

OPERATIONAL AND SAFETY RISKS IN SUGARCANE PROCESSING



THEME: MSMEs & SMALL BUSINESSES



OPERATIONAL AND SAFETY RISKS IN SUGARCANE PROCESSING

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Core Issue

MY SUGAR faces multiple operational and environmental challenges impacting production efficiency, worker and public safety, and resource utilization. Major issues identified include declining sugarcane supply limiting factory operations, dust hazards affecting highway safety, storage risks due to

government regulations and environmental exposure, and the ineffective engagement of students during internships. These factors collectively affect productivity, financial stability, and community safety

Constraints

- Limited sugarcane availability restricts factory operations to approximately 100 days per year.
- Government-mandated storage requirements increase the risk of spoilage and financial loss.
- Dust from factory operations spreads onto the adjacent highway, creating safety hazards for commuters.
- Traditional internship models do not provide meaningful problem-solving opportunities, reducing value for both students and industry.
- Operational adjustments depend on alignment with farmer schedules, machinery efficiency, and weather conditions.

Context

The sugar industry in Mandya is a critical contributor to the regional economy, relying heavily on consistent sugarcane supply and efficient factory operations. MY SUGAR, being strategically located beside a highway, experiences environmental challenges including dust dispersion affecting public safety. Government policies on sugar output and storage add operational complexity. Additionally, conventional student internships often fail to address real industrial challenges, highlighting a gap in industry-academia collaboration.



Groundwork to be considered

- Detailed information of sugarcane supply patterns and seasonal fluctuations affecting factory operations.
- Study of dust generation and dispersion from factory processes and its impact on nearby area and public.
- Evaluation of storage practices, government regulations, and risks associated with environmental exposure of sugar products.
- Analysis of resource utilization (machinery, energy, labor) to identify inefficiencies.
- Review of existing student internship programs to understand gaps in practical engagement and problem-solving opportunities.
- Engagement with factory staff, local farmers, and students to gather perspectives on operational challenges and safety concerns.

Existing Systems

- Sugarcane supply relies entirely on local farmers, with no buffer system or alternate sourcing for lean periods.
- Factory operations proceed with minimal dust control measures, leading to dust spreading onto adjacent highways.
- Sugar storage is done in compliance with government-mandated silos or warehouses, but environmental exposure and spoilage risks remain.
- Internships are traditionally observation-based, with students performing routine tasks rather than addressing core operational or environmental challenges.
- Resource utilization (machinery, labor) is largely manual or semi-automated, with little optimization for energy, throughput, or safety.