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**UNIVERSITI
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FACULTY OF PLANTATION AND AGROTECHNOLOGY

PLANT PROPAGATION

(AGR 232)

TITLE OF REPORT: SEED SOWING

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Introduction

A seed is an embryonic plant enclosed in a protective outer covering. The formation of the seed is part of the process of reproduction in seed plants, the spermatophytes, including the gymnosperm and angiosperm plants. Seeds are the product of the ripened ovule, after fertilization by pollen and some growth within the mother plant. The embryo is developed from the zygote and the seed coat from the integuments of the ovule.

Then, seeds are the vital part of agriculture. Only good quality seeds which are sown properly can give an expected result or yield. Seeds of a variety of types and strains are available.

Next, seed selection is essential seed in each plant so that the crop can increase the cost of production. For instance, healthy and good quality seeds are the root of a healthy crop. Hence the selection of seeds is decisive. Selection helps to obtain healthy seeds and sustain and optimize the quality of crop strain. Based on plant size, the quantity of grains, fruit size or colour, disease resistance etc. seeds can be selected. Before that we also need to check the germination period, nutrients required so that the selected seeds will be beneficial in terms of yield and finance. Some seeds are sources of diseases it is can effect a grow of the seed to germinate. Hence for high yield, sow best seeds.

After the preparation of soil, the previously selected seeds are scattered in the field. This is called sowing. Sowing should be done carefully and uniformly. If seeds are not sown uniformly, overcrowding of crop happens. For sufficient sunlight, water and other requirements congestion need to be prevented.

We also used jackfruit's seed (*Artocarpus heterophyllus*) belong to the family Moraceae which is common to be seen planted or existed naturally in tropical area. This jackfruit seed is a recalcitrant because this seed cannot be stored for a long time. In addition, seed sowing is a sexual propagation because it involved seed to produce a new plants.

Objective

1. To know the growth stage of seedlings.
2. To study the morphology and maturity of the seeds.
3. To know the difference type of seed in terms of germination, height and morphology.
4. To determine the new varieties.

Materials

Polybags, jackfruit seed(*Artocarpus heterophyllus*), watering can and soil mixture.

Procedure

1. Firstly, we used the jackfruit seed (*Artocarpus heterophyllus*) for seed sowing.
2. Then, we prepared the medium.
3. Besides that, we were filled the polybags with the soil mixture which is topsoil, sand and compost (2:1:1).
4. Next, we make a hole of the soil and we put the jackfruit seed into the hole and make sure the seed cultivation is not to depth. Then, make sure the radicle of the seed facing upwards.
5. After we planted the jackfruit seed into the polybags, we were transfer the polybags into the nursery and we used watering can to water the seed.
6. Lastly, we have a thirteen of the seed of jackfruits that we had done to plant. Then, we should be take care of the seed until germination of the seed.



We filled the polybags with soil mixture.



We put the jackfruit seed into the polybags .



We also transfer the polybags into the nursery and watering the polybags.

Results



Polybag

Week	Seed germination
1 (27/10/2017)	Seed germination not yet occurred
2 (3/11/2017)	Seed germination not yet occurred
3 (10/11/2017)	Seed germination not yet occurred
4 (17/11/2017)	               

Discussion

From the result that we can see 1/13 is not successful to grow but 12/13 was successful to grow. It is because the seed maybe infected by the pests and diseases like snails. Then, maybe soil is compact and cause the movement of water is low. The best way that we used herbicides and when the soil is compact we can use tillage to overcome this problem.

Next, planting seedlings is very easy to much done because it only uses two ingredients is polybag and seed. This is also has a high success rate. Besides that, through this cultivation of this seed, it can produce tap root. The advantage of taproot it have strongly holds the root. Next, this method is very easy to do and cheap materials.

Conclusion

As conclusion, that I can learn from seed sowing method is to know the growth stage of the jackfruit seed and I also study the morphology and maturity of the seeds. Then, I also learn the difference type of seed in terms of germination, height and morphology. This method also can produce the new varieties.