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A Social
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MANUAL DEHUSKING OF DRIED ARECANUTS



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THEME: AGRICULTURE & ALLIED SECTORS



MANUAL DEHUSKING OF DRIED ARECANUTS

STAKEHOLDER

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Core Issue

Small-scale farmers producing only 1–2 quintals of arecanut face challenges in dehusking. Most still rely on traditional hand tools, such as sharp blades, to remove the husk from the nuts. This manual process is time consuming, physically demanding, and risky, as workers are prone to cuts and injuries while handling the tools. At the same time, the low production volume

makes investing in large-scale mechanical dehusking machines impractical and unaffordable. As a result, these farmers are forced to continue using manual methods, which reduce efficiency, increase labor effort, and compromise safety. There is need for reliable, safe, and affordable dehusking solutions.

Constraints

- Traditional peeling with blades causes frequent injuries and hand wounds.
- Lack of affordable small-scale dehusking tool in the market.
- Farmers often work individually, limiting scope for sharing of equipment to use.
- Manual peeling is time consuming and reduces overall efficiency.

Context

Arecanut (supari) is a major cash crop in Tumakuru and surrounding regions, playing a vital role in the livelihoods of small and marginal farmers. While larger farmers can afford mechanical dehusking machines, small-scale farmers who produce only 1–2 quintals—depend heavily on traditional hand peeling. This slows down the processing cycle and puts physical strain on the farmers and their families. With increasing demand for arecanut in the market, improving the efficiency and safety of small-scale dehusking could boost productivity, income, and farmer well-being.



Groundwork to be considered

- Document existing traditional arecanut peeling practices and the challenges farmers face.
- Identify safety risks and necessary precautions involved in arecanut peeling.
- Engage with farmers to understand their requirements and openness to adopting new solutions.
- Explore design possibilities for a portable dehusking machine suitable for household use.
- Assess the market potential for low-cost, farmer-friendly dehusking machines.

Existing Systems

Currently, small-scale farmers who produce only 1–2 quintals of arecanut mostly depend on traditional manual methods, where the nut is peeled using a handheld blade. This process is slow, physically tiring, and risky, often leading to cuts and injuries. On the other end, larger farms and processing units use mechanized dehusking machines that can handle high volumes efficiently. However, these machines are expensive and not economical for small farmers with limited output. Some low-cost or semi-mechanized alternatives have been introduced in the market, but they are either not widely available, require power supply that is inconsistent in rural areas, or still demand skill and effort to operate. As a result, there remains a gap between the manual method and the costly large-scale machines, leaving small farmers without any solution.

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