

Factors responsible for Deterioration of Cut flowers

Food depletion:-

Food depletion is one of the important causes for deterioration of Cut flowers. Various physiological processes are taking place within cut flowers. Since the harvested flower is also a living entity, various physiological processes like respiration, transpiration, pigment changes are all taking place within it. The only difference is that when the flower is on the plant, whatever food resources are utilised for various physiological functions, those amounts are replaced by plant by photosynthesis. But as soon as the flower is detached from the plant, there is no question of replacement of food. Whatever food resources are within cut flower, it is utilised and flower in turn runs short of food supply.

Bacterial and fungal infections

This will shorten the flower life. While sorting, care should be taken to eliminate the diseased flowers as they serve as an inoculum for further infection on other healthy cut flowers.

Maturation and ageing

The picking of flowers for commercial marketing is influenced by season, environment, distance to market and specific consumer requirements. The early harvested flowers generally assure full opening and develop good quality in the vase. As flowers age, they become susceptible to ethylene induced.

Wilting

Excessive moisture loss through transpiration will limit the flower life. Flowers that have lost 10 - 15% or more of their flesh weight usually wilt.

Bruising and crushing

During storage and transportation, flower bruising and crushing occur. Marketability and longevity of bruised and crushed flowers are reduced. Moreover secondary infection may occur as harmful microorganisms will enter the cut flowers through these wounds.

Temperature

High temperature hastens rate of respiration and transpiration in cut flowers which will affect their quality. Holding at very low temperature is also harmful as it may cause chilling injury.

Ethylene

Accumulation of ethylene in the storage will cause senescence and sometimes abscission of flowers is also speeded up. Cut flowers start shrink after a vase period of 4 to 6 days. This phenomenon also called sleepiness is caused by high production of ethylene.