

# Peelers and Slicers

## Peeler

The peeler and slicer (most commonly used for potatoes) were originally developed by Bob Nave, one of the founders of Compatible Technical International (CTI) and the founder of the Society for Development of Appropriate Technology (SOTEC) located in Bareilly, India.

The peeler and slicer were developed to aid rural farmers in easily turning their potato crop into a shelf-stable, saleable product. This is very important because during the potato harvest season, potato prices are very low and most farmers do not have access to cold storage. In this instance, farmers must sell their crop at low prices before it rots. Making potato chips allows farmers or local entrepreneurs to take advantage of higher prices and longer shelf life in the chip market while providing employment for family members and laborers.

There are two peeler designs, known as the "Big Peeler" and "Small Peeler." The small peeler (Photo 1) can be a barrel cut in half or a fiberglass drum (shown). The inside is coated with an abrasive material and it is mounted on a stand so that it can be hand-cranked. As the barrel rotates, the potatoes tumble and rub against the abrasive material until they are fully peeled. The big peeler is also an abrasive lined vessel that spins, but it is motorized. Again, the potatoes rub against the grit as the peeler rotates removing about 70% of the potato skin. After machine peeling, the eyes, bad spots and remaining peel are removed by hand.



Photo 1

Peeler being used on potatoes at Rural Training and Village Development Center in India.



Photo 2

Potatoes being sliced with a pedal powered slicer in India.

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### Slicer

The slicer (Photo 2) can be bicycle powered or motorized. It also consists of a small drum with an arm inside that pushes the potatoes toward the outside of the drum. A blade manufactured by Urschel Laboratories in Valparaiso, Indiana is mounted on the drum so that the potatoes are thinly sliced as the potatoes are pushed past it. The slices land in a water-filled tub. They are blanched, dipped in a chemical to preserve them and finally, sun dried to extend their shelf life. Customers purchase the dried chips and fry them at home just before serving, usually for festivals and special occasions. Or, they can be ground in potato flour to make other products.

With the exception of the slicer blades, peelers and slicers are made by local manufacturers from parts and metal stock readily available in India. SOTEC has developed agreements with local manufacturers to make and sell the machines under the Nave brand which distinguishes these machines from others on the market.



Chips are graded and sorted before being shipped to market.