



State Award – Jammu & Kashmir

Walnut Peeling Machine

Mohd. Shafi Ahanger
Anantnag, Jammu & Kashmir
Scout: Direct

Born in a blacksmith's family, Shafi (42) had a childhood full of struggles, more so because he is physically challenged. Overcoming his financial hardships and physical limitations, Shafi self-learnt mobile repairing and opened a shop in his village. He has had a keen interest in developing something new, which has led him to make devices like an inverter power supply, a lantern that works on DC power, and a generator using a six-volt motor. In 2017, he won NIF's National award for his PCB repairing device for mobile phone.

Kashmir is blessed with walnuts of the best quality. Peeling (green) walnuts immediately after harvesting and drying is essential for walnut processing. Peeling green walnuts manually is a tedious, time-consuming and back-breaking process, and it adversely affects the skin of the hands of the person who peels the walnut. To make the process

efficient and without exertion, Shafi first developed a manual walnut peeling device and then modified it into a manual and a powered system.

In this machine, green walnuts are fed into the hopper at a level convenient to workers standing on the ground. They are received on a horizontal conveyor into four parallel rectangular channels mounted atop shredder plates. The shredder plates are supported by perpendicular compression springs so that walnuts of all sizes can be accommodated underneath the shredder plates, and sufficient compression force can be applied to the walnuts. As the walnuts travel along the conveyor belt length, they are subjected to impact and shredding forces, leading to the peeling of walnuts. The machine's throughput is 500-600 kg/h at a peeling efficiency of 98%.

