

# Market Analysis for products from organic household waste: A case study in Minas Gerais (Brazil)

## REASON/ INTRODUCTION

In the state of Minas Gerais (Brazil) a lot of organic household waste is produce (GFT). Currently only a small percentage of the collected residual gets separated and reused, the majority is sent to landfills.

Composting and anaerobic biodigestion have been shown to be efficient ways to recycle solid urban organic waste. Composting is an aerobic process in which organic municipal solid waste is converted into humified fertilizer. With anaerobic biodigestion organic waste is transformed into biofertilizer and biogas.



Figure 1: Landfill in Andradas, Minas Gerais

## GOAL

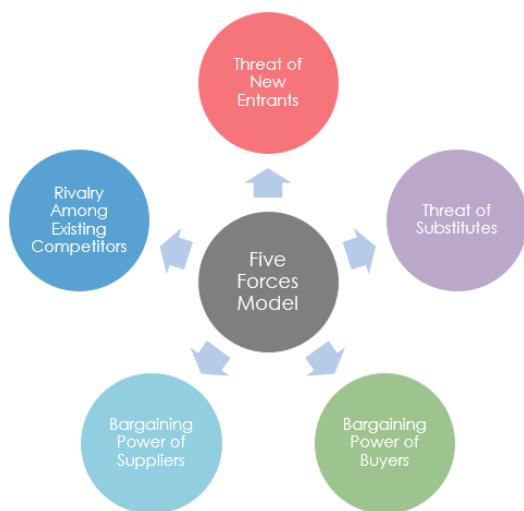
The goal of the Project is to analyse if there is a market in Minas Gerais for products made of organic household waste, such as compost and biogas.

## METHODS

Three different models were used that complement each other: 5 forces of Porter; SWOT Analysis and Business Model Canvas.

## RESULTS

### PORTER'S FIVE FORCES MODEL



## SWOT ANALYSIS - COMPOST



The Five Forces of Porter and the SWOT Analysis showed that Compost would currently be the best option for the state.

Minas Gerais is a state where agriculture is very expressive, there is a vast number of farmers, rural producers and companies linked to agribusiness that could benefit from this product. In addition, the compost can be sold to Garden Centers and rural product stores, which can be used for residential gardens, such as in schools, business and municipal gardens. Despite that, the compost market can be considered of small scale, there is not a large number of companies working in this segment. Synthetic fertilizers are more used and better known among consumers.

## THE SUSTAINABLE BUSINESS MODEL CANVAS

<b>Key Partners</b> Farmers Garden Centers Raw Material suppliers Government • Secretary of State for the Environment and Development. Sustainable - SEMAD. • State Environmental Foundation - FEAM Labs	<b>Key Activities</b> Collection Transportation Sorting Decompost Testing Packaging  <b>Key Resources</b> Machinery - Infraestructure Group of Specialist • Biologist • Environmental engineer Land Resource Marketing	<b>Value Propositions</b> Promoting good quality to the soil  Save money (less expensive than artificial fertilizers)  Soil structure improvement	<b>Customer relationships</b> Direct contact - In person, Telephone, email Farmer to Farmer Discounts and partnerships  <b>Channels</b> Direct contact - Telephone, email Garden Centers and stores Outdoor fairs	<b>Customer segments</b>  City hall Farmers Local Population Universities
<b>Cost Structure</b> Transport Labour Machinery Quality test Utilities + process Storage		<b>Revenue Streams</b> Pack of X Kg of Compost		
<b>Eco-Social Costs</b> Packaging residual Testing residual Change of Machinery		<b>Eco-Social Benefits</b> Promoting circular economy Adding value to waste Less amount of waste to Landfills		

## CONCLUSION

Investments on organic compost would lead to notably benefits, such as being less aggressive for plantations, productions local territory, improvement of the soil quality. In addition of being a sustainable option for the re-use of the waste, promoting circular economy.

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