 | HS673 | S | S | S | S | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 10 | VL3020 | S | S | R | S | R | S | R | R | R | R | R | S | R | R | R | R | R | R | Yr9+ |
| 11 | UP3041 | S | S | S | R | S | S | S | S | R | S | S | S | R | R | R | S | S | R | - |
| 12 | HPW467 | MS | S | MS | MS | R | R | MS | R | R | R | R | R | R | MR | R | R | R | R | YrA+ |
| 13 | HS674 | S | S | S | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | YrA+ |
| 14 | VL3019 | MS | S | S | MR | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 15 | VL3021 | S | S | S | R | R | S | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 16 | WH1105 (C) | R | S | S | R | R | R | R | R | R | R | R | R | R | MS | R | R | R | R | Yr2+ |
| 17 | HD3226 (I)( C) | S | S | R | S | R | MS | MS | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 18 | HD 3086 (C) | S | S | MR | S | R | S | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 19 | PBW820 | R | MS | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |


| 20 | DBW221 | S | S | S | S | S | S | S | S | MR | S | S | R | R | S | S | S | R | S | Yr2+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 | DBW222 | R | S | S | R | R | S | R | R | R | R | MR | R | R | R | R | R | R | R | Yr9+ |
| 22 | PBW550 (C) | S | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 23 | PBW821 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 24 | HD2967 (C) | S | S | S | S | R | R | S | S | R | R | R | R | R | S | MS | S | R | R | Yr2+ |
| 25 | NW7049 | S | S | S | S | R | MS | S | MS | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 26 | DDW621-50 (C) | S | S | S | S | R | MS | R | R | R | MS | R | R | R | R | R | R | R | R | - |
| 27 | DBW88 (C) | S | S | S | S | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | YrA+ |
| 28 | PBW752 (I)(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 29 | DBW173 (C) | S | S | S | S | R | MR | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 30 | WH1021 (C) | S | S | S | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 31 | HD 3059 (C ) | S | S | S | MS | MR | S | R | R | R | S | R | R | R | R | R | R | R | R | Yr2+ |
| 32 | WH1124 (C) | S | S | S | S | R | MS | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 33 | PBW771 | MS | MR | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 34 | HI1620 (I) (C) | S | S | S | S | R | R | S | MS | R | R | R | R | R | S | R | S | R | R | YrA+ |
| 35 | PBW796 | S | S | S | S | S | S | S | S | S | S | S | S | MR | S | R | S | MS | R | - |
| 36 | H11628 | S | S | S | S | S | S | S | S | S | R | R | R | R | S | R | S | R | R | Yr2+ |
| 37 | WH1142 | S | S | S | S | S | MS | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 38 | HD3043(C) | R | S | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+A+ |
| 39 | PBW644 (C) | R | S | S | S | MS | S | R | R | R | R | MS | R | R | MR | R | R | S | S | Yr2+ |
| 40 | HD3237 (C)(I) | S | S | S | S | S | S | S | S | R | S | R | MR | R | S | R | S | R | S | Yr2+ |
| 41 | BRW 3806 | R | S | S | MS | R | R | S | S | R | R | R | R | R | MS | R | MS | R | R | Yr2+ |
| 42 | NIAW3170 | S | S | S | S | S | S | S | S | S | S | R | MX | MS | S | MS | S | R | S | - |
| 43 | WH1080 (C) | S | S | S | S | S | MS | S | S | S | S | R | R | S | S | R | S | R | S | - |
| 44 | HD3249(C) | MS | S | S | S | R | S | S | S | R | MS | R | R | R | MS | R | S | R | R | Yr2+ |
| 45 | HD2733 (C) | S | S | S | S | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+18+ |
| 46 | PBW781 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |


| 47 | DBW257 | S | S | MS | S | R | S | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 48 | DBW39 (C) | MS | S | S | S | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 49 | HD3277 | S | S | MS | S | R | MS | S | S | MX | R | R | R | R | S | R | S | R | R | Yr2+ |
| 50 | RAJ4529 | S | S | S | S | S | S | S | S | S | MS | S | S | MS | S | MS | S | MS | S | - |
| 51 | DBW187 (I) (C) | S | S | S | S | S | R | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 52 | WH1239 | S | S | S | S | R | R | S | S | R | R | R | R | R | S | R | S | R | R | YrA+ |
| 53 | K0307 (C) | MS | S | S | S | S | S | S | S | S | S | R | S | S | S | R | S | R | S | Yr2+ |
| 54 | HD2967 (C) | S | S | S | S | R | R | S | S | R | R | R | R | R | S | R | S | S | R | Yr2+ |
| 55 | K1317 (C) | MS | S | S | S | R | R | MR | R | R | R | R | R | R | MX | R | MS | R | R | Yr9+A+ |
| 56 | H11612 (C) | S | S | S | S | MS | MS | MS | S | MR | MS | R | S | R | MR | R | S | R | MS | Yr2+ |
| 57 | HD3293 | S | S | S | S | R | R | MS | S | R | R | R | R | R | MS | R | S | R | R | Yr2+ |
| 58 | HD3171 (C) | MR | MS | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr2+ |
| 59 | HD2888 (C) | S | MS | S | S | R | R | S | MS | MR | R | R | R | R | MR | MS | S | R | R | Yr2+ |
| 60 | DBW252 | MR | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | YrA+ |
| 61 | K8027 (C) | MS | S | S | MS | R | MR | S | MS | R | R | R | R | R | MS | R | S | R | R | Yr2+ |
| 62 | DBW 273 | S | S | S | S | MS | S | S | S | MS | S | S | R | R | S | R | S | MS | S | Yr2+ |
| 63 | H18713 (d) (C) | MR | S | S | S | S | MS | S | S | MS | S | R | S | S | MS | S | MS | S | R | - |
| 64 | NIDW1158(d) | R | R | R | R | R | MR | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 65 | H18811 (d) | MS | S | S | MS | S | MS | MS | S | R | R | R | S | MS | MR | MS | MR | R | R | - |
| 66 | HD3343 | S | S | S | S | MS | S | S | S | MS | S | R | R | R | MS | R | S | MR | R | Yr2+ |
| 67 | GW322 (C) | S | S | S | S | MS | S | S | S | MR | S | R | S | MS | S | MS | S | R | R | Yr2+ |
| 68 | H11544 (C) | S | S | S | S | MS | S | S | MS | S | S | S | MS | R | MS | MS | S | S | S | Yr2+ |
| 69 | H18737 (C) (d) | MS | MS | S | S | MS | MR | S | S | R | R | R | S | S | MS | MS | S | S | R | Yr2+ |
| 70 | H18812 (d) | MS | S | S | S | S | S | MS | S | S | MS | R | R | R | S | R | R | MS | R | Yr2+ |
| 71 | GW1348 (d) | MS | S | S | S | S | S | S | S | MS | R | R | R | R | MS | R | S | MS | MR | Yr2+ |
| 72 | DDW49 (d) | MS | S | S | S | S | MS | S | S | R | MS | R | S | MS | MS | S | MS | MR | MR | - |
| 73 | PBW822 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 74 | HD3345 | MS | S | MS | MS | R | R | R | MR | R | R | R | R | R | R | R | MR | R | R | - |


| 75 | DDW48(d) | MS | S | S | S | S | MR | S | S | R | MS | MS | R | R | MS | R | MS | R | R | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 76 | H18627 (d) (C) | S | S | S | MS | S | S | S | S | R | R | R | MS | R | MR | R | R | MS | R | Yr2+ |
| 77 | DBW110(C) | S | S | S | S | S | S | S | S | R | S | MS | R | MR | S | R | S | R | MS | Yr2+ |
| 78 | UAS466 (d) | R | S | S | MS | R | MS | MS | S | R | R | R | MS | MS | MR | R | MS | MS | R | - |
| 79 | MP3288 (C) | S | S | S | MS | R | R | S | S | R | S | R | MR | MR | MS | R | S | R | R | Yr2+ |
| 80 | DBW277 | S | S | S | S | R | R | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 81 | DDW47 (d) | MS | S | MS | R | R | S | S | R | R | R | R | MS | MS | R | R | R | R | R | - |
| 82 | HD2932 (C) | S | S | S | MS | S | S | S | S | MR | S | R | R | MR | S | R | S | R | R | - |
| 83 | HD2864 (C) | S | S | S | S | S | S | MS | MS | MR | MS | R | R | MS | MS | R | S | S | R | Yr2+ |
| 84 | MP3336 (C) | S | S | S | S | MS | S | MS | S | MS | S | MS | MS | R | MS | R | S | MS | MS | - |
| 85 | MP4010 (C) | S | S | S | S | S | S | S | S | S | S | MS | R | R | S | R | S | MS | MS | Yr2+ |
| 86 | CG1029 | S | S | S | S | S | S | S | MS | R | S | R | R | MS | S | R | S | MR | R | - |
| 87 | UAS3002 | S | S | S | S | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 88 | H11633 | S | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 89 | H11634 | MS | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 90 | H18808 (d) | S | S | S | S | S | S | S | S | R | R | R | S | S | MR | MS | S | R | MR | - |
| 91 | H18807 (d) | S | MS | MS | MS | R | MR | MR | R | R | MS | MR | MS | MS | R | MR | MR | R | R | - |
| 92 | PBW823 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 93 | UAS 428 (d) (C) | S | S | S | S | S | S | S | S | MS | S | MS | S | MR | S | R | S | S | S | - |
| 94 | DDW49 (d) | S | S | S | S | S | MS | S | S | R | S | R | S | MS | MS | MS | MR | R | R | - |
| 95 | UAS3001 | R | S | S | S | R | R | R | R | R | S | R | R | R | R | R | R | R | R | Yr9+ |
| 96 | Macs3949(d)(C) | R | MS | S | MS | R | R | S | S | R | R | R | S | MR | R | R | R | R | R | Yr2+ |
| 97 | Macs 6222 (C) | R | S | S | MS | S | S | R | R | MR | MR | R | R | MR | R | R | MS | R | R | - |
| 98 | GW322 (C) | S | S | S | S | MS | S | S | S | R | S | R | MR | MR | S | R | S | R | R | Yr2+ |
| 99 | DDW48 (d) | S | S | S | S | S | S | S | S | MS | S | S | S | S | S | R | S | S | S | - |
| 100 | Macs6478 | MS | S | S | S | R | R | R | R | R | S | R | MR | R | R | R | MR | R | R | Yr2+ |
| 101 | HD3343 | S | S | S | S | S | MS | S | S | MR | S | R | R | R | S | MR | S | MS | R | Yr2+ |
| 102 | WHD 963 (d) | R | S | MS | MR | R | R | R | R | R | S | R | R | R | R | R | R | R | R | - |


| 103 | H18807(d) | MS | S | MS | S | MR | MS | R | MX | R | R | R | S | MR | R | R | R | R | R |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 104 | H1 1633 | R | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 105 | UAS3002 | R | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 106 | Raj4083(d) | S | S | S | MS | S | MS | MS | S | R | S | R | R | R | MS | R | S | MS | MR | Yr2+ |
| 107 | HD2932 (C) | S | S | S | S | S | S | S | S | R | S | R | R | MS | S | MR | S | MX | R | - |
| 108 | GW509 | S | S | S | S | MS | S | S | S | R | S | R | R | MS | S | S | S | MR | R | - |
| 109 | HD3090 (C) | S | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 110 | NIAW3170 | S | S | S | S | S | S | S | S | R | R | S | S | R | S | MS | S | R | R | - |
| 111 | GW1346(d) | S | S | S | S | S | S | S | S | MS | S | MS | S | S | S | MS | S | S | S | - |
| 112 | Macs 4058(d) | S | S | S | S | S | S | S | S | S | S | S | S | MS | S | MS | S | S | S | - |
| 113 | DBW93 (C) | S | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 114 | H18805 (d) | S | S | S | S | S | MR | MS | S | MS | R | R | S | S | R | R | R | R | R | - |
| 115 | AKDW2997-16 <br> (d) (C) | S | S | S | S | S | S | S | S | MS | MS | MS | R | S | S | S | S | S | S | - |
| 116 | Macs6695 | S | S | S | S | MS | S | S | MS | MR | S | R | MR | S | S | MR | S | R | MS | - |
| 117 | UAS446 (d)(C) | S | S | S | S | R | MR | S | MS | R | R | R | R | S | R | MS | MR | MR | R | - |
| 118 | H11605 (C) | R | S | S | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr2+ |
| 119 | Macs 6696 | S | S | S | S | S | S | S | S | S | S | MS | MS | MS | S | MR | S | R | R | - |
| 120 | NIDW149 (d) | R | S | R | S | MS | R | S | MS | R | R | MS | R | R | S | MS | R | S | R | - |
| 121 | H18802 (d) | R | MR | MX | MS | MS | R | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 122 | DDK1029 (C) | MS | S | S | MS | MS | MS | MX | S | MS | MS | MS | MS | MS | MS | MS | MS | S | MS | - |
| 123 | Macs5052 | MS | S | S | MS | MS | MS | S | MS | MR | MS | MS | R | R | MS | R | MS | MR | MR | - |
| 124 | Macs6222 ( ) | S | S | S | MS | R | S | R | R | R | R | R | R | R | R | R | S | R | R | - |
| 125 | DDK1056 | MS | S | S | MS | R | MS | S | MS | R | MS | R | R | MR | MS | R | MS | MR | R | Yr2+ |
| 126 | HW1098(C) | MS | S | S | MS | R | MS | MS | R | MR | R | R | R | R | R | R | R | R | R | Yr2+ |
| 127 | Macs 5053 | MS | S | S | MS | MS | MS | MS | S | R | MS | MR | R | R | MS | R | MS | MR | MR | Yr2+ |
| 128 | DDK1057 | S | S | S | S | S | S | S | S | NG | NG | S | S | S | R | S | S | S | S | - |
| 129 | HD3317 | S | S | S | S | S | S | R | R | R | R | R | R | S | R | R | R | R | R | Yr9+ |
| 130 | WH1254 | S | S | S | S | R | S | S | S | R | R | R | R | R | S | R | S | R | S | Yr2+ |


| 131 | DBW301 | R | R | R | R | S | R | R | R | R | R | R | R | R | S | R | R | R | R | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 132 | WH1270 | MS | S | S | S | R | MS | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 133 | HD2967 | S | S | S | S | R | R | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 134 | PBW824 | MS | S | S | S | S | S | S | S | R | R | R | R | R | MS | R | MS | R | R | Yr2+ |
| 135 | UP3043 | MS | S | S | S | R | MS | S | S | S | MS | S | R | R | S | R | S | R | R | - |
| 136 | DBW187 | MS | S | S | S | R | MR | S | S | R | S | R | R | R | S | R | S | R | R | Yr2+ |
| 137 | PBW825 | S | S | S | S | R | S | S | S | R | R | R | R | R | S | R | S | R | R | Yr2+ |
| 138 | DBW303 | MS | S | S | MS | R | MR | MR | MS | R | R | R | R | R | MS | R | MS | R | R | YrA+ |
| 139 | DBW304 | S | S | S | S | R | MR | S | S | R | S | R | R | R | S | R | S | R | R | Yr2+ |
| 140 | UP3042 | MS | S | S | R | R | R | R | MS | S | S | R | R | R | MR | R | R | R | R | Yr2+ |
| 141 | DBW302 | S | S | S | R | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 142 | PBW825 | S | S | S | S | R | R | MS | R | R | MR | R | R | R | MS | R | R | R | R | Yr2+ |
| 143 | HD3347 | S | S | S | S | MS | S | S | S | R | MR | R | S | R | S | R | S | MS | R | - |
| 144 | WH1223 | S | S | S | S | MS | S | S | S | MS | MS | R | MR | R | S | R | S | MR | R | Yr2+ |
| 145 | KRL 19 (C) | MS | R | S | S | S | R | S | R | R | S | S | R | S | MS | MS | R | R | R | - |
| 146 | Kharchia 65 | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | S | - |
| 147 | NW7060 | S | S | S | S | MS | R | S | S | R | S | R | R | R | MS | S | S | R | R | Yr2+ |
| 148 | KRL 210(C) | S | S | S | S | R | MS | S | S | S | MS | R | R | R | MS | R | S | R | R | Yr2+ |
| 149 | WH1228 | S | S | S | S | MS | MS | S | S | R | S | R | R | R | S | R | S | R | R | Yr2+ |
| 150 | NW7062 | S | S | S | S | MR | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 151 | PBW 757 (C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | Resistant |
| 152 | WR544 (C) | S | S | S | S | S | S | S | S | R | MS | R | MS | MS | S | R | S | MR | R | - |
| 153 | HD3298 | S | S | S | S | MS | MR | MS | S | R | R | R | R | R | S | R | R | MS | R | Yr2+ |
| 154 | HD3271 | R | R | R | S | R | R | R | MR | R | R | R | R | R | R | R | R | R | R | - |
| 155 | DBW 14 (C) | MS | S | S | S | MR | MS | MR | MR | MS | S | R | MR | R | R | R | R | MS | MS | Yr2+ |
| 156 | DBW71 (C) | S | S | R | S | S | S | R | S | R | MR | R | R | R | R | MS | S | R | R | - |
| 157 | H11621 | S | S | S | S | S | S | S | S | R | S | MS | R | R | S | R | S | S | MS | - |
| 158 | PBW 797 | R | S | S | S | R | R | R | R | R | MS | R | R | R | R | R | R | R | R | - |



