

## **CONSTRAINTS TO SMALL-SCALE PRODUCTION AND MARKETING OF PROCESSED FOOD PRODUCTS IN ZIMBABWE- The Case of Fruits and Vegetables.**

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### **Abstract**

Despite the widely publicised ‘success’ stories about Zimbabwe’s agricultural production in the 1980s, there is still food insecurity, extreme poverty, hunger, and malnutrition at household level. Rural households in Natural Regions IV and V hardly produce above their subsistence levels owing to poor soils and erratic rainfall patterns. It is becoming increasingly apparent that small-scale farming on its own rarely provides a sufficient means of survival in many areas of rural Zimbabwe. Previous studies suggested that small-scale food processing activities represent a potential source of livelihood for the poorest people in Sub-Saharan Africa. However, a number of factors may constrain the ability of small-scale enterprises to effectively manufacture and market processed food products. In collaboration with the University of Reading, The University of Zimbabwe conducted a series of case studies to gain a more detailed understanding of the requirements for small-scale enterprises to effectively manufacture and market processed fruits and vegetables. The case studies involved in-depth interviews with small-scale horticultural producers/ processors. A total of 26 case studies were undertaken throughout the eastern districts of Zimbabwe. The enterprises were involved in the processing of dried fruits, dried vegetables, and fruit jams/jelly/marmalades. The case study research suggests that small-scale fruit and vegetable processing has the potential to provide improved returns to horticultural producers as long as appropriate processing equipment, processing skills, packaging material, and marketing information are made available.

Keywords: Food processing, dried fruits, dried vegetables, fruit jam products, food safety

### **Introduction**

Small-scale farming in Zimbabwe rarely provides sufficient means of survival in many rural areas. Most rural households depend on a diverse portfolio of activities and income sources. Some households are looking towards activities such as food processing as a means to enhance their livelihood.

Previous research suggests that small-scale food processing activities represent a potential source of livelihood for the poorest people in Sub-Saharan Africa. Food processing may increase the value of crops to poor farmers and thus yielding higher returns, expand marketing opportunities, improve shelf-life and furthermore overcome seasonal and perishability constraints. Adoption of improved and validated processing technologies, good standards of quality and hygiene may assist small-scale horticultural producers overcome some of the problems experienced in the fresh produce market such as lack of market information and market integration, reliance on spot markets, transport constraints and wastage. By processing some or the entire crop, producers have

an alternative or additional means of marketing their produce. This is important given that post-harvest losses of horticultural crops range from 30 – 40%, and as a result limit smallholder access to higher value markets in urban areas. Even in circumstances where small-scale producers can access such markets, returns on unprocessed products are typically low. Small-scale agro-processing activities may also contribute to socio-economic development through improved incomes, employment, food availability, nutrition and social and cultural well-being. However, research has shown that a number of factors may constrain the ability of small-scale enterprises to effectively manufacture and market processed food products. On a macro level, many policies implemented by governments have served to hinder the development of small-scale industries. At the firm level, limited access to credit, lack of appropriate technologies, a lack of technological capability, the unreliable supply of raw materials, a lack of management know-how and poor quality control amongst other things have served to constrain the development of small-scale industries. These problems apply in many developing countries and are particularly applicable in Zimbabwe.

A case study research was undertaken with small-scale producers/processors of horticultural crops in order to gain a more detailed understanding of the requirements for small-scale producers to effectively manufacture and market processed food products. The main areas of interest included considering the constraints faced in producing or procuring raw materials, processing the crops and accessing markets for finished product(s).

The specific objectives of the case study research were:

1. To identify the necessary requirements for small-scale producers/processors to effectively manufacture and market processed products based on horticultural crops and hence access the potential market for processed food products.
2. To identify the potential externalities associated with the processing of horticultural products in the study areas.
3. To identify constraints that might prevent small-scale producers of horticultural crops from manufacturing and marketing processed products effectively

### **Approach**

In collaboration with the University of Reading, the University of Zimbabwe conducted a series of case studies in the eastern districts of Zimbabwe. The study areas had different geophysical characteristics, degrees of infra-structural development and social dimensions. The study examined the specific requirements of existing small-scale producers/processors in terms of procurement of raw material, appropriate processing technologies, quality control procedures, market information and marketing effort. The impact of externalities was addressed by assessing aspects of food safety and hygiene. The constraints to be addressed included technical, financial, infrastructural, institutional, social and informational factors.

The case studies involved in-depth interviews with small-scale horticultural producers/processors using a standard interview guide and checklist. The interview guide was developed on the basis of results from previous research work.

### **Results**

A total of 26 case studies were conducted throughout the eastern districts of Zimbabwe. Seven case studies were carried out in Mashonaland East Province in the districts of Murehwa (5 cases), Marondera (1) and Mudzi (1). The remaining 19 cases were compiled in Manicaland Province across the districts of Nyanga (12), Makoni (1), Chimanimani (4) and Chipinge (2). Manicaland province is the largest producer of fruits and vegetables followed by Mashonaland East in vegetable production and Mashonaland Central in fruit production. Of all the case studies

conducted, 15 enterprises were involved in the processing of fruit jam /jelly/marmalades, 14 were involved in drying of vegetables and 5 dried fruits. Only two enterprises processed vegetable soups, chutney and piccalilli.

#### Socio-economic constraints:

Small-scale processors located in the tourist zones of Nyanga and the Eastern Highlands lost business due to the general decline in tourism in the country. Processed food sales at roadside kiosks dropped drastically since 2000 due to reduced the volume of traffic on the main roads as a result of erratic supplies and the increased price of fuel.

Fruit and vegetable production declined due the high costs of production (seed, chemicals etc). The limited volume of fruit and vegetables available on the market is too expensive for the small-scale processor to make meaningful business.

Prices of basic commodities that are essential for food processing such as sugar, salt etc. have increased sharply resulting in highly priced processed products. Consumers are now prioritising on essential basic foodstuffs and cutting down on luxuries such as fruit jam.

#### Crop production and management constraints

Small-scale producers have limited access to fertile land and irrigation water. Some producers have embarked on stream-bank cultivation where access to water is much easier. Crop production is further constrained by the prevalence of pests and diseases such as aphids and mildews that cause losses of up to 50%. However, most of the producers demonstrated a good knowledge of the common pests and diseases.

#### Technological constraints

Most of the interviewed processors carried out their food processing activities in their usual home kitchens. Preparation of raw materials (grading, peeling, and cutting) was done by hand using ordinary kitchen knives. The ordinary household pots (clay, enamel, and aluminium) were used for cooking jam. Drying of vegetables was predominantly by spreading out cut and blanched pieces in thin layers on flat surfaces. Small-scale processors lacked storage facilities to keep raw or semi-processed products for use in the off-season period.

#### Packaging

Accessing appropriate packaging material for processed products was identified as a major constraint especially for those enterprises with a market focus. In December 2000, Zimbabwe Glass Industry Limited, the country's leading glass container manufacturer, suspended production citing economic problems. Jam manufacturers who relied on the company for jam jars were left at odds. Some enterprises have resorted to using recycled glass jars. However, they were quite aware of the food safety and hygiene concerns of this practice. Some had substituted glass jars with plastic peanut butter jars knowing very well that these were not recommended for jam, as they could not be easily sterilised.

#### Marketing

Marketing of small-scale processed food products was found to be largely informal. Enterprises located in rural areas relied on demand from local informal markets, which are small and unreliable. Demand was erratic and seasonal (only when fresh products were not available). The study established that there was a general lack of marketing skills and information. Processors had little knowledge of their customer preferences regarding product range, taste and packaging for example. There was no evidence of deliberate effort to promote the products. Lack of transport was often cited as the hindrance to going out and market the businesses.

### Training

A few of the producers/processors interviewed had received formal training in food processing. In the majority, processors relied on informal training, informal sources of information and recipes found in magazines and books. The few who had received training in food processing generally lacked skills in product marketing.

**Table 1.** Training classification of case study participants

Enterprise category	No. of Cases
Produces and processes horticultural crops and has received formal training in food processing	6
Produces and processes horticultural crops and has <b>not</b> received formal training in food processing	15
Processes (but does <b>not</b> produce) horticultural crops and has received formal training in food processing	2
Processes (but does <b>not</b> produce) horticultural crops and has <b>not</b> received formal training in food processing	2
Not known	1

### Legal requirements

It was established that all processors were aware of the general food safety requirements and the hygienic practices to be adhered to in the industry. Attention to hygiene and basic food safety procedures was found to be very limited among all informal enterprises. Knowledge of the regulations and legislation governing food safety and hygiene issues was only evident among those processors who marketed their product through formal outlets. The required cost of meeting the Standard Association of Zimbabwe regulations was viewed by the more informal processors as prohibitive.

### Working capital

Various processors interviewed indicated poor cash flow as a constraint. The cash problem was among other factors caused by bad debts from clients.

### **Discussion**

Dried fruit production, processing of dried vegetables and jam processing have potential to provide small-scale producers improved returns to horticultural production in Zimbabwe. However, the country's agricultural sector is currently feeling the effect of the serious economic and political problems. The country is suffering from severe fuel and electricity shortages, high inflation (above 100%) and unemployment (above 50%), an acute shortage of foreign exchange, high agricultural production costs and a sharp decline in tourism revenue that has dropped by more than 40% in the first six months of 2001. The escalating costs of basic food commodities prompted the Government of Zimbabwe in early 1999 to introduce price controls on basic food items. However, the price controls were lifted six months later and this led to a sharp rise of prices. The increase in the price of sugar for example had a direct effect on the cost of processing fruit jam.

In October 2001, the Government of Zimbabwe once again instituted price controls. Unfortunately this time around the move led to erratic supplies and general shortage of some controlled products such as sugar, cooking oil, salt margarine etc. Imported preservatives such as

pectin became just too expensive for jam processors due to the shortage of foreign currency, high parallel exchange rates and inflation.

The shortage of fertile land and water for irrigation has made it impossible for small-scale producers to increase and/or diversify production of fruit and vegetables. Stream-bank cultivation, which is quite rampant, is an illegal practice that puts the producer at risk of prosecution.

Lack of appropriate food processing equipment and cold storage facilities hinder the ability to process large volumes of product over a longer period. Horticultural crops are highly seasonal and perishable. For one to continuously process fruits and vegetables there has to be some storage facilities. The general lack of cold storage facilities among small-scale processors implied that they could only process vegetables and fruits that were in season at a particular time. Without appropriate storage facilities therefore meant that small-scale processors could not maintain their customers.

The use of basic household utensils was limiting production capacity. Jam processors for example, often used inappropriate pots and wood fire for cooking. Cooking over wood fire made it difficult to regulate temperatures resulting in poor quality products.

The traditional method of sun drying of vegetables was found to be relatively slow thereby exposing the product to bad weather conditions, insect infestation, enzymatic reactions, micro-organism growth, mycotoxin development and dust contamination.

Lack of formal training acted as a barrier against confidence in marketing food products even though the quality could be good

Given the period in which the case study research was conducted, it is suffice to say that the constraints faced by small-scale food processors are quite critical. Various points of intervention such as development or acquisition of appropriate processing equipment, provision of processing skills through training, provision of appropriate packaging material and marketing skills and information should be made available for the small-scale food processors to break into the formal markets.

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