UNIVERSITI TEKNOLOGI MARA

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FACULTY OF PLANTATION AND AGROTECNOLOGY

DIPLOMA IN PLANTING INDUSTRY MANAGEMENT(DPIM)

AGR 232 :PLANT PROPAGATION

PRACTICAL REPORT 2:

(PROPAGATION BY STEM AND LEAF CUTTING)

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STEM CUTTING

INTRODUCTION:

Stem cuttings are the most commonly used method of vegetative propagation. A stem cutting is plant stemincluding a tip (e.g. shoot, twig, sucker,) or a portion of a stem without the apex that includes one or more nodes removed from a parent plant and capable of rooting; A stem cutting is used to grow a whole new plant, which is also known as cloning (because you are creating an exact copy of the parent plant, a clone).

OBJECTIVE:

- Produce a new young plant in shorter time.
- Enable flowering to accelerate generically.
- Maintain and breed mutants and no setting samples because of double flowers.

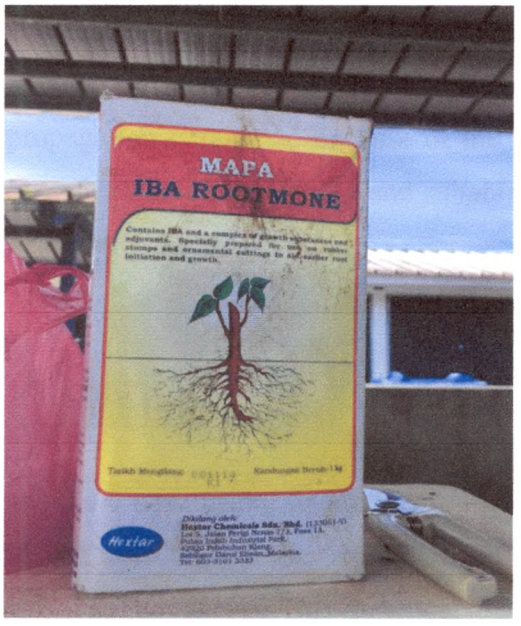
APPARATUS AND MATERIALS:

Poly bags, root promoting agents, soil mixture, secateurs and flowering plants.

PROCEDURES:

1. A medium was prepared with topsoil, sand and compost with a ratio 2:1:1
2. The poly bags then was filled up with the medium.
3. By using a secateurs, the branches was cut from the mother plant about 45 degree of angle and the size was about 7.00 cm below a node.
4. Excess leaves were removed and leaving only 2-3 pairs leaves per plant.
5. The cut tip was applied with root promoting agent.
6. Then, a hole was made by using a finger.
7. Lastly, the plant was inserted about 2 cm into the hole

MATERIALS:



RESULT:

DAYS	CONDITION
1	Does not showing any response in growth
2	Does not showing any response in growth
3	Does not showing any response in growth
4	Does not showing any response in growth
5	The plant started to turgid
6	Start produces node
7	A small node appear
8	Node appear in green
9	A node is getting bigger
10	Another node is appear
11	The first node began to become a leaf
12	Small leaf appear
13	Leaf is getting bigger

LEAF CUTTING

INTRODUCTION

Stem cuttings are the most commonly used method of vegetative propagation. Leaf cuttings of most plants will not generate a new plant; they usually produce only a few roots or just decay. Because leaf cutting do not include an axillary bud, they can be used only for plants that are capable of forming adventitious buds. Leaf cutting are used almost exclusively for propagating some indoor plants. There are several type of leaf cuttings, such as Leaf-petiole, leaf without a Petiole, split vein and leaf-bud cutting.

a) Leaf-Petiole

Remove a leaf and include up to 1½ inches of the petiole. Insert the lower end of the petiole into the medium. One or more new plant will form at the base of the petiole. The new plants are then severed from the original leaf-petiole cutting and the cutting may be used once again to produce more plants. Examples of plants that can be propagated by leaf-petiole cutting includes African violet, peperoni, episcopal, Hoyas, and sedum.

b) Leaf without a petiole

This method is used for plants with thick, fleshy leaves. The snake plant (Sansevieria), a monocot , can be propagated by cutting the long leaves into 3 to 4 inches pieces. Insert the cuttings vertically into the medium. African violet, a dicot, can also be propagated from the leaf blade itself. Cut a leaf from a plant and remove the petiole. Insert the leaf vertically into the medium making sure that the mid vein is buried in the rooting medium. New plant will form from the mid vein.

c) Split-vein

Detach a leaf from a rex begonia and remove the petiole. Make cuts on several prominent veins on the underside of the leaf. Lay the cutting, lower side down, on the medium. If the leaf curls up, hold it in place by covering the margins with rooting medium. New plants will form at each cut. A variation of this method is to cut the leaf into wedges, so that each pieces has a main vein. The leaf wedges should be inserted into the media with the main vein partially covered.

d) Leaf-bud cutting

Leaf-bud cutting are used for many trailing vines and when space or cutting material is limited. Each node on a stem can be treated as a cutting. This type of cutting consist of a leaf blade, petiole, and short piece of stem with an attached axillary bud. Place cuttings in the medium with the bud covered (½ to 1 inch) and the leaf exposed. Examples of plants that can be propagated in this manner include clematis, rhododendron, camellia, jade plant, rubber plant, devil's ivy, grape ivy, dracaena, blackberry, mania, and heart-leaf philodendron.

OBJECTIVE

1)To know the type of the leaf cutting how to make it.

2)To produce the new product/plant by leaf cutting.

3)To increase the number of product in propagation.

4)Enable flowering to accelerate generically.

APPARATUS AND MATERIALS

Scope, lime, topsoil, sand, poly bag, snack blade leaf, secateurs,

PROCEDURE

1) Leaf that we choose must in the good and free from affecting disease and pest.
2) Mixed the compost gently until it mix well.
3) Put the mixed composed into the poly bag.
4) Cut the leave into the few part before we planted it into poly bag.
5) Then, press the cutting leaf into the poly bag that contain compost.
6) Water the plant gently and avoid for excess watering.
7) Put the poly bag in the suitable place such as nursery and greenhouse.