



BUSINESS ANALYSIS

Collaboration between IISER Mohali and NIT Warangal iGEM teams

Product Analysis

Potential Products from Our Engineered Substrate -

- Biological extract / Engineered Yeast or Enzyme Extract to treat cottonseed
- Treated cotton seed to prepare cottonseed meal
- Treated cottonseed used to make other products (cereals, snacks, batter and more.)

Shortlisted Product for First Phase of Commercialisation

- Engineered Yeast Extract
- FMCG products from detoxified cottonseed

Key Stakeholders

Cotton farmers, aggregators, food processing establishments, end customers.

Business Analysis

A Possible and Recommended Commercialisation Strategy

Set up processing plants/devices to treat cottonseed with yeast extract without any expert technical assistance. This would empower the use of our extract at the grassroots level (by farmers) and draw a contract to buy back the treated cotton seed at a subsidised rate/on a profit-sharing basis.

Set up strategic partnerships with the food processing supply chain to detoxify the cottonseed, process it for consumption and pack it into various edible forms.

Some examples of food processing establishments from our country are - Britannia, Nestle India, MTR foods and more.

Some of the output products could be (list is non-exhaustive) -

- Treated raw cottonseed as a supplement
- Powdered cotton seed to make snacks like Nachos
- Cottonseed powder as a health drink mix

Identify essential products and build a brand around these. These products can then be part of the fast-moving consumer goods (FMCG) supply chains.

Hence, we plan on targeting FMCG as our primary market.

Addressable Market

The total addressable market is expected to be USD 15361.8 Billion USD by 2025, with a compound annual rate growth (CAGR) of 5.4% for 2018-25

Our secondary market is the Agritech market. This is also expected to reach a valuation of over 35 Billion USD by 2025 and is a primary focus for the Indian government, making it a lucrative market to test out MVP and get grants for pre seed and seed phases of commercialisation.

Marketing and Target Audience

Our preliminary stakeholders are farmers and agritech ventures to support us in the initial phases. Our final and major revenue streams would be through FMCG ventures.

(information already present on the website is sufficient for non FMCG ventures)

Being a new player in the market, it would be tough to establish and differentiate ourselves. However, our USP of a nutrient-rich, alternate, vegan and sustainable meal enables us to quickly position ourselves as an ideal food for the socially aware youth.

Our primary marketing channels would consist of targeted ads, social media marketing, viral marketing, influencer marketing and new-age digital marketing to help us scale.

Capturing even 0.00001% of market share would bring enough revenue to justify our high initial RnD expenses and produce a significant return on investments from the third year onwards.

Timeline and Challenges

The product is still only in the proof of concept stage.

Patents for the engineered substrate can take up to 5 years. A provisional patent needs to be obtained quickly to enable licencing and scaling of the proprietary technology behind the detoxification. These are required to scale in the agritech segment.

FDA, FSSAI and other food regulation and safety standards need to be met before entering the FMCG segment.

For the FMCG segment, ideal stakeholders need to be identified to establish a supply chain.

We heartly thank the IISER Mohali team for doing this detailed business analysis of our project.