

POST HARVEST HANDLING

A Grower's Perspective

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We need to start our discussion of post harvest handling of blueberries with blueberry bloom. In order to obtain high quality fruit for retail markets we need to prevent frost injury and control disease and insect damage. It is imperative the grower has perfect, premium fruit ready for harvest on the bush. Consumers purchase fresh blueberries on impulse and are prompted primarily by their perception of quality. There are two factors that can not be controlled. At harvest time growers generally have to battle environmental conditions such as high temperature which hastens ripening, and possible periods of extended rainfall which can also hasten ripening and cause splitting. Both of which will greatly reduce storage quality. On the other hand, the factors that can be control include avoiding harvest of wet blueberries, avoid harvesting fruit during peak high heat hours of the day and prompt removal of fruit from the field which avoids buildup of excessive heat within the harvested fruit.

Care of fruit during harvest is determined by the type of harvesting done. For example growers who manually harvest fruit must adhere to the following rules:

Manual Harvesting - Rules for Blueberry Pickers

1. *Keep hands clean*
2. *Pick all ripe blueberries on bush*
3. *Avoid dropping berries (discard dropped fruit)*
4. *Do not squeeze or roll fruit*
5. *Do not put trash or cull berries into the container*
6. *Never allow harvested fruit to remain in sun*

Growers who use mechanical methods should adhere to the following rules:

Mechanical Harvesting - Rules for Minimizing Damage to Fruit

1. *Harvest only dry fruit during the coolest part of the day*
2. *Minimize drop heights*
3. *Eliminate as much vibration as possible*
4. *Limit the depth of fruit in field containers to 4 or 5"*
5. *Handle and dump field containers very gently*
6. *Cool fruit as soon as possible after harvest*

Every effort should be made to keep defective fruit within the package to a minimum. The common defects are insect damage, broken skin, decay or mold, and overripe and shriveled fruit. This will aid in delivering a high quality package to the retailer and result in a satisfied consumer.

Harvested berries should be cooled as quickly as possible and the process can start in the field by placing the harvested containers of fruit in shaded areas. Prompt removal of harvested fruit to the packaging area insures that excessive field heat does not build within the harvested fruit. Fruit should be cooled to 50°F immediately upon arrival to the packaging shed.

Additional cooling to temperatures lower than 50°F may result in a condition known as sweating during packaging at ambient temperatures which results in poor package appearance.

Blueberries are packaged in either paper pulp or plastic clam shell containers. The paper pulp is generally covered with cellophane or netting. The pint are then placed in 12 pint master trays and palletized for cooling and subsequent shipping. Once packaged, the fruit should be refrigerated at a minimum of 45°F if delivery is imminent and within approximately 24 hours. A temperature of 32 to 34°F (-0.6 to 1°C) and a relative humidity of greater than 90% is recommended for extended shelf life.