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*Suppliers & Exporters Of Fresh Fruits & Vegetables.*



## Post Harvest Losses An Everyday Challenge for Cut Roses

Postharvest management plays a critical role in enhancing the competitiveness of cutflowers which by nature are highly perishable. Roses grown in open fields and greenhouses by small ,medium and large scale farmers for export are of particular interest not only because it is one of the major cutflowers grown in the country but also because of its fair quality and perishability.

The random appraisals, market visits, and quality profiling shows technical and nontechnical problems that constrain the industry. Postharvest problems include overmaturity of flowers at harvest, mechanical damage, absence or non-implementation of customer specific standards, short

vase life and poor quality of sold flowers and lack of awareness on proper handling. Other problems include lack of capital, high cost of packaging and transport, lack of postharvest facilities and high losses during the low demand period. The plant physiology behind cool chain management; Respiration

Harvested cut roses are alive, which means that they will constantly respire. Respiration involves the breakdown of carbohydrate (example sugars) and other food reserves (organic and fatty acids) in the plant or in harvested produce and results in the production of carbon dioxide, water and heat. Respiration occurs both pre- and post-harvest.

$C_6H_{12}O_6 + 6 O_2 \rightarrow 6 CO_2 + 6H_2O + \text{Heat (2830 kJ)}$   
 Respiration will occur in presence or absence of Oxygen .The more rapid the respiration rate, the faster the flower will consume its food reserves, the greater will be the heat produced and the shorter will be the post-harvest life of the flower. Growth and development

The respiration will produce energy necessary for the development of floral parts and thus opening of the flower will continue even after the harvesting. Physiological breakdown; The cells may disintegrate with exposure to too low temperatures. Pathological breakdown; This involves the activity of bacteria and fungi. They

mainly occur on injured plant surfaces .The end result is decomposition. Temperature management Temperature management, commonly referred to as the cool chain management is single most important factor that affects cut roses.

Temperature has a linear correlation with post harvest plant processes of growth and development-(Flower opening ) ,Physiological breakdown and pathological breakdown-decomposition/ botrytis .Furthermore, exposure to high temperature in the display area and failure to rehydrate or condition the flowers results in wilting and eventually drying of blooms. Temperature has a significant influence on the respiration rate of harvested