

Major Consumer Products Manufacturer Reduces Costs, Planning Cycle Times with Automated Scheduling

Aspen Plant Scheduler enables optimal raw material selection, reducing blended raw material costs by 2-5% and reducing planning cycle time from two days to one hour.

The company is a large manufacturer of blended products in the United States, responsible for selecting, blending, and shipping custom corn flour blends worldwide.

After experiencing high raw material cost, a high level of wasted material, and increased storage expenses, the company looked to improve its blend line generation process. This manual, complex process involves the selection of flour lots with specific characteristics that are affected by crop year, geographical region, and age of the material. In addition, lot-to-lot consistency requirements forced the company to split lots. To add to the challenge, operators must adhere to silo capacity restrictions and periodic emptying of silos for cleaning and maintenance, further complicating the scheduling process.

The company selected AspenTech partner Logexsoft to automate its blend material selection and scheduling process. The solution leverages *Aspen Plant Scheduler*, which provides a flexible and configurable optimization engine for automating the process, as well as an easy-to-understand graphical user interface for viewing results. In addition *Aspen Scheduling Insight* was used to measure, track, and display the “schedule versus actual” results and plot improvement trends.

“The blend line generation system is one of the few systems in production that’s mission critical.”

—CIO, Major Consumer Products Manufacturer

The company name has been concealed to protect the competitive advantage this solution represents to them.

Customer Profile

**Major Consumer Products
Manufacturer**
Food & Beverage

Challenge:

Reduce the effort and cost involved in selection and scheduling of optimal raw material blends

Solution:

Aspen Plant Scheduler to automate the complex blend selection and scheduling process

Benefits:

- Reduce blend line schedule generation time from 2 days to less than one hour
- Reduce manpower resources from 6 blend line analysts to one
- Improve logistician productivity by 600%
- Reduce raw material inventory by 3%
- Improve silo availability by approximately 10%
- Reduce transportation costs by 5%



Complexity and Manual Operations Limit Performance

The company's scheduling system was a highly manual, spreadsheet-driven process that required a great deal of effort, experience, and skill to generate a blend line schedule. Logisticians had to select the proper raw material to meet varying customer specifications such as color, protein content, and texture. In addition, they were challenged to:

- Choose the lowest cost blend of on-hand raw material that would meet customer specifications and delivery requirements
- Utilize material that was approaching its expiration date first, whenever possible
- Ensure lot-to-lot consistency by splitting multiple raw material lots across blend lots
- Avoid stranding small quantities of materials
- Choose material from a minimum number of storage complexes to minimize transportation expenses
- Periodically use up all the material in a storage complex to allow for cleaning and maintenance

Aspen Plant Scheduler Streamlines Selection and Scheduling

The Blend Line Generation system interfaces with the company's SAP ERP and other systems to collect the required data. It then automatically generates an optimized raw material selection and blend line schedule. Production data is also fed back into the system to provide logisticians with visibility into what was actually produced relative to what was scheduled.

At the heart of *Aspen Plant Scheduler* is a powerful optimization engine that determines the best schedule for satisfying objectives within current timeframes. It automatically assigns available inventory to blends that the users wish to create, taking into consideration production order requirements, available raw material inventory, material attributes, recipe/specification requirements, lot-to-lot consistency requirements, transportation and storage costs, and additional user-defined blend line schedule policies. Users can also create and run "what-if" scenarios to determine the most effective way to recover from a disruption or maximize the profitability of an unexpected opportunity.

The solution has been operational at the company for more than five years and is an integral part of its production strategy.

About AspenTech

AspenTech is a leading supplier of software that optimizes process manufacturing — including oil and gas, petroleum, chemicals, pharmaceuticals and other industries that manufacture and produce products from a chemical process. With integrated aspenONE solutions, process manufacturers can implement best practices for optimizing their engineering, manufacturing and supply chain operations. As a result, AspenTech customers are better able to increase capacity, improve margins, reduce costs and become more energy efficient. To see how the world's leading process manufacturers rely on AspenTech to achieve their operational excellence goals, visit www.aspentech.com.



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