EXPERIMENT 4  PIT DIGGING AND MANURING

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4.0 OBJECTIVE

After completing this practical exercise, you should be able to:

• prepare a pit and mix manures and fertilizers for planting fruit crops.

4.1 INTRODUCTION

After selection of proper site for planting of fruit trees, the fruit grower is interested for optimum growth of trees and the maximum production of fruit. You can do it by proper planting of trees. Since the fruit trees have deep root system, their roots penetrate up to 1.0-1.2 m deep in the soil to get moisture and nutrients. If there is a hard soil or soil contains hard pans, stones etc., the growth of the tree will be restricted affecting fruit production adversely.

Fruit trees also remove large amounts of nutrients from the soil than most other crops. Therefore, to maintain fertility of the soil and good production of fruits, it is essential to apply required quantities of organic mature such as leaf mould and farmyard manure beside inorganic manures having nitrogen, phosphorus and potash as main elements. In this experiment, you will learn as to how to prepare pits and apply fertilizers and manure.

4.2 EXPERIMENT

4.2.1 Requirement

• Measuring tape;

• Spade; and

• Manure/Fertilizer.

4.2.2 Procedure

• After selecting a suitable site for planting, level the land by maintaining proper slope not more than 0.3 per cent;
• Depending upon the fruit tree, fix the pegs at suitable plant to plant and row to row, distance, 30 cm;

• Dig the 1 x 1 m pit. The top one soil should be kept on one side and remaining soil on the other side;

• Allow the exposed pits for weathering action for a period of atleast 15-20 days prior to planting;

• After weathering, fill up the loose soil in the pit and allow settling down by watering, if necessary;

• If the soil has poor fertility, you may add a basket of well decomposed FYM along with 1-2 kg of super phosphate in each pit;

• Pit is ready for planting after one month;

• After planting of fruit plants, regular manuring should be done according to the age of plant; and

• In case of Guava fruit, for one year age of plant, add 15 kg of FYM, 0.5 kg of CAN (Calcium Ammonium Nitrate), 0.250 kg of Super phosphate 100g of Pot sulphate. Every year increase the doses.

### 4.2.3 Observation

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of Fruit Plant</th>
<th>No. of Pits/ha</th>
<th>Quantity of Manure Added</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>FYM (kg)</td>
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<td>1</td>
<td>2</td>
<td>3</td>
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</tbody>
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### 4.3 PRECAUTIONS

• Use only well rotten farmyard manure.

• Irrigate the refilled pits before planting.

• Add BHC 10 per cent dust in each pit before filling.

• Apply FYM and half dose of CAN, Super phosphate and Potash in the month of February and remaining half in July 0.6-0.9 m away from the trunk.

### 4.4 RESULTS

• Report the size of pit.

• Report the distance from row to row and plant to plant.

• Report the structure/texture of soil.