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# THE KUMAR BULLETIN

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# Kumar + CPM-Crown Biomass Pelleting Plant

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The future of clean energy is rooted in smarter processing. Kumar + CPM-Crown's Biomass Pelleting Plant transforms agri-residues into high-density fuel powering industrial boilers, thermal plants, and heating systems with efficiency and reliability.

## Why biomass pellets?

Because stubble and waste left to burn in open fields harm air quality and compromise long-term sustainability. Pellets turn this challenge into opportunity.

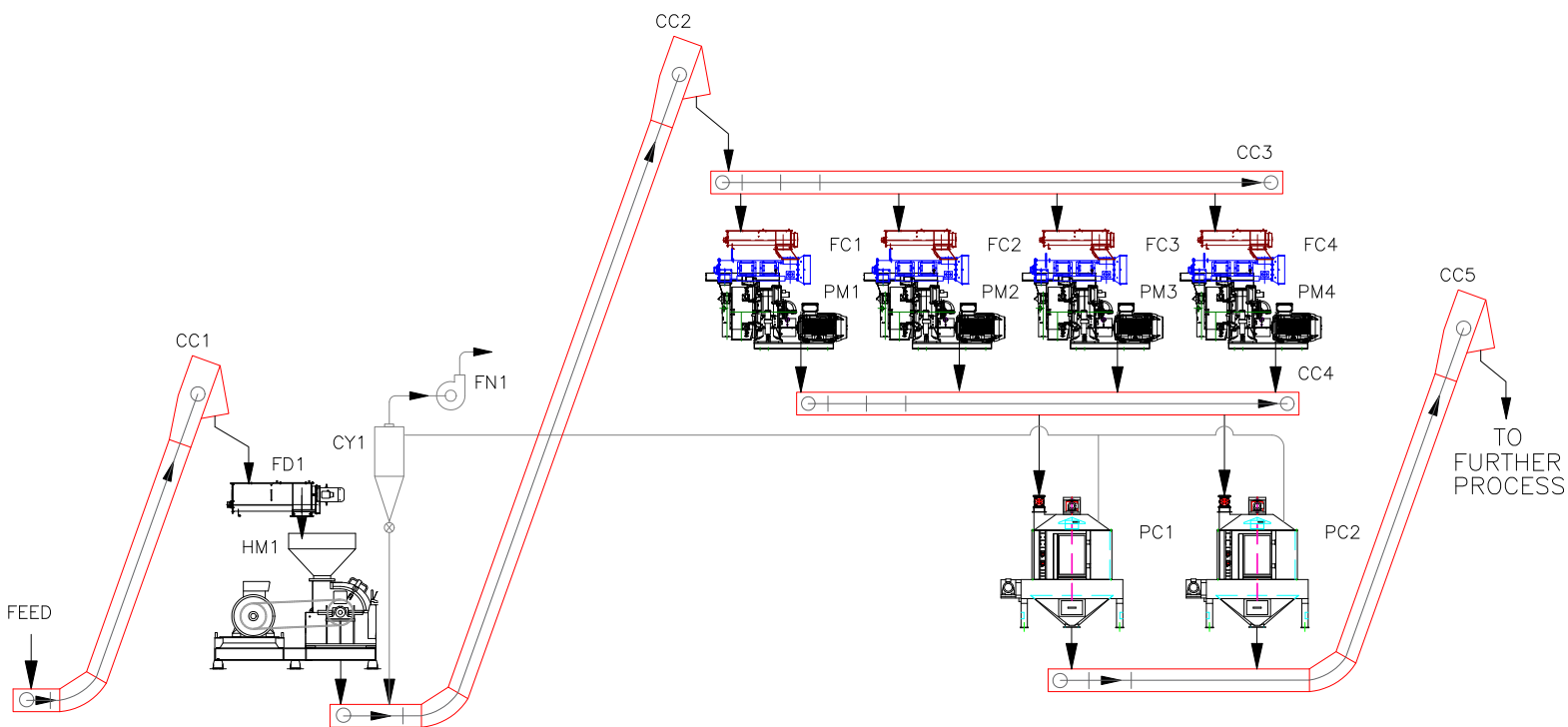
## What makes the biomass plant stand out?

Designed for performance, with every stage from shredding and drying to pelleting and packing engineered for throughput, pellet consistency, and operator safety.

- Pellets are compact, uniform, easier to store and cost less to transport.
- Lower moisture means fewer emissions, less ash, and more efficiency.
- Higher density and uniformity make them efficient for combustion and reliable feeding in industrial systems.
- Pelletisation supports lower emissions and decentralised, local-resource energy generation.

# THRIVE WITH US

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## Input materials

- Paddy straw
- Rice Husk
- Wood chips
- Sawdust
- Corn Stalk
- Wheat Husk
- Agro-industrial waste

## Applications

- Industrial boilers
- Thermal power plants
- Gasifiers
- Heating systems
- Co-firing

## Integrated systems - key equipment

**CHIPPER/SHREDDER** prepares raw biomass into chips

**HAMMER MILL** grinds material to a uniform particle size

**ROTARY/FLASH DRYER** lowers moisture to an optimal 10–15%

**PELLET MILL** compresses dry powder into dense pellets

**PELLET COOLER** cools pellets for safe storage and handling

**CYCLONE SEPARATOR** removes airborne dust and fines

**VIBRATING SCREENER** ensures uniform pellet sizing

**PACKING MACHINE** automates bagging for 15–50 kg or bulk

**STORAGE SILO** buffer for raw or finished materials

**PLC CONTROL PANEL** manages plant operations with safety interlocks

# MEET SAGAR GAWALI

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## DESIGN DESK TO INNOVATION LAB

Kumar is legacy—and that's what drew me in. I joined as a design engineer because I wanted to work on practical, real-world engineering challenges that make a tangible impact. Over the years, I've had the opportunity to work on projects that improved plant performance and customer outcomes, converting field learnings into engineering solutions.

With each milestone, I grew—from designer to problem-solver, from contributor to team lead. Today, as R&D Manager, I lead a team that transforms ideas into meaningful innovations. The journey has been deeply rewarding—full of challenges, hands-on learning, and support from leadership.

## ENGINEERING CURIOSITY MEETS REAL-WORLD PROBLEM SOLVING

What I enjoy most is the variety—no two problems are

ever the same. I get to dive deep into technical details, run trials, and collaborate across departments to test and validate new ideas.

Whether it's improving a product or troubleshooting on-site, we're constantly in motion—working directly with machines, gathering data, and turning feedback into improvements. There's real satisfaction in seeing how even small design tweaks can transform a customer's operations.

And at the heart of it all? Practising and mastering the basics—with consistency, curiosity, and discipline.

## A DAY IN THE LIFE OF AN R&D GUY

Every day begins with a review of ongoing development projects and feedback from the field, sales, and management. Some days, we're on the shop floor running trials; on others, we're fine-tuning process parameters, analysing data, or collaborating with

engineering, production, and service teams.

The rhythm shifts between lab, factory, and field—but the goal is always the same: solve problems, improve performance, and innovate with purpose.

## BREAKTHROUGHS

One of our recent achievements was the successful development of the XP-400 Expeller, in close collaboration with the Engineering team. We not only hit our targets for oil yield and processing capacity—we exceeded them. The performance has now been validated at customer sites, and the feedback has been outstanding.

That's not all. Our R&D team has also led the development of:

**FiltoKx® Filter** – For dewaxing/winterisation

**SPDC Series** – Single Pass Dryer Cooler (100 TPD to



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We don't just design. We test, troubleshoot, and turn engineering insight into performance you can count on.



1200 TPD)

Extrok™ Extruder – 1 TPH capacity

Commercial Biodiesel Skid Plant – 5 MTPD

All of these are purpose-driven innovations built under Kumar's 3FCE (Food, Feed, Fuel, Circular Economy) framework. And there's more to come—stay tuned.

#### **BUILDING KUMAR'S INNOVATION EDGE**

Much of what we do in R&D happens behind the scenes—but its impact is very real. From tracking customer needs to trialling new technologies, we ensure that every product and process improvement is tested, validated, and ready to perform before reaching the market.

Our focus on lab and pilot-scale trials during the pre-engineering stage helps us avoid downstream issues and ensures that Kumar delivers on its promise of reliability, innovation, and sustainability.

**SAGAR GAWALI**  
**Manager R&D**

# PROJECT UPDATES

Design, engineering, manufacture and supply of **10 TPD Oil Mill** machinery for **decorticated groundnut**



Design, engineering, manufacture and supply of **20 TPD glycerolysis plant**

# BUILD TO THRIVE



# INDEPENDENCE DAY



## WHERE WE'RE GOING NEXT

### WORLD COCONUT CONGRESS

# Booth #122

24-26 September, 2025

SMX Convention Center,  
Manila. Philippines

### INTERNATIONAL SOY CONCLAVE

# Booth #39

8-9 October, 2025

Brilliant Convention  
Centre, Indore. India



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