

## Methods of plant propagation

### Introduction

Reproduction is one of the manifestations of life.

**Reproduction:** the ability of living organisms to produce living organisms similar to themselves.

The importance of reproduction for living organisms:

It ensures the continuation of its species and its survival on the surface of the earth.

### Methods of reproduction in plants

1. Seed propagation
2. Vegetative propagation

### Seed propagation

Concept of seed propagation

**Seed propagation:** the production of a new plant through the embryo of the seed resulting from the process of pollination and fertilization, and seeds are used as a basic means of propagation in the majority of plants, whether they belong to vegetables, ornamental plants or field crops, but they are rarely used in the propagation of fruit trees.

Plants that propagate by seeds

1. Vegetables (tomato, cucumber, spinach, apricot)
2. Ornamental plants (carnation, basil, mouth of the fish)
3. Field crops (wheat, corn, lentils, chickpeas)

Methods of planting seeds

Seeds are planted in the permanent soil in two main ways, which are:

1. Planting in rows (grooves).
2. Planting in basins.

Some plants need special care, so their seeds are planted in special trays called "seedling trays", which contain eyes, so that a suitable planting mixture is prepared for it, and after the seedlings grow and reach the appropriate size, they are transferred to planting in the permanent place.

Planting seeds in rows (grooves)

Advantages of this method:

- Controlling irrigation and organizing it.
- Ease of conducting agricultural operations.

Plants that are planted in grooves:

- Tomato, eggplant, pepper, potato, cucumber, zucchini, cabbage, cauliflower, onion, okra, and others.

Planting seeds in basins

Plants that are planted in basins:

- Spinach, radish, lettuce, mint, parsley, and others.

## Vegetative propagation

Concept of vegetative propagation

**Vegetative propagation:** obtaining a complete new plant using any part of the mother plant except The seed.

Reasons for its use:

- Producing plants that have the same characteristics as the mother plant itself.
- Propagating plants that do not contain seeds in their fruits, such as some varieties of grapes and oranges.
- Speed of obtaining fruits.

Methods of vegetative propagation of plants:

Cuttings

- Leaf cuttings: as in the plant (Begonia) and the tiger skin plant.
- Stem cuttings: as in grape, olive, rose and carpet plants.
- Root cuttings: as in pomegranate plants.

Layering

- Terrestrial layering: as in jasmine and grape.
- Aerial layering: as in the rose plant.

Grafting

- As in fruit plants, such as: apple, apricot, fig, and grape.

Bulbs and tubers

- As in onion, garlic and narcissus plants.

The following chart shows the methods of plant propagation:

[Image of a chart showing the different methods of plant propagation]

Conclusion

Plant propagation is a natural process that allows plants to reproduce and create new plants. There are many different methods

of plant propagation, each with its own advantages and disadvantages. The best method of propagation for a particular plant will depend on a number of factors, including the type of plant, the climate, and the desired results.