



EXPANDING FARINHA FLOUR BUSINESSES IN THE AMAZON

BUSINESS ON THE FRONTLINES

In 2019, the Foundation for Amazon Sustainability and the University of Notre Dame through its Meyer Business on the Frontlines Program collaborated to analyze artisanal flour businesses to support the traditional communities of the Amazon.



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The Amazon river basin is one of the most biodiverse places on earth, home to the largest rainforest and a focal point of ecological conservation. Yet the basin continues to be threatened by illegal logging, poaching, natural resources extraction and pollution.

For more than 10 years, the Foundation for Amazon Sustainability (FAS) has led conservation efforts in the Amazon, focusing on sustainable economic development of the area's abundant resources and traditional river communities. In groundbreaking initiatives, FAS has sought to balance the economic needs of the communities inhabiting the rainforest with the need for ecological conservation.

Since 2018, the University of Notre Dame's Meyer Business on the Frontlines Program has partnered with FAS to develop business solutions to impact livelihoods for the better and help make the forest worth more standing than cut down.



Photo by Barbara Johnston

ABOUT

FOUNDATION FOR AMAZON SUSTAINABILITY (FAS)

As a Brazilian nongovernmental organization, FAS was launched in 2007 by means of a partnership between the government of the state of Amazonas and the Bradesco Bank. The foundation gained the support of multinational corporations such as Coca-Cola Company Brazil (2009) and Samsung (2010), among other partnerships for its programs and projects.

The mission of FAS is to promote sustainable development, environmental conservation and improvement of the quality of life of the river communities of the state of Amazonas. The main initiatives are implemented by the Bolsa Floresta Program, Education and Saude Program and Innovative Solutions Program.



Photo by Barbara Johnston

ABOUT

THE MEYER BUSINESS ON THE FRONTLINES PROGRAM

At the University of Notre Dame, the Meyer Business on the Frontlines Program (BOTFL) utilizes the dynamic skills of business to address issues including post-conflict rehabilitation, poverty, illicit economies, isolation and prejudice. MBA and other graduate students from across the University work directly on projects with partners in the field with the ultimate goal of creating jobs and setting the conditions for economic growth.

Many BOTFL projects focus on agriculture, infrastructure and mining. Others have extended to micro-finance, youth unemployment, post-civil

war reconciliation, business incubators, health and nutrition, human trafficking and disaster preparedness. Since 2008, BOTFL teams have worked on more than 60 projects in 30 countries with more than 25 partners.

Through the years, BOTFL projects have created jobs and increased livelihoods for thousands of people around the world and have helped organizations to incorporate a business mindset into the service of their communities.

THE PROBLEM



Photos by Barbara Johnston

FAS has an expansive reach across 16 Conservation Units of Amazonas, assisting 9,597 families and benefiting over 40,000 people. Current efforts to increase the quality of life and income for the communities along the Amazon River include supporting several value chains. One of the most popular is farinha de mandioca.

Farinha de mandioca is a type of flour and a staple on every Brazilian table alongside rice and beans. The riverside communities grow their own mandioca roots and process the farinha using a very labor-intensive and artisanal process of finishing the farinha in the Uarani style. The Uarani style, also known as ball flour, is unique to

the reserve within Mamirauá. The Uarani flour is shaped like a ball to commemorate the fish eggs of the Amazon region.

Ribeirinha is a Farinha de Mandioca Uarani style farinha product produced by community members of the Sustainable Development Reserve of Mamirauá and sold to restaurants, grocers and wholesalers in Manaus through a partnership with FAS. The Ribeirinha business is poised to contribute to local income generation and sustainability of Amazonas. FAS asked the BOTFL team to analyze the profitability and short- and long-term sustainability of the Ribeirinha business.

THE COLLABORATION

In November 2018, the BOTFL team began researching and analyzing farinha in order to build the business case and investment plan to expand farinha production in Amazonas under the high-end Ribeirinha brand. The team began by investigating potential markets for farinha while researching requirements in terms of quality, production times and commodity prices. While initial research was conducted through video conference between the team and FAS and through proactive outreach and networking, the team's true insights came during the first two weeks of March 2019 while visiting the reserves and witnessing the production and markets firsthand.

Through research, detailed analysis and in-country interviews, the team confirmed the costs for the farmers, such as raw inputs, fertilizer, labor, equipment and infrastructure. The team identified where costs could be minimized and investments in quality of life were needed. The market requirements for the processing and sale of farinha have created the need for geographic designation to distinguish the Uarini style from other types of farinha. The designation may create a short-term competitive advantage, but is essential to compete long-term in this market.

When the team visited Ipapachu, a small community outside of Tefe, they saw what a labor-intensive and social activity the production of

FARINHA DE MANDIOCA VALUE CAPTURE

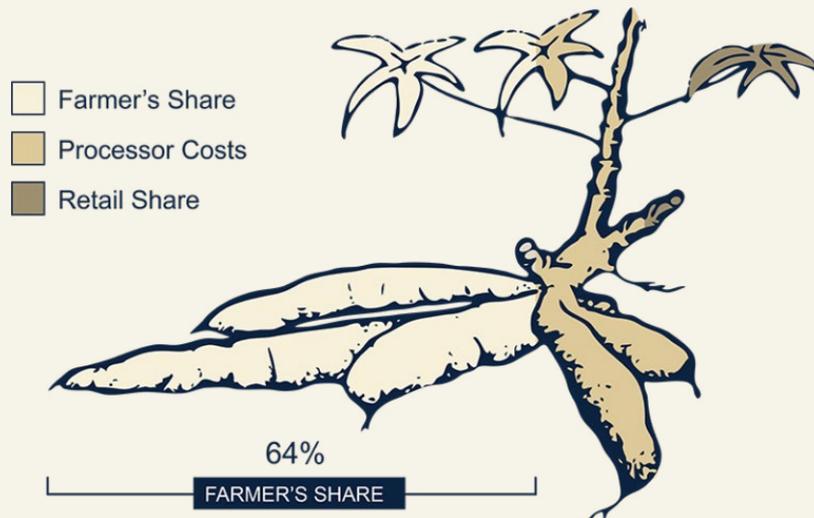




Photo by Barbara Johnston

Farinha de mandioca has become within the area. Neighbors and families came back from other communities and cities to help.

Through extensive in-country interviews and evaluation of the entire supply chain from farmers to customers for farinha, the team discovered that farmers capture most (64%) of the income

from the value chain. Families and communities selling to the Ribeirinha association experience a net increase of at least 25% or R\$ 0.60 per kg for the farmer's income. FAS' role in Ribeirinha's profitability helps sustain the financial health of the business, representing a 14.8% subsidy.

"The artisanal production of farinha de mandioca is a way for your whole family and the community to band together to support each other while catching up with your friends. We knew that our recommendations need to reflect and honor this very social artisanal production process."

SARAH CHANDLER

University of Notre Dame MBA 2019,
BOTFL teammate

THE SOLUTION



Photo by Barbara Johnston

The BOTFL team recommended five areas that could benefit the long-term sustainability of the Ribeirinha business. Recommendations included establishing and maintaining working capital, key performance indicators to track progress of the business, best practices for growing farinha de mandioca, marketing and customer targeting strategies, and social impact improvements to increase the safety of the producers of farinha de mandioca.

“It was a privilege to once again serve as a member of the FAS-ND team to study and develop sustainable economic plans for products that help support the economy of the traditional communities living in the Amazonas region. Feeling the warm welcome of the FAS organization and the river communities brought me much pride and satisfaction.”

JOHN DUNBAR

Adjunct Professor of Finance, University of Notre Dame, BOTFL team faculty advisor

MARKETING AND TARGETING CUSTOMERS

The premium boxes of Ribeirinha do an outstanding job of telling the story of the Amazon people and stand out against the traditional plastic bag packaging. This look and feel should be carried through consistently to the plastic bag version. The current customer targeting strategy should be adjusted to align with the profitability of each product.

SOCIAL IMPACT IMPROVEMENTS

Farinha de mandioca processing has detrimental health consequences that affect producers early in life such as back problems from carrying the farinha. Technological improvements like carrying packs that better distribute the weight could have positive health and social impacts for the producers of farinha.

FARINHA DE MANDIOCA GROWING BEST PRACTICES

The academic and in-country experts on farinha de mandioca have consistent recommendations on best practices that can be shared with communities through seminars and other touchpoints with FAS.

WORKING CAPITAL MANAGEMENT

The Ribeirinha business needs to use FAS' capital better or build working capital to allow the business to rent inventory space in Manaus, shorten lead times and build a rainy-day fund for equipment servicing.

KEY PERFORMANCE INDICATORS (KPIs)

FAS tracks more than 300 different KPIs across its organization. To actively assess the health of the business FAS should focus on Ribeirinha sales, contribution margin, on-time delivery and inventory turnover.

THE RESULTS



Photo by John Dunbar

Following the team's collaboration in 2019, FAS invested in the team's recommendations, including improving the farinha houses and investing in equipment and infrastructure for packaging. FAS and the communities have also partnered to collectively invest in new safety measures for the producers of farinha.

The focus is to expand the production of farinha, as well as packaging at RDS Mamirauá. FAS also hired a specialized consultancy to support a strategy of selling Ribeirinha flour in luxury restaurants and supermarkets in Manaus, increasing sales by more than 20% from 2018 to 2019.

Thanks to the thorough analysis and recommendations of the BOTFL team, FAS is in the process of building a sustainable social enterprise around farinha de mandioca in Amazonas.

Continuing Partnership

As part of a multi-year collaboration between FAS and Notre Dame, the farinha supply chain project is just one part of a larger partnership. Additional projects include:

- 1 A collaboration on a major economic research initiative to assess the impact on the lives of those living in river fishing communities from FAS investments in the necessary components of a vibrant fisheries business. This research protocol has already been launched with the new pirarucu fishing season that began September 2018.
- 2 Future BOTFL team projects to evaluate supply chains and commercialization opportunities for products from the forest such as guarana, acai, cacao, wood and vegetable oils.
- 3 The next BOTFL team visit to the Amazon is planned for 2021.

WHAT WE LEARNED FROM EACH OTHER

"As an environmental conservation organization that also cares deeply about the community in the Amazon, FAS never ceases to amaze me in terms of creativity, dedication, and impact. It is an honor for the Meyer Business on the Frontlines Program to continue to partner with FAS on such meaningful and worthy projects as the farinha de mandioca supply chain and commercialization project."

VIVA BARTKUS

*Associate Professor of Management, Faculty Director
of the Meyer Business on the Frontlines Program*

"Through the established partnership between FAS and Notre Dame we understand that our investments must be made in the improvement of equipment and infrastructure for the packaging of the farinha, as well as, we must improve the farinha houses of this product. This way we can support the positioning of the Ribeirinha brand in the market and stimulate the increase of its production without losing the quality of its product."

EDVALDO CORREA

FAS Floresta em Pé Program Manager

Learn more

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