

Student 4. Tissue Culture.

Tissue culture is a asexual culturing technique. Tissue culture is using particular cells like leaf stems to create cast amounts of new plants. The new plants are exactly the same.

Step 1: Select suitable suckers (explants) from a desired and healthy plant. It must be free of pests and diseases [4].

Step 2: Sterilise the suckers and put them in a disinfectant to kill any bacteria or diseases.

Step 3: Choose an end of the plant like the end of the stem or lateral bud tip as these tissues have the highest rates of cell division and produce required growth regulating substances [2].

Step 4: Cut out a small part of the tissue or isolate individual cells and place them in a tissue culture container, containing agar.

Step 5: The tissue will grow and it will make a big blob of tissue called callus. Callus is tissue that forms over wounds in plants protecting inner tissues and causing healing [3]. The cells may make new shoots directly from the cells. The cells are now called plantlets.

Step 6: Once the plantlets develop into seedlings some can be removed and the whole process can start again. This is a quick way of building up identical plants to make a forest. This results in a rapid multiplication of new plants and thousands can be produced in just a few months.

Step 7: When the seedlings are big enough they can be removed and put into pots with soil. The seedlings are now grown in a greenhouse like any other seed or cutting would [1].

Step 8: The hardening process takes three to four months before they can be planted outside in a plantation. This increases the rate of survival.