

Power Consumption Management in Roller Flour Mills



Jatinder Ahluwalia
+91 98921 7715
jatinder1957@gmail.com



Managing energy costs without compromising quality is vital as power is the second largest expense after wheat.



Feeder Selection

- **Avoid rural feeders due to erratic supply.**
- **Industrial feeders offer regular maintenance schedules.**
- **Express feeders provide seamless supply but are costly.**

Transformer Selection



- Efficiency difference of 2% can save ~6,000 units/month.
- Inspect transformer testing before dispatch.

Motor Selection



- IE3 motors recommended for cost-efficiency.
- IE4 costly and hard to rewind.
- Motors run best near 90% load.

Power Factor & Capacitors

- High power factor earns rebates (up to 7%).
- High-quality capacitors maintain stable output for years.



Roller Mill Efficiency

- Condition of rolls impacts energy use.
- Proper pressure and lubrication reduce power consumption.



Plansifters & Sieving

- Regular inspection avoids clogging.
- Prevents unnecessary grinding and extra power use.



Bran Grinding

- Extra power is needed where fine bran is demanded.
- Driven by regional market preferences.



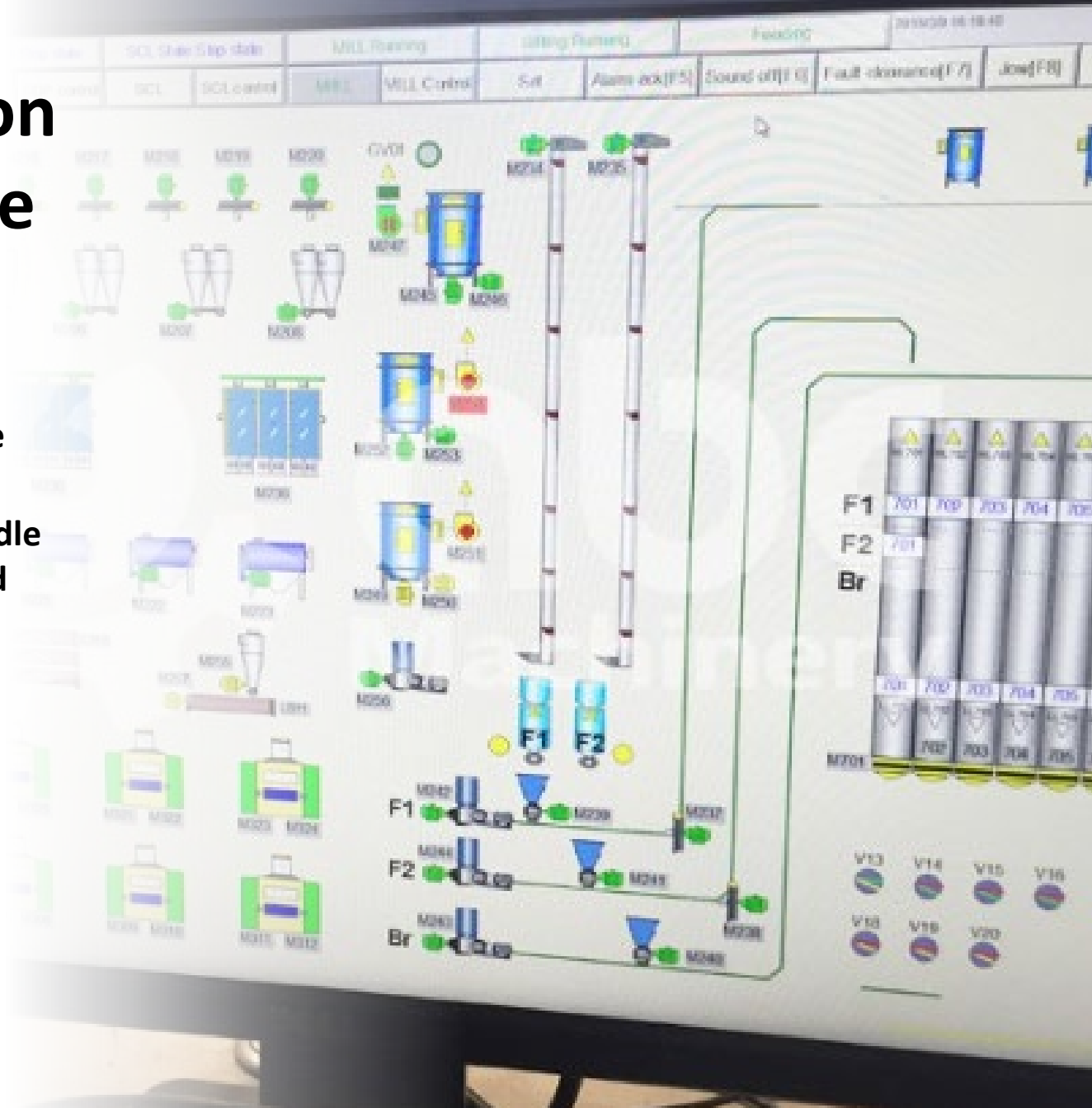
Grain Conditioning

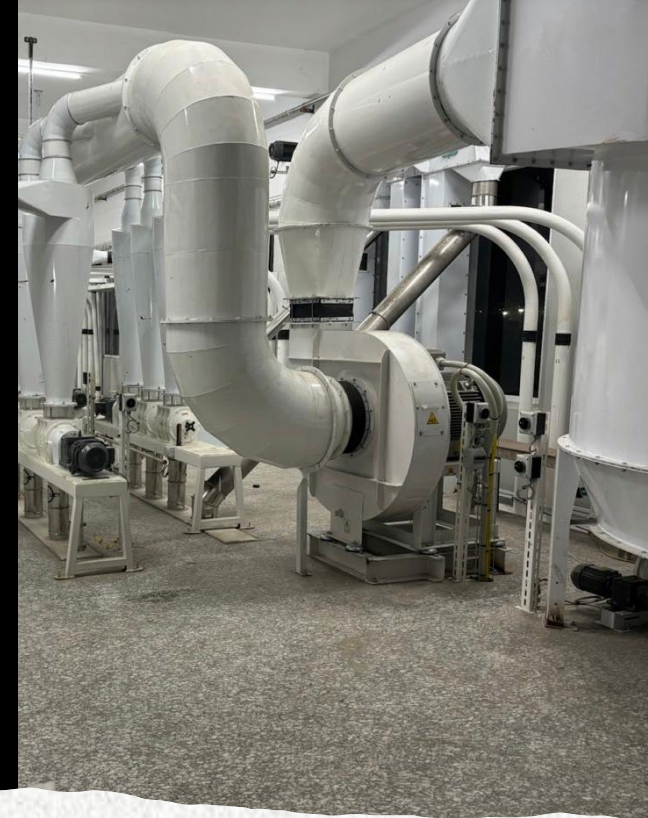
- Proper mellowing improves milling efficiency.
- Depends on kernel hardness, humidity and temperature.



Automation Advantage

- Only ~20% of mills are automated.
- Automation reduces idle running, manpower and energy waste.



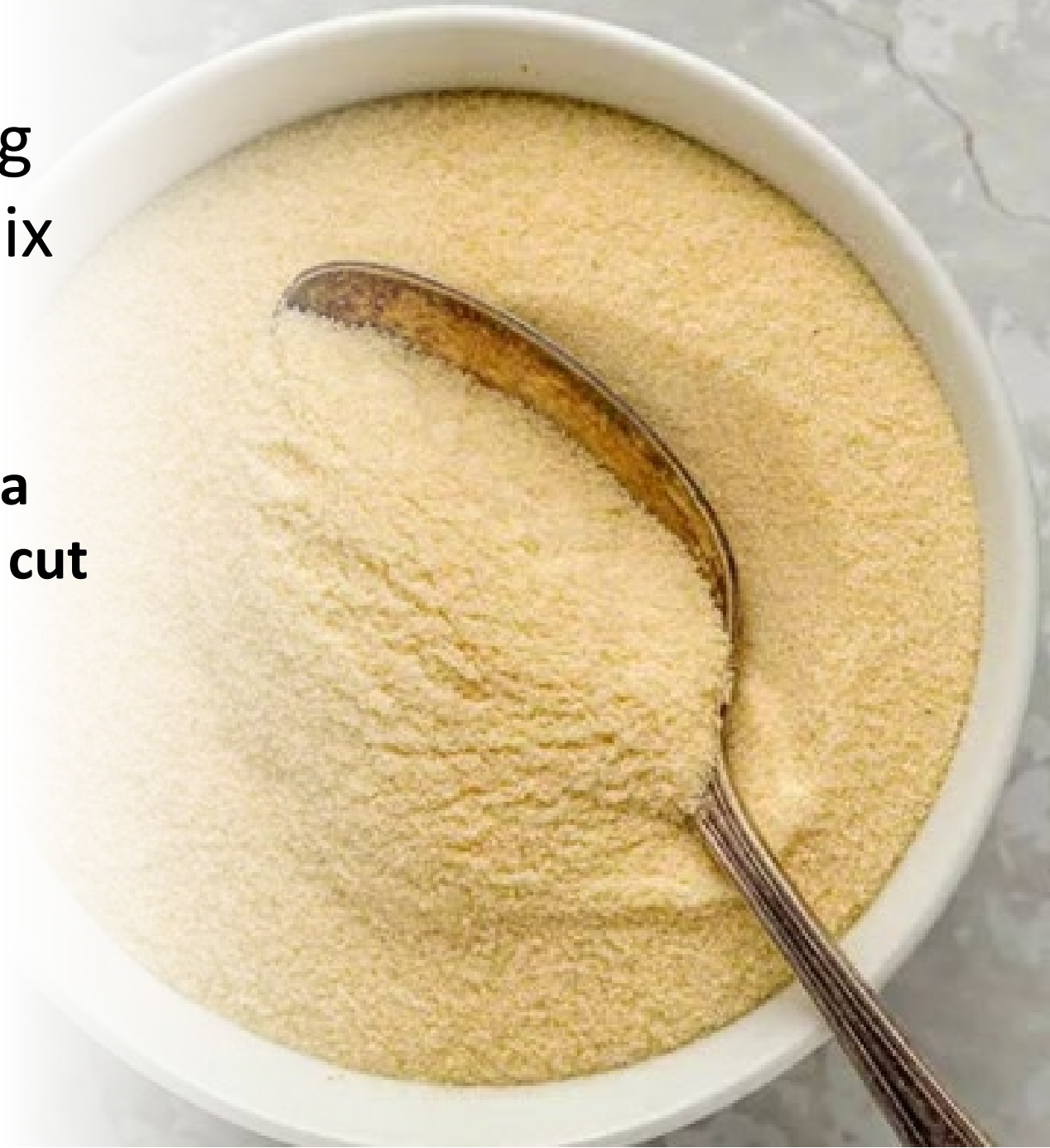


Air Handling & Pneumatic Design

- Compressed air leaks, over-designed fans, poor filter control, badly designed aspiration system waste energy.

Optimising Product Mix

- **10% semolina extraction can cut energy use by ~5%.**





THANK YOU

- **Questions & Discussion**
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