Report on the Study on Processed Indigenous Vegetables (IV's): Mutare city and its Peri-urban areas
A study undertaken as part of activities for the CPHP-funded IV's project Langton Mukwereza
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August 2002

#### **Introduction**

This report is part of a study that was also undertaken at Bulawayo markets and a smallholder farming area where the cultivation and processing of IV was noted as considerable through an earlier study. Checklists were developed and used to guide the data collection process amongst various stakeholders.

The survey team interviewed buyers and managers of formal wholesalers and supermarkets for their views on the importance of IV's (fresh and processed) in their business. From the major producing areas, the team wanted to establish the methods used in processing the various IV's, the period of processing and trade (months) as well as the significance of that trade (volumes, value). Through interactions with various stakeholders, the interviewing team assessed the status of the market for processed IV's as well as exploring opportunities for further expansion.

### A. <u>Survey Methodology</u>

The general methodology used in the study was that outlined in the proposal submitted to the IV project Principal Investigator at NRI. Three checklists (appended to this report) were used to collect information on processing, storage, handling, selling and consumption of IVs. Observation was also used in the data and information collection exercise. All interviews were conducted at trading places or on farms where IV's were produced and / or processed. Three officers from the Ministry of Agriculture collected the information over two periods of slightly over a week each. This was done not to accommodate other duties.

Institutions/people to whom the checklists were administered included the following:

- Producers/processors of IVs
- Formal wholesalers- Interfresh and Manica Produce
- Informal wholesalers at Sakubva market
- Vendors/traders
- Chain stores like TM and TNT and small shops at BP and Shell service stations

Appendix I below presents the names and designations of people whom the survey team interacted with on the study.

#### B. Study Area and time of the survey

The study was carried out in Manicaland province covering the city of Mutare and its peri-urban areas where IV's are produced and / or processed. This is a follow up to a **Socio-Economic Survey on Production, Marketing and Consumption of Indigenous Vegetables (IVs) in Urban and Peri-urban areas** that was undertaken through the CPHP-funded IV project just over years ago. Appendix II below presents the schedule of data collection activities in the field.

A few issues on each category of stakeholders consulted:

- **Sakubva market** has about 30 traders/vendors. The survey team interviewed 11 (about 35%) of these traders<sup>1</sup>.
- Three formal horticultural **Wholesalers** supply Mutare with produce. These are Manica Produce, Interfresh and Katope. Two of them are based in Mutare while the third (Katope) is based in Harare. Interfresh supplies the TM and TNT supermarkets. Katope supplies OK supermarket(s) while Manica Produce supplies BP and Shell shops and other selected small shops. The survey team interviewed buyers and managers from Interfresh and Manica Produce.
- Interviews were held with the major **Supermarket** and **Service station** staff in Mutare. These include TM, OK and TNT. BP and Shell service station shops were also visited and interviews held.
- The team also visited **Zimunya communal area** (Dzobo area) and Weirmouth farm. Weirmouth farm, Zimunya, Buhera and Marange are areas mentioned by traders (both formal and informal) as sources of processed IVs.

The rest of the report summarizes observations and responses from interviews conducted with Producers/ Processors, Wholesalers/ Vendors/ Traders, Non-Governmental Organizations and Consumers.

# C. Producers/Processors

### 1. Interview with Mr. Zulu, Weirmouth Farm

Weirmouth farm is situated about 10 kilometres southwest of Mutare. This is largely a horticultural farm. It produces cabbage, cauliflower, *runi*, broccoli, rape, *muboora*, *mova* and black jack. The farm processes cabbage and rape. The IVs currently produced at Weirmouth are all sold fresh<sup>2</sup>. The demand for *runi* this last season was so high that at the time of visit the farm manager (Mr. Zulu) had collected some seed in preparation for the 2002/2003 cropping season. The area to be put under *runi* will be more than that for last year.

There are plans at Weirmouth to produce cowpeas *(nyemba)* for processing. This is a response to requests from consumers through the marketing chain (wholesalers and supermarkets).

The farm is currently processing cabbage. On average it processes between fifteen and twenty kilograms of cabbage per week. The processing is done by old women who are part of the farm's workforce. The manager believes that the old women process the cabbage better than young women due to the experience they have gained in the processing of both exotic and indigenous vegetables.

<sup>&</sup>lt;sup>1</sup> During the survey, the team took some photographs. Some of the photographs are included in this report.

<sup>&</sup>lt;sup>2</sup> The fact that all the IVs are sold fresh shows that demand is always outstripping supply.

The processors use basic equipment of pots and knives. The cabbage is par-boiled and tomatoes (over-ripe) are added<sup>3</sup>. The cabbage is then sun-dried on plastic paper. The dry product is then heat-sealed in plastic packets for the market (Interfresh and Manica Produce wholesalers).

The processed vegetables are sold to wholesalers like Interfresh and Manica Produce as soon as they are ready. With the demand for the vegetables is so high, the farm does not store any processed products.

According to Mr. Zulu consumers prefer *runi* (fresh) most. Amaranths (*mova*) and then *muboora* are next on the preference list.

#### 2. Zimunya Communal area producers/processors

Dzobo is an area in Zimunya communal lands. It is situated some thirty to forty kilometres south of Mutare town. A tarred road with about four to five kilometres of dirty road connects it. The dirt road is in a fairly good condition. There are commuter omnibuses that use the highway and a 76-sitter bus that uses goes through Dzobo area<sup>4</sup>.

The team decided to visit Dzobo area after it was mentioned by vendors/traders (at Sakubva market) as one of the sources of processed IVs. At Sakubva market, the traders said that they buy processed IVs coming from Zimunya (Chigodora, Dora and Dzobo), Buhera and Marange. The team interviewed four producers/processors at Dzobo. All the processors interviewed were women. In one case one woman was interviewed in the presence of her husband. It was observed that some processors also buy some IVs from other processors in the area for resale in Mutare<sup>5</sup>.

The producers/processors interviewed grow *runi, nyemba*, okra and amaranths in addition to a number of exotic vegetables. They process *runi, nyemba*, okra and *muboora*. Two major reasons were given for processing these IVs. These are:

- The processed IVs are stored for use as relish during times of green vegetable shortages. This is usually during the months of September and October.
- The farmers get some money through selling the processed vegetables in Mutare and at times (with some processors) Bulawayo. The money assists the farmers in paying school fees and buying food and clothes for the family.

The IVs are processed during the months of November to March depending on the type. For example farmers stop harvesting cowpea leaves as soon as the plant starts flowering.

<sup>&</sup>lt;sup>3</sup> The tomatoes that are used in the processing of cabbage are those that are not suitable for the produce market. In most cases these will be over-ripe tomatoes.

<sup>&</sup>lt;sup>4</sup> The big bus goes to Mutare and back at least three times a day.

<sup>&</sup>lt;sup>5</sup> The processors buy from people who are either too old to be going to Mutare to sell the IVs or they are unable to raise bus-fare for the trip.

The IVs are processed in almost the same manner with some variations by crop. Young tender leaves are plucked and for cowpeas, the leaves are allowed to stay overnight in a cool place. The leaves are then rolled (*kusukuta*) using hands. This is done in order o soften them. This is said to improve the final quality of the processed *nyemba*. The processors do not add anything to the IV as they par-boil. Some said they do not add even salt as it has the tendency of absorbing moisture during storage.

The IV is then par-boiled and spread to dry in the sun. Some processors dry the leaves on plastic paper while others spread the IV of flat rocks.

When *nyemba* is about to dry it is rolled again and then left to finally dry. In some cases the drying can take the whole day depending on the weather conditions. Under cloudy conditions the drying can take longer. Under continuous cloudy conditions, the quality of the processed vegetables is affected as drying takes many days.

After drying (depending on demand of the product) the processed IV can go straight to market or it can be stored. Storage is usually practiced when the price at the market is low. It is also done when the farmer is bulking his product for the market. Sending produce to market in bigger volumes (after bulking up) is said to reduce costs.

The processed IVs are usually stored in sacks. Processors hang the sacks in the storage rooms. This is because the processed vegetables quickly pulverise if the containers are heaped one on top of the other.

Some producers also buy processed IVs from other local processors. Some of the buyers complained that some sellers sell them produce-

- That is not well prepared (processed)
- That has soil particles
- That is from hardened leaves
- That is not well rolled (*kusukutwa*)

The producers raised problems that they encounter during processing of IV's:

- The processed IVs do not dry well if it rains or it is continuously humid and overcast.
- Lack of buyers who are prepared to pay a good price for their produce. The processor's basis for arriving at the price of product varied from: the general price increases of grocery items, the cost of produce (if processor bought part of the product from other processors) to market information about price of product at other markets.
- Transport that is suitable to ferry product to market without incurring losses through pulverisation. Processors prefer to use buses that have roof-racks rather than those with a boot.
- Theft of product at the market
- At times low prices due to too much produce at the Sakubva market.
- They say there is only one outlet for their produce (the Sakubva market)

According to the processors, vendors at the Sakubva market want processed *runi* and *nyemba* most. From the four processors interviewed two of them ranked *runi* the most preferred followed by *nyemba* while the other two ranked *nyemba* the most preferred followed by *runi*.

Processors sell their IVs to traders during different times of the year. This is largely a result of pressing cash needs, quantities that one has, availability of product, the IV that one specialises in and the price that traders pay for the product. The table below shows the different times in the year that the interviewed processors sell their product.

Table 2. Thirds of ye	
Processor	Period of selling Product
Farmer 1	November to March
Farmer 2	February to August
Farmer 3	June to September
Farmer 4	January to August

 Table 2: Times of year when IV's are available

Source: Processed Indigenous Vegetables survey, 2002

The price of processed IVs at the market is arrived at through a number of ways. These include the following;

- The supply and demand of the product on the market
- Information gathered from other sellers at the market
- Negotiation with buyers at the market. The processor uses the price he/she would have bought the product for from other processors.
- Processors lack information on what the buyers want. Thus they want buyers/traders to tell them their needs
- They want traders to pay reasonable prices for their produce.

# D. Wholesalers and Vendors/Traders

# 1. Vendors/Traders

Sakubva market has about thirty vendors/traders who sell indigenous vegetables. The majority of these vendors are female. The survey team interviewed eleven vendors. These comprised nine female and two men.

#### a. <u>Source of produce</u>

Most of the traders buy processed IVs from producers/processors. These producers come from areas around Mutare. These sources of IVs include Zimunya communal area (Dzobo, Dora, Mabiya and Chigodora), Marange and Buhera. The producers go to sell their vegetables at the Sakubva market. Traders at Mutare market sell a variety of IVs. These include *runi, nyemba, guku*, okra, *muboora* and mushroom (*howa*). During the rainy season the IVs are sold fresh while offseason the processed ones are sold. The same traders also sell processed cabbage, rape and covo. Some of the processed exotic vegetables are bought from producers with the remainder being processed at the market. The exotic vegetables processed at the market are usually fresh vegetables that would have failed to sell.

The quantity of processed exotic vegetables on sale is usually less than that of IVs.

In addition to processed IV and exotic vegetables, some traders stocked processed (par boiled and dried) mopani worms (*madora*) and dried mushroom.

Vendors at Sakubva market tend to specialise in their operations. There are some that deal with fresh vegetables, others potatoes while some may specialise in yams or pottery. The vendors who are into processed vegetables had the following reasons for taking IVs:

- Processed IVs do not go bad quickly
- Some vendors grew up in areas where the processed IVs are produced
- The location of some stalls at the market dictates what type of product to sell. Some stalls are in 'high traffic' areas<sup>6</sup> while others are in low traffic areas.

#### b. <u>Storage</u>

Most of the processed IVs are stored in heissen bags or containers made out of reeds (*tswanda*). It was observed that some of the vegetables spend the whole day not covered. This exposes the product to dirt and dust. The IVs are kept at the market while some can be at home depending on quantity one has. Care needs to be taken when storing processed IVs. Sacks should not be heaped one on top of the other since the product can easily pulverise under pressure.

The storage facility should be dry since the presence of moisture results in moulds on the product. The situation worsens if salt is added to the vegetables during processing.

#### c. <u>Buyers</u>

Buyers of processed IVs are both male and female, rich and poor, the ill and pregnant women. Buyers of processed IV's are from all income groups (rich and poor).

#### d. Selling periods and prices of produce

Availability of IVs on the market can be right through the year depending on the quality of the rainy season. For example, the 2001/2002 cropping season was generally bad. As a

<sup>&</sup>lt;sup>6</sup> High traffic areas are those areas that a lot of consumers pass through. Some vendors decided to sell processed vegetables because their stalls are located in 'low traffic' areas. That is the probability of getting sales is lower than that in high traffic areas.

result very little IVs were produced. In such years IVs can be available from April to around October/November. The IVs have a better price when the season is not very good. The price peaks up around September/October every year. This is the time when green vegetables are not readily available on the market.

IVs compete on the market with fresh exotic vegetables. The fresh exotics are readily abundant from June/July to about August. During this period there is not much of IVs sold.

The price of IVs also goes up in response to the demand of the product. The selling price of processed IVs is dependent on the following;

- The demand and supply of the product on the market. Supply on the other hand is dependent on the quality of the rainy season. A good rainy season usually results in a lot of IVs on the market and hence lower prices.
- The cost of the product (processed IVs); that is how much vendors/traders pay for the IVs. The vendors aim for a 100% profit when selling the IVs.
- The time of season. The price of processed IVs is usually highest around September/October when there are few fresh exotic and indigenous vegetables on the market (substitutes).

# e. <u>Packaging and quantities sold per year</u>

Almost all traders/vendors at Sakubva market sell processed IVs using small plates. The traders do not pack the product in plastics of plain paper. Two reasons were given for doing this:

- i. Plastic packets are expensive; as a result they use them to pack products like fertilisers and sugar.
- ii. Consumers expect to be given some extra of the product, that is, over and above the purchased quantity (*mubhasera*). This comes as a 'thank you for buying from me'; a token of appreciation. Most consumers almost expect this. As a result sealing the product in plastic means the trader cannot give the consumer *mubhasera*. This is seen as a way of chasing away customers.

Some traders pack the purchased product in plastic in the presence of the customer. It was observed that some of the plastic packets used are not very clean.

The vendors interviewed sell different quantities of processed IVs per year. The quantities each vendor sells is dependent on the quality of the rainy season and whether one has managed to get a buyer who wants to export the product to South Africa. Buyers who sell products in South Africa purchase the IVs in big volumes. The quantities sold per year ranged from one and half to six bags per trader.

# f. <u>Quality of product and buyer/seller relationships</u>

There are some attributes that traders/vendors look for when assessing the quality of processed IVs. These include the following:

- The product should be rolled (*kusukutwa*) before and during processing

- The product (processed IV) should be from tender leaves
- The processed vegetables should be free of foreign material like twigs and sand particles
- The product should not be pulverised

Processor/trader relationships are a function of the quality of product a processor sells. Traders have and want to have relationships with processors who sell high quality IVs. This is because they (traders) want to continue buying high quality product that sells fast. Some traders however, said that they do not have any marketing relationships with sellers. They buy the IVs from whoever has the product they like.

#### g. Growth of the processed IV industry

Most traders interviewed were of the view that there is going to be growth in the processed IV lines. This is attributed to the fact that medical doctors recommend some patients to take IVs in their diets. The patients are those suffering from high blood pressure and HIV/AIDS related illnesses.

At times, processed IVs are relatively cheaper compared to exotic vegetables. As a result some households are buying more of those products than some time back.

Some traders sell the processed IVs to other traders who have markets in Bulawayo and South Africa. These vendors buy the product in large quantities and this has raised the demand for processed IVs.

Some formal shops (TM, TNT and BP outlets) now sell processed vegetables (exotic). Currently they sell processed exotic vegetables (cabbage). Discussions with shop managers revealed that some consumers also ask for processed IVs. There is therefore need to link processors and wholesalers that sell horticultural produce to formal shops. This is likely to increase the demand of processed IVs. There is need to conduct market research in order verify the demand for IVs from consumers that buy from chain stores.

The formal shops currently sell fresh IVs like runi and muboora when in season.

#### h. Problems

Traders/vendors of processed IVs face a number of problems in their operations. These include the following:

- Processors/producers at times sell low quality processed vegetables
- Pulverisation of the vegetables during transportation or whilst in storage
- Sellers expect too high a price for their produce
- Some of the vegetables are eaten by rats whilst in storage
- Some producers over-boil the vegetables during processing. This results in low quality products.
- Some of the processed IVs have soil particles and dirt.

### i. General comments on traders/vendors

The survey team observed that there is a general failure by traders to observe food safety measures. Edible food (peppers, processed IVs, beans) is displayed on the same platform (shelf) with snuff, fertilisers and tobacco. In one case, a trader who was repackaging fertiliser into smaller packets literally switched to selling processed IVs without washing her hands.

# 2. Interfresh Wholesalers<sup>7</sup>

Interfresh is one of the wholesalers that sell horticultural produce in Mutare. It has other branches in Victoria Falls and Bulawayo with its head office in Harare.

The company sells a wide range of vegetables. Some are sold fresh while others are processed in some form. In the past few years, the company started selling fresh IVs to its customers. These include *runi, muboora* and *mowa*. The company also sells mopani worms (*madora*).

Currently the company sells processed cabbage and rape. The processed cabbage and rape come largely from a commercial farm (Weirmouth). Although the company wants to try selling processed IVs, the product(s) has not been available. In other words there are no producers that have tried to sell processed IVs to Interfresh.

Interfresh has two groups of suppliers. There are suppliers that bring produce and they want to be paid the same day. The other group of suppliers is called scheduled growers. These farmers operate on a thirty-day account. In other words they are paid after every thirty days.

Interfresh develops relationships with its scheduled growers. This is because of the following reasons:

- The farmers supply the company regularly and
- They can be easily contacted as most of them have access to telephones and they visit the company premises regularly.

The price of processed cabbage and rape does not fluctuate as much as that of fresh vegetables. The Interfresh manager attributed this to the fact that processed vegetables can be stored for a longer period than fresh produce. The price of the processed vegetables goes up during the months of September and October when there are few fresh vegetables on the market.

Interfresh believes that there are opportunities for smallholder farmers to process IVs for formal wholesalers. Wholesalers want these farmers to produce a variety of the IVs and they also want a certain level of hygiene to be attained in the processing.

# 3. <u>Manica Produce wholesalers<sup>8</sup></u>

<sup>&</sup>lt;sup>7</sup> The survey team talked to. Mr. S. Zharare. He is the Procurement Manager for the firm.

<sup>&</sup>lt;sup>8</sup> The survey team talked to Mr. Zviuya (the buyer) from Manica Produce.

Manica Produce wholesalers sell horticultural produce in Mutare and the surrounding areas. It sells both fresh and processed vegetables. The vegetables include almost all exotic produce (depending on season) and okra. Okra is sold fresh only. This is because of unavailability of the processed okra.

The wholesaler sells processed cabbage ( with tomato) and rape from Weirmouth farm. This line is currently on trial. At the time of interview, the company bought between five and ten kilograms of processed cabbage per week. These are packed and distributed to the retailers. Manica produce sells its products through retailers like the BP and Shell garage shops.

The company packages processed IVs in transparent plastics. The plastic pack has the Manica Produce logo and inscription only. The contents of the pack are not specified. The packaging is not very attractive and thus not appealing to customers.

The company also wants to try processed IVs on the market. These includes *nyemba*, *mova* and *runi*. However, the produce is not readily available. The unavailability of the produce may be related to the lack of information to the producers/processors about the availability of a market through formal wholesalers. The processors may not know the existence of this alternative marketing channel

Manica produce also feels that it can make more money from selling fresh *runi, muboora, mova* and *derere* than the processed lines. This is because many consumers ask more about fresh than processed IVs.

# 4. <u>Safire</u>

Safire is a Non Governmental Organisation (NGO) with an office in Mutare. The visit to this office was to find out whether the institution is involved in any initiatives related to the production and /or processing of IV's.

Safire is involved in Indigenous products but not vegetables. It processes traditional tea (*makoni*), jam from *masawu* fruit and baobab fruit juice/powder.

# 5. <u>Plan International<sup>9</sup></u>

Plan international is an NGO with offices in Mutare. It works in a number of districts in the province. These include Mutare and Mutasa districts. Some projects that the NGO is involved in are agricultural. In the year 2002, the organisation has planned to intensify horticultural production in some areas. However, it has no direct plans to be working in IV production or processing.

# E. Interviews with Retailers

<sup>&</sup>lt;sup>9</sup> Mr. Tauro from Mutasa district provided information to the survey team.

The survey team visited the following shops for interviews

- TM supermarket
- OK supermarket
- TNT supermarket
- BP garage shops (x2)
- Shell Select shop

The retail outlets were visited as a follow up to information supplied by wholesalers (Interfresh and Manica Produce) and producers (Weirmouth farm).

#### 1. <u>BP and Shell garages shops</u>

At the BP shops the team talked to Mrs. B Hagworth (the manager of the two outlets). These two shops get their horticultural produce from Manica produce wholesalers. The products get to the shops already packaged. The products found in these shops are mostly exotic vegetables and some of them are the 'ready to prepare' type. The shops also sell processed cabbage. The manager raised concern over the poor packaging and labeling of the processed cabbage. The only inscription is that of the name of the packaging company. There is thus room for improving the packaging and labeling of such processed vegetables.

Management recommends the units the products should be sold in and advises on the type of produce that is selling well. For instance, the manager recommended that Manica Produce packages Irish potatoes in one and two kilogram packs. This was a response to the needs of the target market that buys from these shops<sup>10</sup>.

The shops targets people staying on their own (single), small families (only two members) and travelers. The target market wants a little of each product and at times easy to prepare food. As a result, the manager had some misgivings on selling processed IVs in such shops.

At the time of the visit, there were about five packets of processed cabbage that had not sold for weeks.

#### 2. Shell Select

Shell Select does not sell both processed exotics and IVs. This is based on the assumption that the target market does not like processed vegetables.

There is need to carry out a market research to verify these assumptions.

#### 3. <u>OK bazaars</u>

<sup>&</sup>lt;sup>10</sup> Horticultural produce (vegetables mainly) is bought by people living on their own or as two. Most of such customers buy produce that they want to prepare all at once rather than store for the following day.

Katope (formerly FAVCO) serves the OK bazaars group of supermarkets. Katope is based in Harare. OK bazaars is still to try selling processed IVs in its shops.

# 4. <u>TNT supermarket</u>

TNT supermarket gets its horticultural supplies from Interfresh wholesalers. The supermarket sells most of the exotic fresh vegetables in addition to processed cabbage and rape<sup>11</sup>. It also sells (when in season) IVs like *runi, muboora, derere* (okra) and *nhungunira*. The fresh IVs are sold when available.

Consumers constantly ask about the availability of processed IVs in the shop. As a result, the supermarket is working towards introducing processed IVs. This might take some time as it has to discuss with its horticultural supplier (Interfresh).

The shop sells only about three by 300 gram-packets of processed cabbage per day. The processed cabbage is available throughout the year in the shop. This is unlike fresh IVs that are available for a few months during the rainy season.

The price of processed cabbage is generally lower than that of fresh cabbage. However, the price goes up significantly during times of fresh produce shortages (September/October). At the time of survey processed cabbage was selling at \$65 per 300 grams.

The attendant at the supermarket was of the opinion that there is not much potential for growth in processed vegetables. This is because of the fact that these vegetables are consumed by a small section of the population, especially pregnant women. Such assertions were however not corroborated by other stakeholders.

# 5. <u>TM Supermarket</u>

TM supermarket gets its horticultural produce from Interfresh wholesalers. Most of the produce is supplied fresh with the exception of cabbage that comes in two forms (fresh and processed). The store sells fresh IVs when in season. The Mutare branch (city center) has not sold any processed IVs. This is largely because of failure to source them. The shop is very keen to try processed IV lines.

The processed cabbage (like in BP case) is packaged in plain plastic. The contents are also not specified. It is necessary to improve packaging and advise prospective customers of the type(s) of processed vegetables being traded.

# F. Consumers

# 1. Preparation of IVs

<sup>&</sup>lt;sup>11</sup> At the time of survey the TNT had processed cabbage on sale.

Although, most consumers first put the processed IV into warm water to remove dust and sand particles some do not go through this step. Boiling the IV follows after the removal of sand particles and dust. Some add cooking oil, tomatoes and salt to taste while others may add peanut butter, tomatoes and salt. Some consumers mix the prepared IV dish with beef to add variety to the recipe.

#### 2. Consumption of IVs

All vendors/traders and producers/processor talked to eat processed IVs. In some households all members eat processed IVs while in others it is the parents and some children. Some said they force their children to eat a little of the IVs. This is because of the fact that there is a general campaign to promote the consumption of IVs by medical practitioners<sup>12</sup>.

In some households, IVs are not prepared as the main dish. Thus, it gives family members the choice to take the IVs or not.

Most consumers prefer fresh IVs (*runi, guku and muboora*) rather than in the processed form. They take processed IVs when the fresh alternative is not available. The same consumers however, prefer cowpea leaves (*munyemba*) in the processed form (than as a fresh vegetable).

The frequency of consumption of IVs ranged from household to household. This ranged from two times to ten times per month<sup>13</sup>.

<sup>&</sup>lt;sup>12</sup> Doctors recommend consumption of IVs to those suffering from high blood pressure and AIDS related illnesses.

<sup>&</sup>lt;sup>13</sup> The frequency of consumption includes both fresh and processed IVs.

# Appendix I: <u>People interviewed</u>

Name	Designation/Location
Mr. Samupindi	Trader (Sakubva Market)
Mrs. J. Goneso	Trader (Sakubva Market)
Ms. Chayaura	Trader (Sakubva Market)
Mr. Saungweme	Trader (Sakubva Market)
Mrs. Chagura	Trader (Sakubva Market)
Mrs. S. Chiwundiro	Trader (Sakubva Market)
Me. M. Pedzeni	Trader (Sakubva Market)
Mrs. M. Zimunya	Trader (Sakubva Market)
Mrs. Mutarika	Trader (Sakubva Market)
Ms. J. Mangore	Trader (Sakubva Market)
Mrs. E. Shatai	Trader (Sakubva Market)
Mr. C. Madanhire	Manager (Shell Select)
Mrs. B. Hagworth	Manager (BP shops)
Mr. Zulu	Farm Manager (Weirmouth)
Mr. S. Zharare	Procurement Manager (Interfresh)
Mr. Zviuya	Buyer (Manica Produce wholesalers)
Mr. N. Maroro	TM supermarket
Mr. G. Tsvangirai	TNT supermarket
Mrs. Rafemoyo	Producer/processor (Dzobo)
Mrs. Chirewo	Producer/processor (Dzobo)
Mrs. D. Ratohwa	Producer/processor (Dzobo)
Mrs. Garepi	Producer/processor (Dzobo)
Mr. Tauro	Plan International

Appendix II: Schedule of field work: Mutare and Zimunya Communal Farming area; Processed IV's Study

Date	Institution/place visited
3 July 2002	Safire, Plan International, Manica Produce

	wholesalers and Weirmouth farm
4 July 2002 5 July 2002	Interfresh, Sakubva market Sakubva market
25 July 2002	BP shops (2), Shell select shop, OK, TM, and TNT
26 July 2002	Zimunya communal (Dzobo area)
27 July 2002	Sakubva market