Plant tissue culture :lab.(5)

Steps to cell culture and Plant Tissues culture

(THE FOURTH STAGE)

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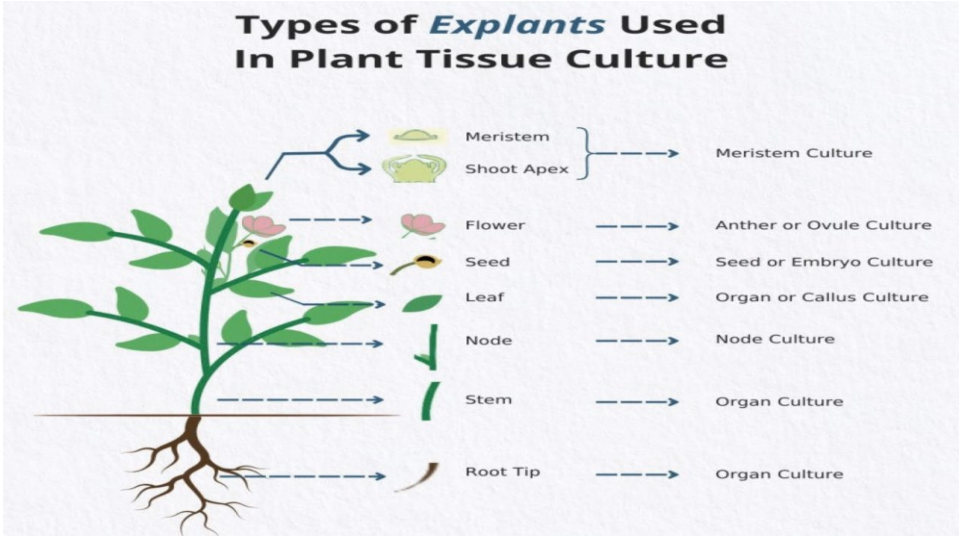
1-First: Selection of the plant part:

1- Selective of mother plants

- The mother plant should be in good health and at the beginning of its activity and have good qualities free from diseases, especially viral diseases, and must be released from the comfort stage if it has a rest period such as tubers and bulbs.

2- Selective of an explant

- The parts that are used are the developing tops of the stems, roots, flower parts, parts of fruits, berries, seeds, pollen, mites,ovaries, embryos, endosperm, veneers, cortex, marrow and macrophy. These parts contain mesothelioma or tissue that can be transformed into mastectomy and each plant is often more suitable than jealousy.



There are several considerations that must be considered before electing the part to be grown:

- **a- Explant:** It means the vegetative part (a developing summit apical meristems, a part of the stem, a part of the leaves, etc.).
- **b- Age of Explant:** It is usually preferable to use a small vegetative separator. In some cases, it is preferable to conduct the process of mixing to form a more active modern growth when cultivating it.
- **c- Size of Explant:** It has been found that the higher size of the plant separated the growth rate is higher in most cases and the rate of multiplication is higher, Also, strong modern growths can be obtained by means of vaccination (the small origin of the taste of the large plant), as well as the treatment of plants with gibrilein sometimes cytokinine This encourages the formation of modern growth.
- while in some cases the size of the plant should be small to be free of Diseases, especially viral diseases and little pollution.
- **d- Season of Explant:** Developing members are more active at the beginning of the growth season (spring) than in the rest of the year.
- **e- Quality of the Explant Source:** It must be completely identical and in good growth and diseasefree.

2-Sterilization of the Explant

- After obtaining the plant part of the source of the mothers are undergoing the process of sterilization as follows:
- 1- Wash the part of the plant used under a stream of tap water for an hour or more and this reduces pollution rates to a large degree and if the outer surface covered with a layer of wax,washing the separate part of a washing powder helps make the outside surface more wet.
- 2- Put in 70% ethanol alcohol for half to one minute then wash with distilled water.
- 3- Put in sodium hypochlorite (chlorox) 5-20% for one-third hour with continuous stirring and stirring.
- 4- Rinse sterile distilled water 4-5 times to get rid of the effects of the sterile material and then the vegetable part becomes cultivable. Steps 2 through 4 take place inside the hood.

3-Culture of the explant:-

- The tissue used after sterilization is cultured on the surface of the sterilized environment previously prepared using sterilized tools. This cultivation takes placeinside a sterilized hood. This is in the case of the solid medium. If the medium is liquid, the part of the plant used on passengers is immersed in the center. The solutions are transferred to the planted part. The medium used in the early stages should preferably be solid and may be liquid in the following stages.

