

Sieving Precision: Indigenous Makhana Grader

Profile of Innovator

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Brief description of Innovation

Grading of Makhana pop using indigenous grader, a unique specialized equipment. It sorted and grade makhana (fox nuts or *Euryale ferox*) into different grades or sizes as per APEDA norms. Grading is important step in makhana processing.

Innovation's Highlights

The machine operates using a series of vibrating or rotating sieves with varying mesh sizes; raw makhana is fed from the top and, as it moves over the sieves, it is separated by size, with clean, graded makhana collected in separate bins. The capacity of the machine ranges from 50 kg/hour for small units to 500-1000 kg/hour for commercial units.

Benefits/Advantages

Improves product quality and uniformity, saves manual labour and time, and enhances processing efficiency, making it suitable for both small-scale and commercial processors. This device can be attached to automatic model. The total pop production is approx. 60,000 q in district from 1,05,000 q of raw seed. The expenditure of manual cleaning and grading on 1 quintal pop is Rs. 1600 while grading



View of indigenous makhana grader



Packing of makhana after grading

and cleaning by machine is 1000 per quintal. If promoted, this machine can help farmers save Rs. 3,60,000.

Scope & Potential of Innovation for Wider Reach/Out Scaling

In view of the present scenario, wherein “*Makhana*” is being highlighted as a “Super food”, this indigenous grader may have a huge scope and potential, in terms of replicability across small-scale & commercial processors, engaged in the field of *Makhana* cultivation.

Scientific Validation required

Yes, to some extent.

Domain

Development of indigenous tool, Vast scope, Makhana pop grading



View of makhana cultivation