

*Use of Peanut (*Arachis hypogaea*) shells waste in *Pleurotus pulmonarius* mushroom farming*

India generates approximately 1.8 million tonnes of groundnut shells and about 15 million tonnes of groundnut haulms annually. The groundnut shell, composed of roughly 70% cellulose, serves as an ideal substrate for cultivating various mushroom species, including *Pleurotus sajor-caju*, *Pleurotus florida*, and *Pleurotus eous*. In addition to being a leguminous crop, groundnut haulms are high in protein content, approximately 12%, minimizing the need for additional supplements in mushroom cultivation.



Status of commercialization

Technology awaiting commercialization.

Salient Features

Sustainability and Waste Reduction: Utilizing peanut shells as a substrate component for mushroom cultivation is a sustainable approach that contributes to waste reduction. Peanut shells are abundant and often discarded as agricultural waste, so their use in mushroom farming helps in recycling this biomass.

Water Retention: Peanut shells have a good water-holding capacity, which is beneficial for maintaining the necessary moisture levels in mushroom cultivation. Proper moisture is crucial for the growth and development of *Pleurotus pulmonarius*.

Cost-Effectiveness: Using peanut shells can be economically advantageous for mushroom farmers. It provides a low-cost substrate option compared to purchasing specialized mushroom-growing mediums.

Eco-Friendly Cultivation: The practice aligns with eco-friendly and organic farming principles, as it involves recycling agricultural waste and reducing the environmental impact associated with waste disposal.

Benefits

Reducing Waste: Peanut shells are often considered agricultural waste. Using them in mushroom cultivation repurposes this waste, reducing environmental burden.

Carbon Footprint Reduction: By utilizing waste products, the carbon footprint associated with waste disposal (like burning or landfilling) is reduced.

Income Generation: Small-scale farmers or communities can generate income by selling waste shells to mushroom cultivators, creating a new revenue stream.

Training

Training is imparted by Krishi Vigyan Kendra-II, Sitapur, U.P

Developer: Shailendra Kumar Singh, Reema Devi, Daya S Srivastava

Contact Details: Krishi Vigyan Kendra-II, Vill-m Katia, Po- Ulara (Manpur), Block- Biswan, District- Sitapur 261145 U.P

