



اَوْنَبُوْرَسِيَّتِيْ بِاَتِيْكَوْلُوْكَى مَبَارَا
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FACULTY OF PLANTATION AND AGROTECHNOLOGY

PLANT PROPAGATION

(AGR 232)

TITLE OF REPORT: CUTTINGS

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Introduction

A plant cutting is a piece of a plant that is used in horticulture for vegetative (asexual) propagation. A piece of the stem or root of the source plant is placed in a suitable medium such as moist soil. If the conditions are suitable, the plant piece will begin to grow as a new plant independent of the parent, a process known as striking. Next, a stem cutting produces new roots, and a root cutting produces new stems. Besides that, some plants can be grown from leaf pieces, called leaf cuttings, which produce both stems and roots. The scions used in grafting are also called cuttings.

Objective

1. Understand the significance of cutting technique.
2. Differentiate types of cuttings and techniques.
3. To know what the types cutting technique that use.
4. Increase the growth rate of the plant.
5. To produce the new plant.

Materials

Polybag, stock plant, secateurs, rooting hormone (IBA), sharp knife, *Sansevieria* (Lidah Jin) and (*Dracaena reflexa*) Song of India plant.

Procedure of stem cutting

1. The stem cutting that we use is hard- wood (bark wood) and we used (*Dracaena reflexa*) Song of India plant.
2. Firstly, we prepared the medium where we was use a mixture soil which is topsoil, sand and compost the is 2:1:1
3. Then, we have cut the branches with from parent plant about 45° angle and the cutting size is 7-15cm. Then, cut below a node with secateurs.
4. After that,if the tip has not hardened, snip it off and remove any side shoots. Then, we removed excess leaves and leaving 2-3 pairs of leaves per plant only.
5. Before, we put into the polybags, we were applying rooting hormone which IBA to the cut tip.
6. Finally, we measure a hole with finger in the polybag and insert the plant about 2-3cm into hole, we have put the polybags into the nursery and then watering the polybags.



We applying with rooting hormone (IBA) after we cut the stem.



Then, we put the polybags into the nursery and watering polybags.

Result



As result, half of the stem cutting is successful but

Procedure of leaf cutting

1. During make a leaf cutting, we have used the *Sansevieria* (Lidah Jin).
2. Firstly, we have only take sections from a thriving, vigorous parent packed with leafy growth. Then single out one new, well formed, undamage leaf.
3. Next, we have cut it off cleanly at the base using a sharp knife and taking care not to squeeze or damage it in the process.
4. Besides that, we have lay it on a clean surface, so that is face down and then we proceed to slice it across the stem into equal sections (3cm).
5. After that, we was left with a jigsaw arrangement of pieces and clearly showing the tops a bottoms of each pieces.
6. Then, before we put the leaf of *Sansevieria* (Lidah Jin) into the polybag, we have put rooting hormone at the bottom of each piece. Then we have insert the bottoms in the compost and not the tops. Lastly, we put the polybags the leaf of *Sansevieria* (Lidah Jin) into the nursery and watering the polybags.



we applying with rooting hormone (IBA) after we cut the stem.



Then, we put the polybags into the nursery and watering polybags

Results



From the result that we can see, the leaf cutting is successful.

Discussion

From the results that, we can see the half of the plants are successful and the half of the plants is unsuccessful. It is because, the technique that we have done this stem and leaf cutting is not right. Besides that, the plant tissue of the plant maybe left too long and it will cause the plant tissue become infected and that can infected by hand or another factor. It is also make the plant is not are good condition and can cause the plant will die.

After that, to reduce this problem from happening, make sure the rootstock from the parent in are good condition before cut the plant. Before planting the plant to the polybags, avoid the plant from touching to exposed the plant tissue.

Then, cuttings is a vegetative propagation method that has an advantage and disadvantage to plant. The advantage use this vegetative propagation method such as stem and leaf cutting technique is easy and fast to do because it is oly cut half of the stem and leaf. Next, this technique also does not require the special technique like a budding and grafting method.

Lastly, the disadvantage of this cutting techniques is the plants gradually lose their vigour as there is no genetic variation. They are more prone to diseases that are specific to the species. This can result in the destruction of an entire crop. Since many plants are produced, in this results in overcrowding and lack of nutrients.

Conclusion

As conclusion, that I can learn from this technique of vegetative propagation which is cuttings. For example, the cuttings that we had done is stem and leaf cuttings. Besides that, I understand the significance of cuttings technique and the differentiate types of cuttings technique. Lastly, this method also can increase the growth rate of the plant and can produce the new plant.