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# EXPERIMENT 3 PLANTING SYSTEMS

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## 3.1 INTRODUCTION

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Every crop has definite system of planting. Mulberry also has specific method of planting which can help in better establishment of the plantation. Systems of planting have been evolved after thorough investigation and therefore have proper practical utility. You have already learnt that mulberry leaf is the sole food for silkworm. Thus, the proper system of planting can help in producing more leaf of good quality.

### Objective

After studying and performing this experiment, you should be able to:

- learn the method of mulberry cultivation with respect to its various practices and requirements.

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## 3.2 EXPERIMENT

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### 3.2.1 Principle

The desired system of planting takes into account the planting density, the depth at which mulberry can be planted, method of preparing of trenches, pits, rows and furrows. All the above help in better establishment of the plant since the desired aspects of the system of planting are taken into account.

### 3.2.2 Requirements

- Garden Implements
- Measuring Tape
- Rope
- Well decomposed Farm Yard Manure / compost
- Planting materials

### 3.2.3 Procedure

#### a) Pit System of Planting

- Take a measuring tape and outline pits of 30 x 30 cm dimension.

- Dig the pits of 30 cm depth each.
- Apply one kilogram of FYM / compost per pit in light soils and 1 kg of sand in addition in clayey soils.
- Plant the saplings at 90 x 90 cm spacing.

**b) Row System**

- Take a measuring tape and mark the rows 60 cm apart.
- Prepare 15 cm deep furrows between rows with bullock plough or manually.
- Plant the cuttings 20 cm apart on the edges of the row.
- Rest of the procedure for planting remains the same as pit system.

**c) Indo-Japanese System of Planting/ Paired Row System**

- Mark with a measuring tape (90+150) x 60 cm spacing as shown in Fig.3.1.
- Prepare trenches of 30 cm depth along the row with the spade / bullock plough.
- Apply FYM / compost in the trench and mix with the soil.
- While planting, make sure that saplings are placed in upright position in the trenches. This can help in planting saplings in erect position.
- Press the soil around the plant so that roots remain in close contact with the soil.
- Irrigate the garden immediately after planting.
- Subsequent irrigation should be given as and when required.
- Take up plantation preferably during rainy season.



Fig.3.1: Plantation done following Indo-Japanese system

**3.2.4 Observations**

- a) Observe the mulberry plants after transplanting and find out if the plants have established. Record the following observations:

No. of Saplings Planted	No. of Saplings Survived	% of Established Plants

- Find out by sampling procedure as to how much time it takes for the mulberry plant to establish after transplanting.
- b) After observing the plants which have survived, fill the gaps by planting the saplings again.

No. of Plants Observed for Establishment After Transplanting	No. of Plants Survived After					
	10 days	20 days	30 days	40 days	50 days	60 days

### 3.2.5 Calculations

$$\% \text{ of established plant} = \frac{\text{No. of plants survived}}{\text{No. of saplings planted}} \times 100$$

### 3.2.6 Results

This experiment will allow you to know the exact number of plants that have survived after taking up of new plantation with the saplings and would allow you to fill up the gaps and number of saplings required for filling up the gaps for a successful plantation.

$$\% \text{ of established plant} = \underline{\hspace{2cm}} \%$$

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## 3.3 PRECAUTIONS

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- Avoid drying of saplings by covering them with wet gunny cloth.
- Preferably, plant the saplings immediately after uprooting.
- While planting, keep the saplings erect which otherwise leads to semi-erect plants hindering intercultural operations.
- Do not remove the leaf from the plant at least for a period of six months.
- Do not irrigate the plant more than what is desired. Water logging should be avoided.
- Also, do not allow the plants to wilt. Better irrigate before wilting occurs.
- While uprooting, make sure that roots are not damaged.