A field trial was conducted during 1995-96 and 1996-97 to ascertain the losses caused due to leaf blight disease in the grain yield of irrigated wheat. A susceptible variety 'Vijay' was sown in the trial. The artificial inoculations of mass culture of *Alternaria triticina* were done in the inoculated plots at 20 DAS, 30 DAS, and 40 DAS to create the desirable level of disease pressure of leaf blight. The un-inoculated plots (control) were sprayed with Mancozeb 75 WP (0.25%) to check the leaf blight disease. It revealed that inoculated plots showed highest intensity of leaf blight disease within the range of 58.42 to 64.91 per cent and gave significant reduction in the yields in the range of 19.95 to 39.32 per cent and also reduction in 1000 grain weight i.e. 6.80 to 17.08 per cent, as compared to un-inoculated plots of Vijay.

Two year data were pooled and analysed which are presented in Table 1.

The artificial inoculations of mass culture of *Alternaria triticina* were done with spraying of inoculum suspension (20-25 spores per microscopic field at 10 x) in inoculated plots during 8-28 December. The un-inoculated plots were maintained disease free by fungicidal spray of Mancozeb 75 WP (0.25%). The disease intensity was recorded as per Saari and Prescott 0-9 scale (Sharma et al., 1995). The observations on leaf blight were recorded on randomly selected 200 plants per plot. The experiment was conducted during rabi season of 1995-96 and 1996-97. The Per cent Disease Index (PDI) was calculated as per the formula prescribed by Kotasthane and Agrawal, 1976 as given below.

\[
\text{Per cent Disease Index (PDI)} = \frac{\text{Numerical rating x 100}}{\text{Total No. of x Max. rating plants observed}}
\]

The arc sin values of PDI were noted. The grain yield of the net plots were recorded. The yield per hectare were calculated. The 1000 grain weights of the produce from each plot were noted. Two year data were pooled and analysed.

A field trial was conducted at Wheat Research Unit, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola for two rabi seasons of 1995-96 and 1996-97, to know the losses caused due to leaf blight disease of irrigated wheat. Two years data were pooled analysed which are presented in Table 1.
**Table 1:** Losses caused due to leaf blight disease in the grain yield of irrigated wheat during rabi 1995-96 and 1996-97.

<table>
<thead>
<tr>
<th>Treatments</th>
<th>Disease intensity (%)</th>
<th>Grain yield (q/ha)</th>
<th>%loss in yield over un-inoculated (control)</th>
<th>1000 grain weight (g)</th>
<th>% loss in 1000 grain weight over un-inoculated (control)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inoculated 20 DAS</td>
<td>72.53 (58.42)</td>
<td>23.80</td>
<td>19.95</td>
<td>37.18</td>
<td>6.80</td>
</tr>
<tr>
<td>Inoculated 30 DAS</td>
<td>77.97 (62.04)</td>
<td>21.07</td>
<td>29.13</td>
<td>35.43</td>
<td>11.14</td>
</tr>
<tr>
<td>Inoculated 40 DAS</td>
<td>81.97 (64.91)</td>
<td>18.04</td>
<td>39.32</td>
<td>33.06</td>
<td>17.08</td>
</tr>
<tr>
<td>Un-inoculated</td>
<td>20.36</td>
<td>29.73</td>
<td>-</td>
<td>39.87</td>
<td>-</td>
</tr>
</tbody>
</table>

[protected with 75 Mancozeb WP (0.25%)]

SE (m)± 8.90 0.920 - 0.572 - 0.572 -
CD at 5% NS 2.71 - 1.72 -
CV at 5% 2.90 7.28 - -

The data presented in the Table 1 revealed that inoculated plots showed highest intensity of leaf blight disease within the range of 58.42 to 64.91 per cent and gave significant reduction in the yields in the range of 19.95 to 39.32 per cent and also reduction in 1000 grain weight 6.80 to 17.08 per cent as compared to un-inoculated plots of Vijay. The un-inoculated and protected plots with fungicidal sprays (Mancozeb 75 WP 0.25%) exhibited low disease intensity (25.31%) and gave significantly highest yield of 29.73 q/ha. Hence it could be concluded that crop protection with fungicide is essential in irrigated wheat to minimise the reduction in the yields caused due to leaf blight disease. Prabhu and Singh in 1974 reported that irrigated wheat, variety NP 820 was severely affected with *Alternaria triticina* and *Helminthosporium sativum* resulting the losses in the yields exceeding 60 per cent. The results presented in Directorate of Wheat Research (DWR) progress report in August, 1997 by Sharma et al. showed that the extent of losses in the grain yield with variety HP 1633 at Kanpur and Faizabad was 6.23 and 17.90 per cent respectively while there was 1.21 and 9.98 per cent reduction in 1000 grain weight due to leaf blight disease. Similarly at Panthagar Centre and Gurdaspur Centre there were 7.81 per cent losses in UP 262 and 27.65 per cent in HD 2329 in the grain yields.

**REFERENCES**