BC Automation

AI-Optimized Steam Peeling for Fruits & Vegetables

Tech Primer - 03/14/25

Your time, money, and product quality are under pressure.

- **Process variability – Produce conditions change with seasonality, storage, and pre-processing.**
- **Yield loss – Over- or under-peeling leads to unnecessary waste and inefficiency.**
- **Energy waste – Steam usage is often excessive due to lack of real-time process control.**
- **Staying competitive requires intelligent, adaptable peeling solutions—and that's where BC Automation leads.**

PROBLEM: Variability in Steam Peeling Reduces Yield & Efficient

Fruits and vegetables at different life cycle stages require different peeling conditions:

- **Fresh Produce – High moisture and delicate skins make over-peeling a risk.**
- **Process-Grade Produce – Washed and sorted but still variable in skin toughness and moisture content.**
- **Stored Produce – Tougher, suberized skins require higher steam pressure, but excessive peeling damages yield.**
- **Without real-time process intelligence, manufacturers suffer yield loss, excessive energy use, and quality inconsistencies.**

SOLUTION: AI-Driven Driven Steam Peeling Optimization

BC Automation's Steam Peeling MetaProcess integrates SWIR-enabled Advanced Spectrometry to dynamically adapt to produce conditions in real time.

- **Condition-Based Steam Control – AI adjusts steam pressure, cycle times, and batch size based on detected moisture and skin toughness.**
- **Advanced Spectrometry for Peeling Optimization – SWIR sensors detect dirt, suberization levels, and moisture content for precise steam application.**
- **Process-Grade Sorting & Infeed Adjustments – Categorizes produce before peeling to reduce over-processing and maximize yield.**
- **Exit Inspection & Dynamic Feedback – Post-peel sensors ensure quality and continuously adjust upstream settings to refine peeling efficiency.**
- **Energy & Cost Efficiency – Adapts steam use dynamically, reducing waste and lowering operational costs.**

OUR IMPACT: Higher Yield, Lower Costs, & Greater Efficiency

- **✅ Up to 7% Yield Improvement – Reduces over-peeling and preserves usable produce.**
- **✅ Energy Savings from Optimized Steam Use – Less wasted steam means lower operational costs.**
- **✅ Improved Process Stability – Maximizes cycle time, decreases process variations, and increases utilization.**
- **✅ Higher Quality & Consistency – Reduces defects, ensuring fully peeled produce continues down the line.**

BC Automation's AI-driven peeling solutions maximize yield, efficiency, and energy savings, giving fruit and vegetable processors a smarter way to optimize their operations.

89+ clients served

610+ unique processes automated

$2.9B+ client dollars saved

"A huge asset to any company looking to improve their cost and reliability."

Chris Whitehair
SVP Global Operations at SunOpta

"[BC Automation's] solutions are most thorough and comprehensive."

Ned Mitenius
Founder & Sr Consultant at Periscope Consulting

Let's Transform Your Manufacturing Together.

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