

Coconut Cream Production Process Improvement

Ian Neil P. Moreno | Electrical Engineer, Production Supervision | morenoianneil2@gmail.com | +63 930 114 5896

Context

Coconut cream extraction line in a food manufacturing plant. As production supervisor with an electrical engineering background, I was responsible for daily output, equipment condition and process performance across the production process area.

Problem

Extraction performance in the coconut cream process area was inconsistent shift to shift. Output varied without a clear, documented cause, which made planning unreliable and made it difficult to tell whether a given day's result came from the raw material, the equipment or the operating method.

- Yield varied between shifts running the same nominal settings
- Process parameters were adjusted by feel rather than to a documented standard
- Equipment and downtime issues were reported informally, so recurring faults were not visible
- No single record tied operating conditions to the resulting extraction outcome

Approach

I treated it as an engineering problem rather than a staffing problem: measure first, isolate the variables, then change one thing at a time.

- Mapped the process flow end to end and listed every point where an operator decision could change the outcome
- Started a daily log capturing input volume, machine settings, run time, downtime events and output
- Compared shifts and batches to separate raw-material variation from operating-method variation
- Reviewed equipment condition and maintenance history against the days with the weakest results
- Ran controlled adjustments on the highest-impact parameters and kept the rest fixed
- Documented the settings that produced the best consistent result and turned them into a standard the team followed

Action

Technical work in the production process area was carried out alongside process changes agreed with the production team, so improvements survived shift handover:

- Standardised operating parameters for the extraction step and posted them at the line
- Introduced a shift checklist covering start-up condition, parameter verification and downtime logging
- Prioritised the maintenance items most closely linked to unstable runs
- Trained operators on why each parameter mattered, not only on what value to set
- Reviewed the daily log with the team so deviations were caught the same day

Metrics tracked

Metric	Why it was tracked	Direction of result
Extraction yield	Primary measure of process performance per batch	Improved — high extraction yields achieved
Shift-to-shift variance	Shows whether the method, not luck, drives output	Reduced / more consistent

Metric	Why it was tracked	Direction of result
Downtime events	Links equipment condition to lost output	Made visible and prioritised
Output vs. plan	Reliability of production planning	More predictable
Parameter compliance	Confirms the standard is actually followed	Documented and monitored daily

Figures are reported qualitatively. Exact percentages are held back because the underlying production data is company-confidential and cannot be independently verified here.

Result

The process area achieved high extraction yields, and — just as importantly — the result became repeatable. Performance stopped depending on which shift was running, deviations were caught the same day instead of at month end, and the production plan became something the team could commit to.

What transfers to data and VA work

The core of this case study is the analytics loop: define the measure, collect clean daily data, isolate the variable that moves the number, document the standard and keep monitoring it. That is the same loop behind a KPI dashboard, an operations report or a tracked client workflow.

Skills demonstrated: Process Analysis · Technical Problem Solving · Manufacturing Operations · Process Improvement · KPI & Performance Monitoring · Documentation & Standardisation · Team Coordination