EVALUATION OF YIELD PARAMETERS OF POMEGRANATE VARIETIES UNDER SCARCE RAINFALL ZONE

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ABSTRACT

Four varieties of pomegranate were evaluated under scarce rainfall zone at Horticultural Research Station, Anantapur during 2005 in 9 year old plants. The no. of fruits (68) and fruit yield/tree (14.14 kg) was highest in Mridula followed by Ganesh (no. of fruits 61 and yield 11.6 kg). Fruit weight (195.3 g), pulp weight (138.3 g) and peel weight (54 g) were recorded highest in Ganesh followed by Mridula (fruit weight 183.3 g), G-137 (pulp weight 125.8 g) and Rubi (peel weight 53.8 g). 100 aril weights were recorded highest (20.6 g) in Rubi followed by G-137 (17.8 g).

Key words : Pomegranate, Yield, Scarce rainfall zone.

Pomegranate has been traditionally cultivated since ancient times under diverse agro-climatic conditions (Evreinoff, 1949). In the world, production and consumption of pomegranate fruits is increasing. The fact that pomegranate fruit has different industrial usage, such as fruit juice, conserve, vinegar, citric acid and medicine, lead to its gaining popularity in the world markets (Cemeroglu, 1977, Dokuzoguz and Mendilcioglu, 1978 and Aviram and Dornfeld, 2001). Anantapur district of Andhra Pradesh belongs to scarce rainfall zone as its average rain fall is 550 mm. Most of the farmers in this zone are interested to cultivate rain fed horticultural crops for their remunerative returns. The fruit crops such as ber, custard apple, tamarind and pomegranate are known to be dry land horticultural crops. Hence, an attempt was made for the collection and evaluation of pomegranate varieties for identifying a suitable variety to the scarce rainfall zone which is essential to improve the financial conditions of farmers.

Four varieties (Table 1) were evaluated for testing of their performance in scarce rainfall zone. The yield parameters viz., no. of fruits/tree, fruit weight (g), Pulp weight (g), Peel weight (g), 100 aril weight (g) and fruit yield were recorded in all varieties. The plants were planted during 1999 in a RBD design with 4 treatments and 3 replications at a spacing of 5 X 5 m. The data were collected in 5 plants of each variety during 2005 and their average mean values were taken into consideration.

The no. of fruits (68) and fruit yield/tree (14.1 kg) was recorded highest (table) in Mridula followed by Ganesh (No. of fruits 61 and yield 11.6 kg). Patel

<table>
<thead>
<tr>
<th>Varieties</th>
<th>No. of fruits/tree</th>
<th>Fruit weight (g)</th>
<th>Pulp weight (g)</th>
<th>Peel weight (g)</th>
<th>100 aril weight (g)</th>
<th>Fruit yield/tree (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rubi</td>
<td>51.0</td>
<td>172.4</td>
<td>116.0</td>
<td>53.8</td>
<td>20.6</td>
<td>8.3</td>
</tr>
<tr>
<td>G 137</td>
<td>48.0</td>
<td>174.2</td>
<td>125.8</td>
<td>46.4</td>
<td>17.8</td>
<td>8.1</td>
</tr>
<tr>
<td>Mridula</td>
<td>68.0</td>
<td>183.3</td>
<td>123.0</td>
<td>43.0</td>
<td>16.0</td>
<td>14.1</td>
</tr>
<tr>
<td>Ganesh</td>
<td>61.0</td>
<td>195.3</td>
<td>138.3</td>
<td>54.0</td>
<td>17.0</td>
<td>11.5</td>
</tr>
<tr>
<td>SE. m+</td>
<td>5.5</td>
<td>10.30</td>
<td>6.3</td>
<td>3.5</td>
<td>1.51</td>
<td>–</td>
</tr>
<tr>
<td>CD 5%</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
<td>NS</td>
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<td>–</td>
</tr>
</tbody>
</table>

Table 1. Yield parameters of pomegranate varieties during 2005
and Karale (1990) reported that, the no. of fruits per tree was 20-25 in 4 years old plants and 100-150 in 10 years old plants.

The fruit weight (195.3 g), pulp weight (138.3 g) and peel weight (54 g) were highest in Ganesh followed by Mridula (fruit weight 183.3 g), G-137 (pulp weight 125.8 g) and Rubi (peel weight 53.8 g). Yildiz et al., (2003) reported 192.3-388.3 g fruit weight in some genotypes. 100 aril weight were highest (20.6 g) in Rubi followed by G-137 (17.8 g). 100 Aril weight was found between 18.5 g and 38.7 (Yildiz et al, 2003) and between 24.1 g and 41.4 g by Ozkan (2005). The var. Mridula with highest no. of fruits (68) and yield/tree (14.1 kg) and Ganesh (No. of fruits 61 and yield 11.6 kg) were best suitable to scarce rainfall areas in poor fertile soils. Consequently, the results obtained in this research were in conformity of the results obtained by other research workers.

**CONCLUSION**

Mridula and Ganesh varieties of pomegranate were best suitable to scarce rainfall zone in poor fertile soils.

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**REFERENCES**


