Assessing the effect of integrated nutrient management in Nendran banana

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Abstract

A field experiment was undertaken by ICAR, KVK, Idukki at Udumbanchola village during the year 2019-20 in Nendran Banana. The objective of the experiment was to assess the effect of integrated nutrient management in Nendran Banana. The experiment consists of six treatments. The treatment with 80% Recommended Dose of fertilizers + Vermicompost (500 g) + Az spirillum (25 g) + PSB (25 g) + VAM (25 g) along with the spray of Banana micronutrients recorded highest plant height, Number of fruits/Bunch, Fruit length, Fruit Girth, Bunch weight and yield as compared to other treatments.

Keywords: Nendran banana, VAM, Az spirillum, vermicompost, PSB

Materials and Methods

The experiment consists of six treatments. T1- 100% Recommended Dose of Fertilizers, T2- 100% Recommended Dose of Fertilizers + Banana Special spray @ 5 g/lit, T3-80% Recommended Dose of fertilizers + Vermicompost (500 g) + Az spirillum (25 g) + Banana Special spray @ 5 g/lit, T4-80% Recommended Dose of fertilizers + Vermicompost (500g) + PSB (25 g) + Banana Special spray @ 5 g/lit, T5-80% Recommended Dose of fertilizers + Vermicompost (500 g) + VAM (25 g) + Banana Special spray @ 5 g/lit, T6- 80% Recommended Dose of fertilizers + Vermicompost (500 g) + Az spirillum (25 g)+ PSB (25 g) + VAM (25 g) + Banana Special spray @ 5 g/lit.

Results and Discussion

The treatment T6 with 80% Recommended Dose of fertilizers + Vermicompost (500 g) + Az spirillum (25 g) + PSB (25 g) + VAM (25 g) along with the spray of Banana micronutrients recorded highest Number of hands bunch, Number of fruits/Bunch, Fruit length, Bunch weight and yield as compared to other treatments (Table - 1).
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Table 1: effect of Different INM treatments on yield and its attributes in Nendran Banana.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Number of hands bunch</th>
<th>Number of fruits bunch</th>
<th>Fruit length (cm)</th>
<th>Bunch Weight(kg)</th>
<th>Yield (t ha⁻¹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T₁</td>
<td>8.91</td>
<td>141.00</td>
<td>21.15</td>
<td>10.00</td>
<td>22.69</td>
</tr>
<tr>
<td>T₂</td>
<td>9.25</td>
<td>142.41</td>
<td>21.22</td>
<td>10.80</td>
<td>26.58</td>
</tr>
<tr>
<td>T₃</td>
<td>9.41</td>
<td>142.55</td>
<td>21.25</td>
<td>12.20</td>
<td>28.64</td>
</tr>
<tr>
<td>T₄</td>
<td>9.55</td>
<td>143.59</td>
<td>22.39</td>
<td>13.60</td>
<td>30.36</td>
</tr>
<tr>
<td>T₅</td>
<td>9.56</td>
<td>145.22</td>
<td>22.42</td>
<td>14.90</td>
<td>35.60</td>
</tr>
<tr>
<td>T₆</td>
<td>10.00</td>
<td>150.00</td>
<td>23.12</td>
<td>15.58</td>
<td>38.82</td>
</tr>
</tbody>
</table>

Graph 1: Effect of Different INM treatments on yield and its attributes in Nendran Banana

Conclusion
Data presented in Table 1 indicates that significant differences were observed with regard to yield and its attributes viz., number of hands bunch-1, fruits bunch-1, bunch weight and fruit yield due to different treatments. Significantly maximum number of hands bunch-1 (10.00) was obtained Treatment T6. The increase in bunch weight was associated with corresponding increase in number of hands bunch-1, fruits bunch-1, which were found to be highest in treatment T6 with 80% Recommended Dose of fertilizers + Vermicompost (500 g) + Az spirillum (25 g) + PSB (25 g) + VAM (25 g) along with the spray of Banana micronutrients were in accordance with the findings of Tejinder and Dhaliwal (2009) [⁷]. The role of biofertilizers and organic manures such as vermicompost and farmyard manure might have improved the soil physical condition required for plant growth and it also could be due to increased availability of nutrients especially nitrogen as it has a prominent role in leaf emission (Murray, 1960) [⁸].

References