ETHOS Coconut Oil Extraction Optimization

Thomas Bennett

Advisor: Candida Crasto

Introduction

What is Virgin Coconut Oil?
- No industry standard
- Clear and edible
- Extracted from the meat of a coconut through various methods

Uses of Virgin Coconut Oil?
- Positive health effects
- Hair/Skin moisturizer
- Cooking
- Soap

Extraction Process

1. Break open and drain the coconut
2. Grind the copra and mix with cold water
3. Manually extract the oil from the liquid mixture
4. Let a natural separation process occur

Optimization Ideas

- Create technology to replace manual labor
- Add a heat source
- Vary the ratio of water to coconut milk
- Vary the grinding time of the copra
- Storage time of whole coconuts

ETHOS to Dominica

Why coconuts?
- Optimize production of a small scale virgin coconut oil extraction process
- Current state of the process is not ideal
- Improve safety conditions for workers
- Cassava Bread project

Global Value

Approximately $1.5 billion in annual sales

References