

Pecans: Harvesting and Processing

Pecans can be harvested between October–December. Northern crops are harvested earlier during harvesting season to avoid freezes.

Pecans are grown on trees, in husks. When the sutures in the husk begin to split, the nuts are ready for harvest. If the husk is effected by insect damage or disease while they are still shut, this can prevent them from opening and won't produce a quality nut. This is called a "stick-tight". For unaffected husks, the suture splits reveal the in-shell nut. These husks can be easily split open by hand to remove the in-shell nut. At this point, it is time to knock the husks and in-shell nuts down from the trees. For small farms, this can be done manually with a long pole. For large farmers, a mechanical shaker (machine that shakes the trunk of the tree to release the husks) can be more efficient. Once the husks are on the ground they will be collected by a sweeping machine that picks up the husks/in-shell nuts and are taken to the factory for storing.

In-shell nuts can be stored in cold store before processing. Once the factory is ready to process the nuts they will be brought back up to temperature gradually before beginning processing.

The in-shell nuts start the process with washing and a temperature controlled pasteurisation step. The nuts are held at a specific heat for at least seven minutes. From here they go on to cracking, which is done mechanically. **The use of machines during processing can be a point of damage to the nuts as this is a more forceful method of processing, however, it is much more efficient.** The cracked shells and nuts continue on through the de-shellers to separate and remove the shell pieces. They will also pass through EVM removers and sorters in order to sort out any foreign bodies. After sorting, the nuts go through a drying step. The husks hold a lot of moisture so it is importance to remove the in-shell nuts from the husks promptly. Because of this, when the nuts come off the tree, they have a high moisture content as well, making it necessary for a drying step. The nuts are mechanically dried to about 4% moisture. It is important to dry the nuts to the proper moisture level in order to produce a crisp nut and avoid overly dry or soft and moist nuts. Ideally, as a last step, the nuts go through visual inspection to ensure that all of the foreign material has been removed and the individual nuts are of the proper standard. If the nuts do not meet the proper standard, at any step, they should be re-worked through the process.

Once the nuts have made it through this process they will be packed and ready to ship.

References:

<http://fruitandnuteducation.ucdavis.edu/fruitnutproduction/Pecan/ProcessingStorage/>