ANHEUSER-BUSCH INBEV

Barley Valorization from Seed to Sip

Student Team:
Marcos Coppa – Master of Business Administration
Murat Johnson – Master of Business Administration
Michelle Pawlow – EGL (BSE Environmental Engineering/MSE Industrial and Operations Engineering)

Project Sponsors:
Marcelo Goncalez – Global Manager, Vertical Operations
Adam Griffith – Vice President of Operations, Global Raw Materials
Luke Mafazy – Operations Director, Global Raw Materials
Alessandro Sperotto – Vice President, Global Vertical Operations

Faculty Advisors:
John Branch – Ross School of Business
William Schultz – College of Engineering

Anheuser-Busch InBev (AB InBev) is a Belgium-based multinational corporation and is the largest beer company and maltster in the world. The company depends on a consistent supply of high-quality barley to brew beer and secure a resilient supply of grain, working with more than 16,000 direct farmers across 13 countries and 5 continents to grow natural ingredients. AB InBev is committed to source a majority of malt barley directly from its growers around the world, pledging its 2025 Sustainability goals to help make all of AB InBev's contracted growers skilled, connected, and financially empowered.

Established growing regions supply high-grade barley with realized contract acceptance rates greater than 85%. Animal feed markets, in turn, purchase the rejected material at or near the cost of production, enabling a sustainable and profitable model for all parties. The challenge arises in areas lacking development in grower practices, technology availability, feed markets, and supply chain conditions. AB InBev needs a solution to be able to accept all the contracted barley, without compromising beer quality and company profitability. The Tauber team was tasked with developing a plan to valorize the portion of barley historically rejected in order to create a more sustainable business model for both growers and AB InBev.

The Tauber team focused its analysis on three global malting facilities as the basis for our case study, representing the extremes of AB InBev malt houses around the world: Moorhead in the United States (Minnesota), Passo Fundo in Brazil, and Jinja in Uganda. For each of these regions, the team assessed the current main quality issues that lead to rejections or issues during the malting process, the market potential for barley by-products via fractionation efforts. The team proposed actions and implementation guidelines considering the operational and financial impacts to both ABI and the growers.

The team proposed new technologies to increase barley acceptance, creating a global roadmap to determine profit opportunities for malt-graded barley and by-products via new revenue sources and cost improvements. The team developed implementation guidelines based on four main levers to generate value from barley grains that can now be accepted without being malted. They are: separation (sorting out individual kernels based on quality), processing (treating kernels to reduce quality issues and recover the grain), fractionization (converting the barley into its subcomponent parts to sell as by-products), and barley homogeneity (malting barley with a reduced standard deviation in protein levels).

By implementing the technological changes proposed by the Tauber team, AB InBev will be able to accept an additional 380,000 MT of barley from its contracted growers annually, increasing the worldwide acceptance rate from 88% to 97%. These changes will save the company $17.9 million and provide an additional $13.3 million in revenue to growers annually.