Table: Seedling response of AVT lines against the pathotypes of Puccinia striiformis f. sp. tritici (wheat yellow rust) during 2022-23 at ICAR-IIWBR, RS, Shimla

|  |  | Pathotype |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { S. } \\ & \text { No. } \end{aligned}$ | Variety/line | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 7 \end{aligned}$ | $\begin{aligned} & \Theta \\ & \vdots \\ & \Theta \end{aligned}$ | $\begin{aligned} & \underset{\eta}{\theta} \\ & \cdots \\ & \infty \\ & \cdots \end{aligned}$ | $\begin{aligned} & \infty \\ & \infty \\ & \infty \\ & \infty \end{aligned}$ | $$ | 2 | - | $\begin{aligned} & \boldsymbol{Q}_{6} \\ & \boldsymbol{\sim} \\ & \Xi \end{aligned}$ | $\begin{aligned} & \infty \\ & \infty \\ & \sim \\ & \underset{\sim}{n} \end{aligned}$ | $\begin{aligned} & \text { J } \\ & \text { an } \end{aligned}$ | $\because$ | Z | $\begin{aligned} & \underset{\text { B }}{2} \\ & \text { I } \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ | O $\sim$ $\sim$ | Yr-gene |
| 1. | HS691 | R | S | S | R | R | S | R | R | R | R | R | R | R | R | R | - |
| 2. | HS692 | S | S | S | MS | S | S | S | S | S | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{~S} \\ \hline \end{gathered}$ | S | S | S | R | R | Yr2+* |
| 3. | VL3028 | MS | S | S | R | R | S | MS | S | S | R | S | S | R | R | R | Yr2+ |
| 4. | HPW484 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 5. | VL907(C) | R | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{R} \end{gathered}$ | R | MS | MR | S | MS | R | MS | R | S | MS | R | R | R | Yr2+* |
| 6. | VL892(C) | R | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \\ \hline \end{gathered}$ | S | R | R | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 7. | HPW349(C) | R | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{R} \end{gathered}$ | S | R | R | R | R | R | R | R | S | MS | R | R | R | Yr2+ |
| 8. | HS562(C) | R | R | S | MS | R | MS | R | R | R | R | S | R | R | R | R | Yr2+ |
| 9. | VL2041(I)(C) | MS | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | MS | R | MS | R | R | R | R | S | R | R | R | R | Yr2+ |
| 10. | PBW887 | R | S | S | R | R | MS | S | R | R | R | MS | R | R | R | R | YrA+ |
| 11. | PBW889 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 12. | HD3386 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 13. | HD3470 | R | S | S | S | S | MS | R | R | R | R | S | MR | R | R | R | Yr2+ |
| 14. | HI1668 | R | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{~S} \\ \hline \end{gathered}$ | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9 ${ }^{+}$A+ |
| 15. | DBW386 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 16. | UP3102 | R | S | S | MS | MS | R | R | S | R | R | MS | R | R | R | R | Yr2+ |
| 17. | HD3428 | S | S | S | MS | MS | S | MS | R | R | R | S | S | MS | R | R | Yr2+ |
| 18. | PBW893 | MS | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \\ \hline \end{gathered}$ | S | MS | MS | S | MS | R | R | R | S | MR | R | R | R | Yr2+ |
| 19. | K2108 | MS | S | R | R | R | R | R | R | R | R | R | R | R | R | R | Yr9 ${ }^{\text {a }}$ A+ |
| 20. | HD3059(C) | S | R | R | R | R | R | R | R | R | R | R | R | R | R | R | - |


| 21. | DBW173(C) | R | S | S | R | S | MR | R | S | R | R | MS | MS | R | R | R | Yr2+* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 22. | PBW771(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 23. | JKW261(C) | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 24. | WH1402 | R | S | S | R | R | R | MS | R | R | R | MS | R | R | R | R | YrA+* |
| 25. | WH1311 | S | S | S | S | S | S | S | S | R | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \\ \hline \end{gathered}$ | S | S | R | S | $\begin{aligned} & \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | - |
| 26. | UP3111 | S | - | S | R | S | R | R | R | MS | R | R | R | R | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | - |
| 27. | PBW899 | R | R | S | R | R | R | R | $\begin{gathered} \hline \mathrm{MI} \\ \mathrm{X} \\ \hline \end{gathered}$ | R | R | R | R | R | R | R | - |
| 28. | PBW644(C) | R | S | S | MS | R | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 29. | DBW296(C) | S | S | S | MS | S | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 30. | HD3369(I)(C) | R | S | S | R | R | MS | R | R | R | R | R | R | R | R | R | Yr2+ |
| 31. | HI1653(I)(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 32. | HI1654(I)(C) | R | S | S | R | R | R | S | R | R | R | R | R | R | R | R | Yr2+ |
| 33. | HD3388 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 34. | HD3471 | S | S | S | R | MS | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 35. | HD3249(C) | R | S | S | R | R | MR | MS | R | R | R | MS | MR | R | R | R | - |
| 36. | HD3086(C) | MS | S | S | R | R | R | R | R | R | R | S | MIX | R | R | R | Yr2+ |
| 37. | HD2967(C) | S | S | MS | R | R | R | R | R | S | $\begin{gathered} \mathrm{M} \\ \mathrm{R} \end{gathered}$ | MIX | MS | R | R | R | Yr2+ |
| 38. | DBW222(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 39. | PBW826(I)(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 40. | DBW398 | R | S | S | R | R | R | MS | R | R | R | R | R | R | R | R | Yr2+ |
| 41. | HI1612(C) | MS | S | S | MS | R | MS | S | MS | R | R | R | S | R | R | R | Yr2+ |
| 42. | K1317(C) | MS | S | S | S | S | S | S | S | S | S | S | S | R | R | R | -* |
| 43. | HD3171(C) | MS | S | S | R | R | S | S | R | MR | R | S | S | R | R | R | Yr2+ |
| 44. | HD3293(C) | R | S | S | S | R | S | MS | MR | S | R | MIX | S | R | R | S | - |
| 45. | DBW252(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 46. | NWS2194 | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 47. | HI1669 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |


| 48. | HI1670 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 49. | GW547 | R | S | MR | S | R | S | R | R | R | R | R | MR | R | R | R | Yr2+ |
| 50. | GW513(C) | S | S | MS | R | S | MS | S | S | R | R | S | S | R | R | R | Yr2+ |
| 51. | HI1636 (C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 52. | HI1650(I)(C) | S | S | S | R | R | MS | R | S | MS | R | R | S | R | R | R | Yr2+* |
| 53. | $\begin{aligned} & \text { MACS6768(I) } \\ & \text { (C) } \\ & \hline \end{aligned}$ | R | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 54. | HI1674 | MR | S | MS | R | R | MS | MR | R | R | R | R | R | R | R | R | Yr2+ |
| 55. | AKAW5104 | R | R | S | R | R | MS | R | R | R | R | R | R | R | R | R | YrA+ |
| 56. | HD2932(C) | MS | S | S | MS | S | S | R | MS | S | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | R | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | R | - |
| 57. | MP4010(C) | R | S | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 58. | HI1634(C) | S | S | S | MS | MS | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 59. | CG1029(C) | MS | S | S | S | S | R | MS | S | S | R | R | R | R | R | R | Yr2+ |
| 60. | DBW359 | R | S | S | R | R | MS | R | R | R | R | R | R | R | R | R | Yr2+ |
| 61. | DBW441 | MS | S | S | R | R | S | R | S | R | R | S | S | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \\ & \hline \end{aligned}$ | R | - |
| 62. | DBW442 | S | S | S | R | MR | S | R | S | R | R | R | MS | R | R | R | Yr2+ |
| 63. | CG1040 | R | R | MR | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 64. | MP3288(C) | S | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | R | S | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 65. | DBW110(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 66. | CG1036(I)(C) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 67. | HI1655(I)(C) | R | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{R} \end{gathered}$ | MR | R | R | R | R | R | R | R | R | R | R | R | R | - |
| 68. | UAS3020 | R | S | S | R | R | R | R | S | R | R | R | R | R | R | R | Yr2+ |
| 69. | UAS3021 | R | S | S | MR | R | R | R | R | R | R | S | R | R | R | R | Yr2+ |
| 70. | MACS6811 | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 71. | MACS6809 | S | S | S | S | MS | MR | R | S | S | S | MR | MS | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | R | - |
| 72. | NIAW4183 | S | S | S | S | S | R | R | S | S | S | MR | S | R | R | R | - |
| 73. | NIAW4153 | R | S | S | S | S | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 74. | AKAW5314 | S | S | S | R | R | S | S | R | R | R | S | S | R | R | R | YrA+ |
| 75. | AKAW5100 | MS | S | S | R | R | R | R | R | R | R | R | MS | R | R | R | - |


| 76. | MP1378 | MS | S | S | MR | R | MS | MS | MS | R | R | S | R | R | R | R | Yr2+* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 77. | MP1386 | S | S | S | MS | R | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 78. | DBW443 | S | S | S | S | S | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 79. | DBW444 | S | S | S | S | S | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 80. | HD3469 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 81. | NWS2222 | R | R | MS | R | R | R | R | R | R | R | R | R | R | R | R | Yr2+ |
| 82. | PWU15 | R | S | S | R | R | R | R | R | R | R | MS | R | R | R | R | - |
| 83. | WH1306 | MR | S | S | S | S | S | S | S | R | R | S | MS | R | S | R | - |
| 84. | PBW891 | S | S | S | R | S | S | S | S | R | R | S | S | R | R | R | - |
| 85. | HI8841(d) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 86. | UP3083 | S | S | S | S | S | R | S | S | R | R | MR | MS | R | R | R | Yr2+ |
| 87. | $\begin{aligned} & \text { MACS3949(d) } \\ & \text { (C) } \end{aligned}$ | MR | S | S | S | R | R | R | R | R | R | S | R | R | R | R | Yr2+ |
| 88. | $\begin{aligned} & \mathrm{HI} 8826(\mathrm{~d})(\mathrm{I})( \\ & \text { C) } \end{aligned}$ | S | S | S | S | S | R | R | S | S | S | S | S | MR | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | $\begin{aligned} & \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | - |
| 89. | $\begin{aligned} & \text { MACS4100(d) } \\ & \text { (I)(C) } \end{aligned}$ | S | S | S | MS | R | MS | MS | MS | R | R | S | S | R | R | R | Yr2+ |
| 90. | $\begin{aligned} & \text { MACS6222 } \\ & \text { (C) } \end{aligned}$ | S | S | S | S | S | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 91. | HI1672 | MS | S | S | S | S | R | R | R | R | R | R | R | R | R | R | Yr9+ |
| 92. | HI1673 | S | S | S | MS | S | S | MS | S | R | R | S | R | R | R | R | Yr2+ |
| 93. | HI1675 | S | S | S | S | S | S | S | S | S | S | S | S | R | R | R | - |
| 94. | DBW394 | MS | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | R | R | S | R | R | R | R | R | R | R | R | R | YrA+ |
| 95. | DBW395 | S | S | S | S | MS | S | S | S | MS | R | R | S | R | S | S | - |
| 96. | MACS6814 | S | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | R | R | S | S | MS | R | R | S | S | R | S | R | - |
| 97. | MACS6805 | S | S | S | S | S | S | S | S | S | S | S | S | S | R | R | - |
| 98. | NIAW4114 | MS | S | S | R | R | R | R | R | R | R | S | R | R | R | R | Yr2+ |
| 99. | NIAW4120 | S | S | S | S | R | S | S | S | R | R | S | S | R | R | R | Yr2+ |
| 100. | UAS3022 | R | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | MS | R | MS | MS | MS | MS | MR | R | S | S | R | R | R | Yr2+ |
| 101. | UAS3023 | S | S | S | R | R | MS | R | S | S | R | R | S | R | R | R | YrA+ |
| 102. | MP3557 | S | S | S | S | S | S | S | S | MR | R | S | MS | S | $\begin{aligned} & \mathrm{M} \\ & \mathrm{R} \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathrm{M} \\ & \mathrm{R} \\ & \hline \end{aligned}$ | - |


| 103. | MP3556 | S | S | S | R | MR | S | R | R | R | R | S | S | R | R | R | Yr2+ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 104. | PBW897 | S | S | S | S | S | MS | R | R | R | R | R | R | R | R | R | - |
| 105. | MP1388 | S | S | S | S | S | S | S | S | S | M R | MS | S | S | R | S | - |
| 106. | GW542 | MS | $\begin{gathered} \hline \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | S | R | MR | R | R | R | R | S | MR | R | R | R | Yr2+ |
| 107. | GW538 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 108. | WH1310 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 109. | LOK79 | MS | S | MS | S | R | S | R | S | MS | R | S | S | R | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{R} \end{aligned}$ | - |
| 110. | RAJ4083(C) | R | S | S | R | R | S | MS | R | R | R | S | S | R | R | R | Yr2+ |
| 111. | HD3090(C) | MS | S | S | R | R | MS | R | R | R | R | S | S | R | R | R | Yr2+* |
| 112. | HI1633(C) | R | S | MS | R | MR | MR | MS | R | R | R | S | MS | R | R | R | Yr2+* |
| 113. | UAS478(d) | MS | S | S | R | R | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 114. | UAS481(d) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 115. | HI1665 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R^{*}$ |
| 116. | HI8840(d) | R | R | S | R | R | R | R | R | R | R | R | R | R | R | R | Yr2+ |
| 117. | DBW397 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 118. | DDW61(d) | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 119. | NIAW4028 | R | R | R | R | R | R | R | R | R | R | R | R | R | R | R | $R$ |
| 120. | HI1605(C) | MS | R | S | R | R | R | MS | R | R | R | R | MS | R | R | R | Yr2+ |
| 121. | NIAW3170(C) | MR | S | S | R | MR | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 122. | UAS446(d)(C) | R | S | S | R | MS | S | S | R | R | R | S | S | R | R | R | Yr2+ |
| 123. | $\begin{aligned} & \text { NIDW1149(d) } \\ & \text { (C) } \end{aligned}$ | R | R | R | MS | R | R | R | R | R | R | R | R | R | R | R | Yr2+ |
| 124. | DBW380 | S | S | S | S | S | S | S | S | R | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | S | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{R} \end{aligned}$ | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \\ & \hline \end{aligned}$ | - |
| 125. | $\begin{aligned} & \text { DBW370(I)(C } \\ & )^{2} \end{aligned}$ | S | $\begin{gathered} \mathrm{M} \\ \mathrm{~S} \end{gathered}$ | S | R | MS | S | S | MS | R | R | S | S | R | $\begin{aligned} & \mathrm{M} \\ & \mathrm{R} \\ & \hline \end{aligned}$ | R | - |
| 126. | $\begin{aligned} & \text { DBW371(I)(C } \\ & )^{2} \end{aligned}$ | S | S | S | MS | R | S | S | S | R | R | S | S | R | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | $\begin{aligned} & \hline \mathrm{M} \\ & \mathrm{~S} \end{aligned}$ | - |
| 127. | $\begin{aligned} & \text { DBW372(I)(C } \\ & \text { ) } \\ & \hline \end{aligned}$ | S | S | S | R | MR | S | S | R | R | R | S | S | R | R | R | Yr2+ |


| 128. | PBW872(I)(C) | R | S | S | R | R | S | MS | R | R | R | R | MS | R | R | R | $Y r 2+$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 129. | DBW377 | R | S | S | R | R | S | R | R | R | R | R | R | R | R | R | $Y r 2+$ |  |
| 130. | CG 1044 | S | S | S | R | MS | S | S | R | MS | R | S | S | R | R | R | $Y r 2+$ |  |
| 131. | GW 543 | S | S | S | R | R | S | S | R | R | R | MS | MS | R | R | R | $Y r 2+$ |  |
| 132. | DBW187(C) | R | S | S | R | R | S | R | R | R | R | R | R | R | R | R | $Y r 2+$ |  |
| 133. | $\mathrm{DBW} 303(\mathrm{C})$ | R | S | S | S | R | MR | R | R | MR | R | R | S | R | R | R | $Y r 2+$ |  |
| 134. | $\mathrm{GW} 322(\mathrm{C})$ | R | M | S | S | R | R | R | R | R | R | R | R | R | R | R | R | $Y r 9+*$ |

* Different seed lot to that of previous cropping season, - Gene not postulated, $R$ resistant to all pathotypes

