

# OCCUPATIONAL HEALTH HAZARDS FROM DUST EXPOSURE IN RICE MILLING



# THEME: MSMEs & SMALL BUSINESSES



## OCCUPATIONAL HEALTH HAZARDS FROM DUST EXPOSURE IN RICE MILLING

### STAKEHOLDER

MR. TIMME GOWDA  
OWNER, RICE MILL BASARALU, MANDYA.

### Core Issue

During rice milling operations, a significant health hazard arises at the raw paddy intake stage. When paddy is poured from sacks into the system, large amounts of dust are released. Workers are directly exposed to this dust, leading to unsafe air quality and potential long-term respiratory problem. This uncontro-

-lled dust emission was identified as the major problem in rice industries.

### Constraints

- Absence of dust extraction or collection systems at the paddy intake point.
- Continuous manual pouring of paddy makes dust unavoidable under current operations.
- Workers operate in close proximity, facing direct exposure to airborne particles.
- Cost of installing industrial level dust management systems is not possible for small mills.
- Worker safety is often ignored in rural milling units, as there are no strong health and safety measures in place.

### Context

The rice mill, owned by a mechanical engineering graduate, is technologically well-equipped with automated processing, reprocessing, and sorting systems. The machinery ensures efficient separation of grains with minimal wastage and outputs three rice quality categories: animal feed grade, moderate quality brownish rice, and final consumable white rice. Despite these efficiencies, worker safety remains a neglected aspect, with dust hazards posing an immediate occupational risk. The concern directly affects not only workers but also the sustainability of mill operations if health and compliance issues arise in the future.



### **Groundwork to be considered**

- Observe and document the generation of dust during raw paddy intake in rice mills.
- Interaction with workers to record health issues and safety challenges faced due to prolonged dust exposure.
- Assessment of existing dust management practices (if any) in small and medium-scale mills for benchmarking.
- Measurement of air quality levels in and around the intake area to quantify exposure risks.

### **Existing Systems**

- Workers often use cloth masks or handkerchiefs as basic protection, which are insufficient against fine dust.
- Some mills rely on open ventilation (windows, exhaust fans) to disperse dust rather than actively collecting it.
- Dust settles on floors and machinery, with cleaning done manually at intervals.
- Larger mills sometimes adopt industrial dust collectors or cyclone separators, but these solutions are usually absent in small rural units due to high costs.
- Overall, dust control is reactive and minimal, focusing on routine cleaning instead of preventive dust extraction.