

# Plant Tissue Culture

## 1. What is Totipotency?

- The ability of a plant cell to give rise a whole plant is called Totipotency.

## 2. What is explant ?

- The portion of the plant that is taken from the parent plant for culturing on nutrient media is called explants.

## 3. What is Callus?

- The Explant often divides to give rise to an unorganised mass of tissue called callus.

## 4. What is Embryo Rescue?

- Embryos that do not develop inside the ovary can be grown in culture media. This is called Embryo Rescue.

## 5. What are the applications of plant Tissue culture?

### Application of plant Tissue culture:

1. Desirable plants can be rapidly multiplied.
2. Multiplication can be done throughout the year in a small space under controlled conditions.
3. It is possible to obtained plants that are free from pathogens particularly viruses.
4. Embryos that do not develop inside the ovary can

be grown in culture media.

5. Plants tolerant to drought, pathogens etc, can be isolated by creating these conditions in the culture medium.
6. New hybrid species can be evolved by Tissue culture.

### Fill in the blanks

1. Tissue culture was first observed by \_\_\_\_\_
2. Haploid plants obtain commonly by introducing \_\_\_\_\_ in culture media .
3. Development of haploid plants through tissue culture was discovered by \_\_\_\_\_ and \_\_\_\_\_
4. The ability of a plant cell to give rise a whole plant is called \_\_\_\_\_

### ANSWERS

1. Haber landt
2. Pollen grain
3. Shipra Guha and Satish Maheswari
4. Totipotency