

ENTERPRISE DEVELOPMENT FOR PHILROOTCROPS FOOD PRODUCTS

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ABSTRACT

This research-cum-extension project was conducted in order to refine selected food product technologies developed at the PhilRootcrops in terms of product-process optimization, and to establish the system that will ensure sustained production and profitability. The first year of implementation tested the system for *pinoy fries* and *cassava chippy* as the initial consumer tests figured higher potential as to salability and profitability. The "process approach" was applied using the concept of continuing improvements based on feedback from the market and processor-clientele. The implementation components included raw material sourcing, product-process prototype production, promotion and marketing, financial management, and monitoring.

This initial phase generated substantial information to prepare the business plan for *pinoy fries* prospective entrepreneurs. The *pinoy fries* and *cassava chippy*, had highly favorable consumer feedback, and proved easy to start despite limited operating capital and market in LSU campus and walk-in buyers. Substantial information was generated needed to prepare the **business plan** for a mobile- or stall-type *pinoy fries* operation, which included the technical requirements, minimum investment capital, marketing strategy, and backward linkage to raw material supply. Added social benefits derived are the skills acquisition and employment of three processing and selling personnel, increased income by rootcrop suppliers in Abuyog and station, the availability of nutritious snack food product, and the prospect for further improvement of enterprise operation.

INTRODUCTION

Food product research outputs at the PhilRootcrops such as *pinoy fries*, *pitsi-pitsi*, *yucca stick*, and others have yet to be commercialized. Neither were these pilot tested under realistic conditions; but mainly laboratory scale to determine their economic viability. The lack of information on critical aspects of commercialization like the minimum capital requirement, return on investment, and payback period, has deterred the adoption of these technologies. As a strategy to assess these, a multi-disciplinary team of researchers organized themselves to look into the basics and standards needed for a sustained and profitable business venture of selected rootcrop-based food products.

This project consisted of four components: the Raw Material Supply, Food Processing, Promotion and Marketing, and Financials. These were critical to generate information for improved product, process system, and business establishment. The information and experience become significant inputs to the training and operations of prospective entrepreneurs.

OBJECTIVES

Generally, the study aimed to establish basic information on the required technological and financial inputs leading to the commercialization of selected rootcrop-based food products. Specifically, it aimed:

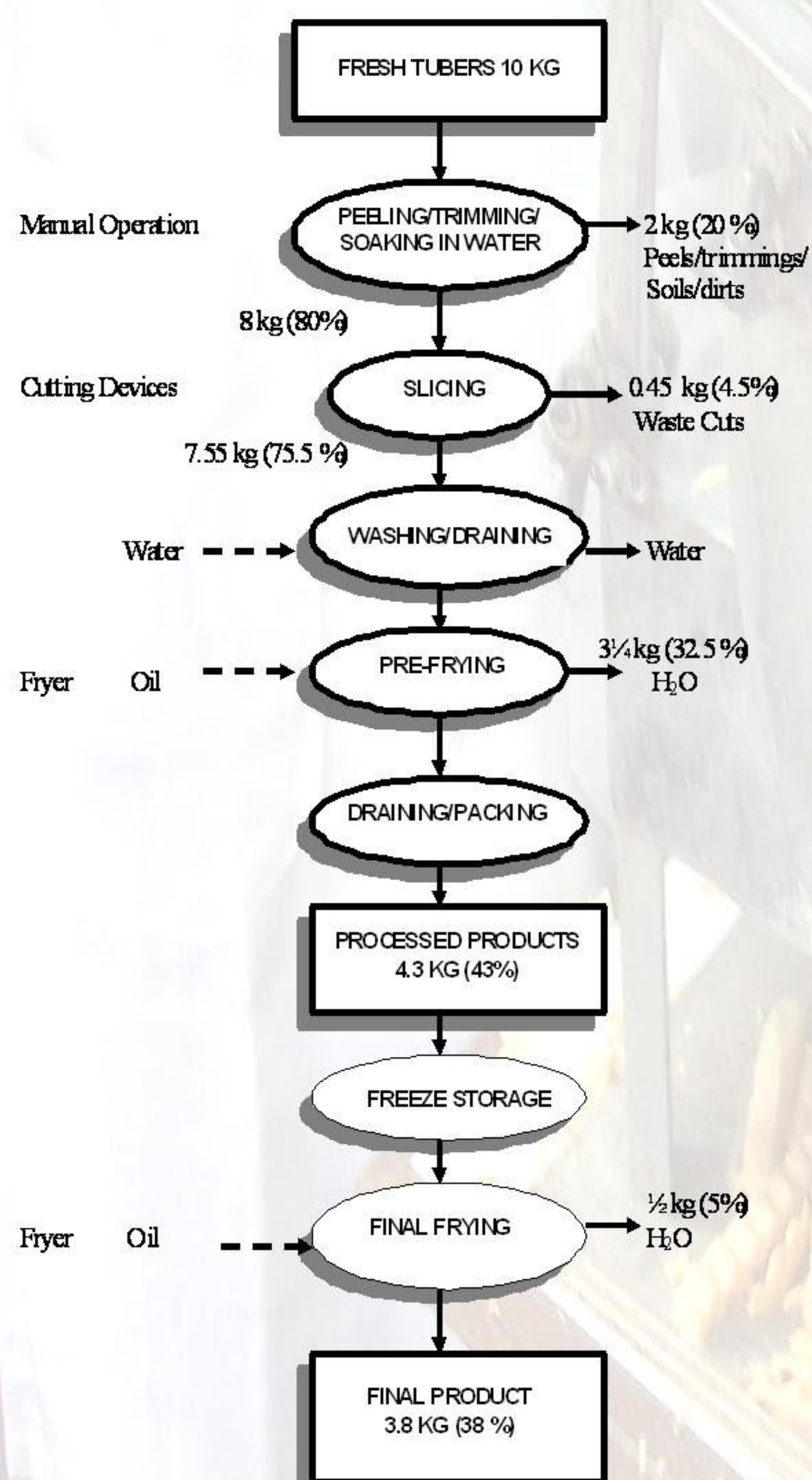
- To devise a mechanism for a sustained supply of raw materials.
- To standardize processes and formulation for quality food products.
- To improve strategies on product awareness, technology transfer arrangement, and marketing.
- To determine the profitability of the business enterprise.

FINDINGS (Phase 1-Pinoy Fries)

Technology Description

"Pinoy fries" is the local, more nutritious version of the commercial potato French fries, but corrugated in shape. Cheese, onion, garlic powder, or salt, is sprinkled for flavoring; no additives used. The tools and equipment needed in making *pinoy fries* include: paring knives, washing facility, slicing devices, deep fryer, thermometer, weighing scale and freezer.

PROCESS FLOW AND MATERIAL BALANCE:



Operational Requirements

- Minimum space requirement of 100m² for a production rate of 50-100 kg/day fresh roots input capacity.
- Operations Manager, a Cashier-Bookkeeper, and a Marketing Officer.
- Labor requirements: at least three food processors. In selling, at most two persons during peak sales in each food stall/cart.
- Backward linkages to raw material indicate that a farm area of 1/3 ha. or a 3,333 m² (e.g. 33.3 x 100 m) lot will be needed to supply sweet potato roots per month.
- Working Capital: 100,000 to 200,000 depending on mode of operation.

Social Acceptability and Benefits

- Business opportunity for micro-entrepreneurs.
- Improvement of the living conditions of sweet potato farmer-suppliers; additional market for their produce.
- Provide employment both men and women in the community as plant laborers, and retail-processors.
- Availability of affordable and more nutritious snack food rich in Vitamin A, C, and calories.
- No adverse impact to the environment since there is no processing activity that requires the use of harmful chemicals.

Market Strategy

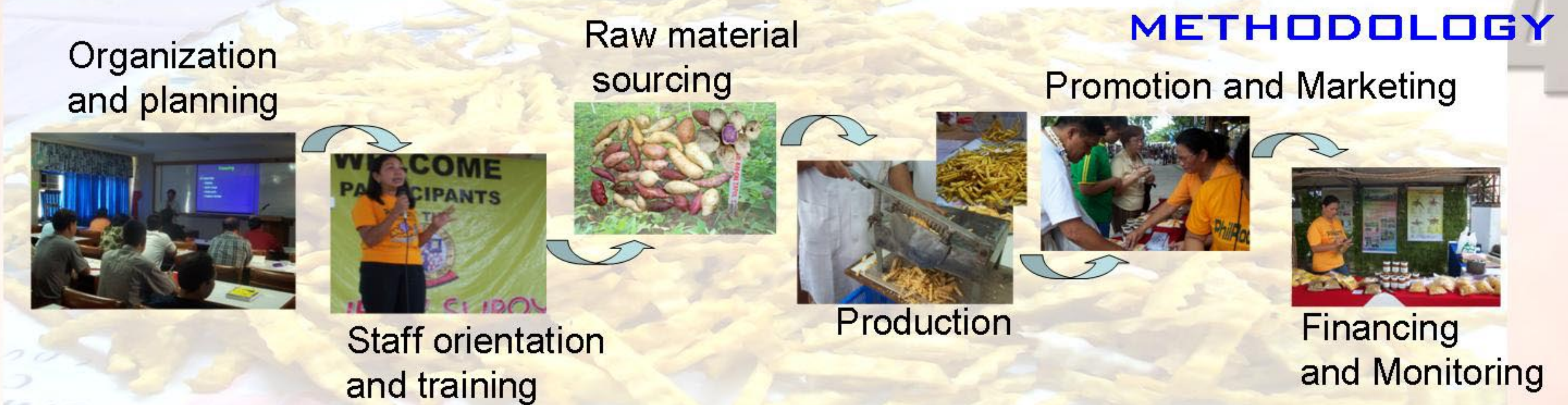
Pinoy Fries is sold through mobile carts, push carts, food stalls, fast-food chains, short orders. Suggested retail price is Php 10/60gm. Quality control involves the following:

- Use of the recommended varieties (PSB SP 17,22,24), of appropriate root maturity.
- Desired frying temperature of oil
- Processing time per step
- Continuous monitoring of product quality. Rejection for under-quality product.

Mode of Distribution by Business Type

Processor-Retailer: A central processor produces ready to fry (RTF) products in frozen form then, do retailing business too, in food stalls, food carts, canteens, restaurants, etc.
Pure Retailing: Retailers have to procure frozen RTF goods from a central distributor/processor then, finally prepare fried products for sale in their food stalls, carts, etc.

METHODOLOGY



SAMPLE FINANCIALS

A. Processing Equipment and Accessories

Equipment	Qty	Unit Cost, P	Life Span	Dep. Cost, P
Weighing Scale	1	200.00	10	16.00
Deep Fryer	1	6,000.00	10	480.00
Food Cart	1	50,000.00	10	4,000.00
Styrofoam-chestbox	1	400.00	10	32.00
Kitchen Utensils;strainer, trays, etc.		1,000.00	10	80.00
TOTAL		57,600.00		4,608.00

B. 3 - Month Operation

Particulars	Amount, P
Raw materials: RTF	182,400.00
Cooking oil, packaging, seasonings	12,660.00
Labor	25,920.00
Fuels	2,970.00
Other Expenses: Marketing	9,714.90
Total	233,664.90

C. Working Capital

Particulars	Amount, P
Processing Equipment	57,600.00
3-month Operation	236,664.90
Total	294,264.90

D. Economic Analysis

Capital Requirement, P	294,264.90
Net Income per month, P	42,711.70
Payback Period, months	6.89
in terms of year	0.57
Benefit-Cost Ratio	0.54
ROI	54.14%

CONCLUSION AND IMPLICATIONS

- Sustained supply of specified raw material proved critical in the continuity and efficiency of business operation.
- Product quality control is maintained by following the right variety with appropriate maturity, and the standardized process.
- Marketing strategies tried out to be effective included price, product presentation, mode of selling, positioning near consumption centers, considering the competing products, packaging and labeling.
- Identified the essentials of commercialization such as the critical factors in the supply chain, marketing strategies as well as providing substantial information for a business plan.
- Improved the product-process technology through optimization in operation and equipment efficiency.

