




EXPLANT MANAGEMENT

Online Training Course on
Horticulture Seed Propagation with Tissue Culture

Indonesian Center for Agricultural Training Lembang
The Agency for Agricultural Human Resources and Development
Ministry of Agriculture, Republic of Indonesia

Non-Aligned-Movement Centre for South-South Technical Cooperation

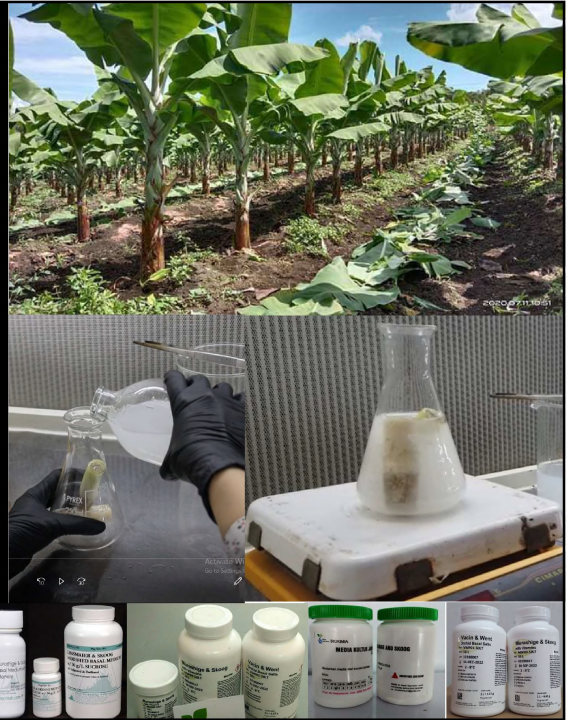


EXPLANT ?

The source of planting material used to multiply plants in tissue culture technology.

4 keys to success in explant management:

- 1) Where did the explants come from?
- 2) How do you remove sources of contaminants (fungi and bacteria)?
- 3) What culture medium do you use to grow the explants?
- 4) Do you have the skills to grow explants in culture bottles?



Good Explants ?

“source of planting material that **meets the requirements**, to **grow** and **develop properly**”



Criteria for good explant:

- 1) Originates from the “mother plant” which is known where it comes from.
- 2) Originates from the “mother plant” that grows normally and healthy.
- 3) Originates from the “mother plant” that grows in a healthy environment.

Note: Explants can be taken from plant tissue that is actively dividing (meristematic).



Explant Sterilization ?

“to remove sources of contaminants (fungi and bacteria)”



4 Important Points on Sterilizing Explants



explant condition



sterilization material



the concentration of the sterilizer



sterilization time

How to plant explants correctly ?

- 1) Make sure the tools and materials for planting the explants are **sterilized**.



How to plant explants correctly ?



- 2) Make sure the explants are planted in the right place, such as **Laminar Air Flow**.

How to plant explants correctly ?



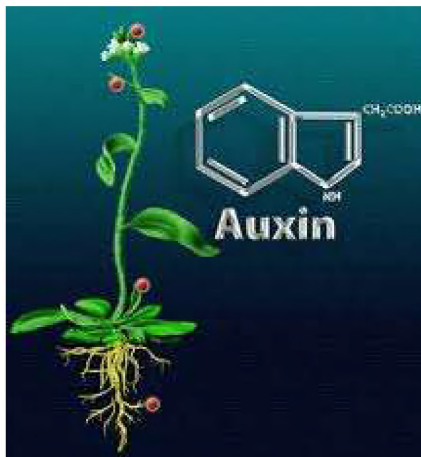
- 3) Make sure before planting explants, the culture media **is not contaminated with fungi and bacteria**.

How to plant explants correctly ?



- 4) Make sure before planting explants, the culture media **is not contaminated with fungi and bacteria.**

How to plant explants correctly ?



- 5) Make sure the explants get the right nutrition, for example **the auxin hormone for rooting.**

How to plant explants correctly ?



- 6) Make sure the explants are reproduced (**subcultured**), if ...
- the culture media has run out.
 - for certain growth conditions on the explants.
 - The explants were fully grown in the culture bottle.

Thank You!

