PERFORMANCE OF PROSO MILLET IN CHARLAND AREA

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ABSTRACT

The experiment was conducted at the charland area of Jamalpur during rabi 2018 to know the yield performance and popularize proso millet in charland areas. Treatments included in the experiment were: BARI Cheena-1, Local-1 and Local-2. Yield level of different proso millet varieties/cultivar were similar except BARI Cheena-1. All the proso millet varieties/cultivar might be cultivate in char land because of low price, availability of its seeds, less risk and water requirement, easily grown without modern technology.

KEYWORDS

Proso millet, Performance, charland area.

1. INTRODUCTION

Millet are small-seeded annual cereals grown for food, feed, forage, and fuel (Kothari et al., 2005). Commonly cultivated millet species include proso millet (Panicum miliaceum L.), pearl millet (Pennisetum glaucum L. R. Br.), finger millet (Eleusine coracana), kodo millet (Paspalum setaceum), foxtail millet (Setaria italica L. Beauv.), little millet (Panicum sumatrense), and barnyard millet (Echinochloa utilis). Proso millet is rich in protein, minerals, vitamins and micro-nutrients such as iron, zinc, copper and manganese and its nutritive parameters are comparable or better than common cereals such as wheat (BBS, 2016). As a part of this programme was conducted to know the yield performance of Cheena variety/cultivar in charland areas.

2. METHODS AND MATERIALS

The district lies between 24°34' and 25°26' north latitudes and between 89°40' and 90°12' east longitudes and is situated at elevation 23 meters above sea level (Pal, 2012). The annual average temperature of this district varies from maximum 36.6°C to minimum 9.4°C. Annual average rainfall is 933.7 mm (Regional Research Report, 2018-19). The experimental site was of medium high land belonging to the agro-ecological zone Old Brahmaputra Floodplain under Agro-Ecological Zone 9 (UNDP – FAO, 1988). The experiment was conducted at the charland area of Jamalpur during rabi 2018 to find out the yield performance and popularize proso millet in charland areas. Design of the experiment was RCB with 3 replications. Each treatment was sown in unit plot having 3m × 3m with the spacing of 1m × 1m. Between two plots and replications were 1m and 1m respectively. BARI Cheena-1, Local-1 and Local-2 were used as variety/cultivar in the experiment. Fertilizers were applied at the rate of 40-14-30-6-0.7 kg ha⁻¹ NPKSZn as urea, triple super phosphate (TSP), muriate of potash (MOP), gypsum, Boron; ½ N and all other fertilizers as basal (FRG, 2012). Rest N will be applied at 30-35 DAS. Seeds were sown on November 19, 2018 in rows. Weeding was done at 25-30 days after emergence of the crop. Crops were harvested on March 18, 2019. Grain yield was calculated from the whole plot. Yield contributing characters were taken from 05 randomly selected plants from the middle rows of each plot. Data were analyzed with the help of a computer package program STAR and means were separated following LSD test at 5% level of significance.

3. RESULTS AND DISCUSSION

Plant height were recorded at harvest are furnished in table 1. Significantly highest (76.60 cm) was recorded under Local-2 while BARI Cheena-1 was lowest (61.43 cm) at harvest. The data regarding effective tiller per hill are furnished in table 1, different treatments did not exhibit their significant influence. An appraisal of data table 1 indicated that
uneffective tiller per hill did not showed significant appearance. The data regarding panicle length are furnished in Table 1, calculated data in Table 1 revealed that different treatments did not exhibit their significant influence. A perusal of data revealed that different treatments did not showed their significant influence on number of effective grain per panicle. Highest number of effective grain per panicle (354) was recorded under BARI Cheena-1 while Local-1 was lowest (313). The data regarding 1000 seed weight were recorded at harvest are arranged in Table 1. Highest (2.6 gm) were recorded under BARI Cheena-1 and it was found statistically at par with Local-1 and Local-2. An appraisal of data Table 1 indicated that different treatments exerted their significant consequence on yield. Highest yield (2.4 t/ha) was registered under treatment BARI Cheena-1 and it was found statistically at par with Local-1 and Local-2.

### Table 1: Yield and yield component of proso millet as influenced by variety/cultivar

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Plant height(cm)</th>
<th>No.of effective tiller/ hill</th>
<th>No.of uneffective tiller/ hill</th>
<th>Panicle length (cm)</th>
<th>No.of effective grain/panicle</th>
<th>1000 seed wt.(gm)</th>
<th>Yield (t/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BARI Cheena-1</td>
<td>61.45</td>
<td>11.33</td>
<td>1.10</td>
<td>22.67</td>
<td>354</td>
<td>2.6</td>
<td>2.4</td>
</tr>
<tr>
<td>Local-1</td>
<td>69.60</td>
<td>9.67</td>
<td>0.79</td>
<td>18.92</td>
<td>313</td>
<td>2.3</td>
<td>2.16</td>
</tr>
<tr>
<td>Local-2</td>
<td>76.60</td>
<td>8.90</td>
<td>1.18</td>
<td>22.47</td>
<td>352</td>
<td>2.4</td>
<td>2.26</td>
</tr>
<tr>
<td>LSD&lt;sub&gt;0.05&lt;/sub&gt;</td>
<td>4.43</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>CV (%)</td>
<td>2.82</td>
<td>12.8</td>
<td>36</td>
<td>18</td>
<td>4.77</td>
<td>4.49</td>
<td>5.31</td>
</tr>
</tbody>
</table>

### 4. CONCLUSION

The results revealed that yield of different proso millet varieties/cultivar were similar except BARI Cheena-1. All the proso millet varieties/cultivar might be cultivate in char land because of low price, availability of its seeds, less risk and water requirement, easily grown without modern technology.

### REFERENCES


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