

Propagation in Flowering and Ornamental Plants

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Abstract

Propagation of flowering and ornamental plants has become a valuable tool assisting propagators to release mass propagation new species and cultivars into market more rapidly. In this review the progress made in the industry of cut flowers, ornamental plants and the potentiality for future expansion of this field. The study explores the scope of propagation thus providing material for conservation of a selected clone.

Keywords: Fertilization, gametes, meiosis, Reproduction.

Introduction

Propagation techniques in flowering and ornamental plants were introduced to solve the majority of the problems that hinder effective propagation of significant economic flowering and ornamental plants. Cloning in flowering and ornamental plants is a viable alternative to seeding based planting (El-Tigani, 2003). Asexual reproduction refers to the multiplication of plants from any vegetative parts other than seed. Asexual propagation, in nature, some plants reproduce mainly vegetatively while others rely almost totally on sexual reproduction. For the plant breeder it is desirable to manipulate sexual and vegetative reproduction (propagation) which can fit into the crop improvement programmed. Genetically the two ways of reproduction is there. Seeds contain genes from the female parent (where we collect the seeds) and the male parent (which contribute the pollen and which is often unknown). Vegetative material is genetically identical to the mother plant from where it was collected. The present guide entirely deals with vegetative propagation. In vegetative propagation the plant can be easily grown commercially and multiply identical to the parent plant (Leaky *et al.* 1990).

Mostly this method can be followed when the plants are not producing seeds. Asexually propagated plants are short stature one. The tending operations like pruning, weeding and harvesting operations can easily be carried out. The spraying of insecticides, pesticides can be easy to apply because of the small stature of asexually propagated plants and the maintenance of plant health can easily be done. The plant obtained is true to type nature and looks more uniform in appearance. More resistant plant can be suitably exploited for beneficial uses. This method of propagation achieves high success if used by experience person having a good knowledge with the individual plants.

General features of Asexual reproduction:

The general features of asexual reproduction are as follows:

Reproduction without fusion of gametes:

The asexual reproduction in flowering plant is also called as cloning. Clones are the individual propagated by asexual means. During cloning process the genetical consequences of all clones are identical if no genetic changes occur in the gametes. The superior individual can replicate them self without the modification as the fusion of gametes allows exact reproduction of genetically superior individuals.

Genetic changes during asexual reproduction:

In asexual reproduction the genetic changes and the chromosomal changes (ploidy or rearrangements) occur. The mutations in one or a few genes, genetic transformation between cells also noticed in vegetative propagation of plants. The changes of plant cells also give rise to an entire plant result in uniform genetically altered plant. Changes in a cell that forms part of a plant result in a chimera (two or more genetically distinct tissues growing adjacent to one another).