

# Access to urban markets for small-scale producers of indigenous cereals: a qualitative study of consumption practices and potential demand among urban consumers in Polokwane

Anne Bichard, Sandrine Dury, Hettie C Schönfeldt, Tshidi Moroka, Faith Motau & Nicolas Bricas<sup>1</sup>

*This study of urban residents of Polokwane, the capital of the Limpopo province in South Africa, was designed to describe how, where, when and by whom sorghum and millet are consumed; how the subjects of the study perceived these grains; to what extent the produce of small-scale producers was considered acceptable; and to gauge their potential demand for products derived from indigenous cereals. Qualitative data were collected using individual interviews and focus-group sessions. The findings suggest that sorghum, which is easily purchasable in town, is widely consumed, mainly as soft porridge, but also as thick porridge, fermented porridge and sorghum beer. The age of consumers, the closeness of their links with rural areas and their religion influence their consumption of sorghum products. Sorghum is seen as being healthy, nutritious and traditional, but inconvenient to cook and preserve. Millet, which is not readily available in Polokwane, is considered old-fashioned. A 'need for tradition', or its opposite, a 'need for modernity', among consumers underlies their demand for products derived from indigenous cereals, a demand which is only partially satisfied. Many respondents would be ready to purchase products originating from small-scale farmers; some may believe that the quality of the produce of small farms is better, or may feel solidarity with small farmers and want to support them. This paper presents ideas for further investigation about the possibility of developing specific products and marketing strategies that will allow small-scale farmers to meet an unsatisfied urban demand.*

## 1. INTRODUCTION

Sorghum and millet are indigenous African cereals, but maize is currently the predominant staple of South Africans. Sorghum is also produced on commercial farms and processed industrially, and sorghum products are available on the South African market, but its current place and that of millet in the diet of South Africans is not well documented.

Sorghum and millet are drought-resistant cereals and can be grown in areas too dry for maize. However, in many parts of Africa, sorghum has been replaced by maize, which is higher yielding and more resistant to damage from birds while it is growing and from

---

<sup>1</sup>Respectively, Master's student, University of Pretoria and Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD); researcher, CIRAD; Professor, Department of Animal and Wildlife Sciences, School of Nutrition, University of Pretoria; Master's student, Department of Consumer Science, University of Pretoria; researcher, Council for Scientific and Industrial Research (CSIR), Pretoria; and researcher, CIRAD. This paper is drawn from a project led by the CSIR and CIRAD on the urban consumption of sorghum and millet in the Northern Province (now Limpopo). The authors are thankful to the French ministries of research and foreign affairs, which funded this project. They acknowledge the helpful comments of Hester Adam, Ngwako Moses Sefoto and Jonas Raphela.

insects during storage. This substitution of maize for indigenous cereals is described as dangerous, 'as increasing population pressure forces poor soils into cultivation and as climatic change and drought cause failure of less drought-resistant staples such as maize, the importance of sorghum (and millet) in food security must be emphasized' (FAO, 1988).

The South African agricultural sector reflects the dualism inherited from the apartheid years and earlier. Alongside large-scale commercial farmers in the modern agro-processing sector there are many small-scale farmers, mainly Africans, who face major difficulties. Empowerment of African farmers is part of the strategic plan for South African agriculture (Department of Agriculture, 2001). Obtaining adequate access to land, water, inputs and credit are some of the problems small-scale farmers have to face. Market access is another challenge for disadvantaged farmers; this could be made easier by a better understanding of market opportunities, and therefore of consumers' demand.

The majority of the people in the Limpopo province in the north-east of South Africa are Pedi, also called Northern Sotho. Quin (1959) described their diet nearly 50 years ago. Typically, rural Pedi people had two meals a day: one around 11 a.m. and a second between 7 and 8 p.m. Meals included two dishes: the main dish was a cereal (sorghum or millet and, later, maize), and the side dish was generally made from vegetables or milk. Between meals, people used to consume large quantities of nutritious sorghum beer and *maheu* or *metogo*. Sorghum was used to make malted meal, beer, gruel (fermented or unfermented), porridge, stews (with whole grains) and bread, and immature sorghum was consumed as a fresh vegetable.

The process of urbanisation is associated with changes in lifestyle and food patterns. This nutritional transition is characterised by a shift from a carbohydrate-based diet rich in cereals towards a diet rich in fat and sugar (Popkin, 1994). There might well be limits to the growth of demand for cereal products in urban areas. Reaching the urban market is crucial for producers, as South African urban residents are wealthier than rural people (May, 1998). Moreover, urban populations are likely to grow, increasing the economic importance of the urban market for any producers.

Traditional cereals which are well adapted to local ecological conditions and constraints could be grown in the northern parts of South Africa, but the demand of urban residents will influence the economic viability of commercial farming. The largest urban centre in the Limpopo province is Polokwane. This municipality was defined in 1999 by the new demarcation board, and includes the town of Pietersburg. According to the 1996 Census, 93 per cent of Polokwane's residents are Africans and most are Sepedi speakers (Statistics SA, 1998b). Polokwane's territory is heterogeneous, including urban areas with a high population density, and large areas with a rural profile (Statistics SA, 1998c). Seshego, the former black township of Pietersburg, is the most populous part of Polokwane.

The present research explores the consumption practices and the perceptions of millet and sorghum among urban residents of Polokwane, in order to identify the potential demand for products derived from the traditional cereals which are produced by small-scale farmers.

## **2. METHOD**

There are three different components of the demand, or the needs, of consumers: hedonistic (or pleasure-seeking), nutritional and socio-cultural. Satisfaction of these

needs will depend on the availability and affordability of the products, the lifestyle and social organisation of the consumers and the socio-cultural patterns influencing people's food choice (Bricas, 1998). The organisation of people to satisfy their demand for food under specific constraints defines their food consumption practices.

The characteristics of consumers, their age, income, education, social status, personal history, links to rural areas and household composition were investigated in this study, as these variables are likely to influence consumers' demand for food. Consumers' perceptions of small-scale farmers and of their products were also explored.

The research is exploratory in nature, which justifies the choice of a qualitative approach. It follows an open and flexible research strategy and uses methods leading to insight and comprehension (Babbie & Mouton, 2001). Qualitative individual interviewing, where interviewers establish a general direction for the conversation and pursue specific topics raised by the respondent, is the method that was chosen to gather information (Babbie & Mouton, 2001). The validity of the information gathered was confirmed using focus-group discussions.

A framework of open-ended questions was written to guide the interviews. It was improved during the survey as knowledge accumulated. It is not a questionnaire, but a set of guidelines. It starts with opening questions about food and cereal consumption and then restates the relevant research themes:

- knowledge about sorghum and millet
- sorghum and millet consumption practices (supply, storage, cooking, meals)
- perceptions of indigenous cereal products
- demand for new sorghum or millet-based products
- perceptions of small-scale farmers and of their products
- personal characteristics (age, income, food expense, education, links with rural world), if not given spontaneously during the conversation, were asked at the end of the meeting, when people are more comfortable with the interviewers.

A phase of observation initiated the fieldwork: visits were paid to the different suburbs of Polokwane and to retail outlets, small restaurants and take-away establishments. Information about brands, price and size of packaging were collected. The opinions of shopkeepers and employees were also canvassed.

## **2.1 Sampling**

When a qualitative approach is adopted, it is not necessary to adhere to quota sheets to sample interviewees. However, to cover the wide spectrum of practices and opinions regarding sorghum and millet consumption, it is important to interview as wide a range of people as possible. Purposive sampling was undertaken, selecting interviewees according to the areas in which they lived, their dwellings, age, social status and race. Women, who are usually responsible for food purchases and cooking, were targeted a priori. As we were investigating consumption and attitudes among urban residents, people staying in rural parts of Polokwane or outside Polokwane were excluded from the sample.

The interviewees were identified in shops or other public places, and some respondents suggested additional people for interviewing.

## 2.2 Data gathering

Data were gathered through individual interviews and focus group discussions by two female interviewers, one being a Sepedi speaker and the other an English speaker. Questions were generally formulated in English and some words were translated into Sepedi, but very rarely. Most interviewees answered in English and some then switched to Sepedi. As soon as Sepedi was used, it was translated and transcribed into English. All but three interviewees could understand the feedback in English.

Twenty-eight interviews were conducted. Almost all the interviews (25 of 28) were with individuals and conducted in their homes, while three were interviewed at their places of work. During the meetings, the interviewers wrote down all the information provided by interviewees, together with notes about the context and the respondents' behaviour. They typed up the reports during the evening following the interviews. A second appointment was made for feedback and almost all the respondents (23 of 28) attended a feedback session. At this session the typed report was read to the interviewee, unclear points were discussed and additional questions were asked. Interviewees were free to correct any information that had previously been given. Information and correction gathered during the feedback were typed out the following evening. The first meetings lasted from one to three hours, depending on how well-informed and eager to participate the person was. Feedback sessions were shorter (1/2–1 hour).

Three focus groups were held to substantiate the information gathered during the interviews.

## 2.3 Data analysis and reporting

Responses from the interviews were analysed, identifying general patterns from which recurrent themes were extracted. The importance of an idea was indicated by how frequently it occurred during the 28 interviews, for example, 'four of 28'. To respect confidentiality, all interviewees' names were changed. For more details about the site and the methodology, see Bichard, 2002 (Table 1).

## 3. RESULTS

### 3.1 The interviewees

Twenty-five of the 28 people interviewed were African, and of these all but three were Pedi; one was coloured and two were white. This sample reflects the racial

**Table 1: Incomes and standards of living of survey respondents**

Income group	Monthly income per adult (in rand)	Examples and remarks	Number interviewed
Very low-income household	Under 1 000	Unemployed dependants Old-age pensioners Employees earning low wages	8
Low- to middle-income household	Between 1 000 and 2 000	Workers (clerk, policeman) Self-employed	7
Middle- to high-income household	Between 2 000 and 4 000	Professionals (manager, teacher)	7
High-income household	Over 4 000	Two interviewees were classified in this category because of their perceived living standards	6

composition of Polokwane. The focus group participants were all African and a majority were Pedi.

Most interviewees (15 of 28) live in Pietersburg's former black township, Seshego. The others stay in different suburbs of Polokwane.

A focus group held in a church brought together the women from Seshego; another in Mangweng contained local women. A third focus group took place at the college at Seshego. Unfortunately, the participants in this third focus group were not part of the target population, but were rural residents who were studying in Seshego and generally avoided the town. However, we carried on with this session because some were eager to speak and gave interesting information.

Most respondents live in small township houses or 'matchboxes', built during apartheid. Some stay in 'RDP houses' (named from the Reconstruction and Development Programme), built according to the current social housing programme. Three interviewees stay in one or other of Seshego's squatter camps. Two of them have no direct access to water and electricity. Interviewees staying in middle- to high-income suburbs live in residential dwellings.

Very few interviewees were not economically active. One is a student; three are unemployed, but one of these is a volunteer at the hospital; three are retired but farm around the township or brew beer; three are self-employed and do not work regularly; two run small shops; one is a housekeeper; one is employed by a small take-away restaurant at the taxi rank; one works at a supermarket; six interviewees are primary or secondary teachers; one is in charge of a crèche; three work for the provincial government administration and another three work for banks.

Respondents were asked about their monthly household income and their expenditure on food. Some were reluctant to give any information on this issue and others did not know their total household income. This occurred most commonly when sons or daughters and their spouses formed part of the household, staying with the parents and contributing to the joint household income. However, their standard of living can be assessed from the information provided on the respondents' activities and visits to their homes. The interviewees were divided into four groups according to the information they gave and the interviewers' perceptions about the household's standard of living (see Table 1).

Five interviewees refused to give their ages. The youngest interviewee was a student aged 21 and the oldest an 80-year-old pensioner. Ten interviewees were between 40 and 50 years old.

Our target was initially women, whom we had supposed to be in charge of food purchasing and cooking, but the views of their husbands, sons and brothers were collected during interviews as males are frequently responsible for shopping and have specific perceptions. One man, met eating sorghum in a small restaurant, was also interviewed on his own.

### **3.2 Sorghum and millet supply and shopping practices**

In Polokwane, people can obtain food through farming and gardening, and through exchanges with people living in rural areas. However, food and beverages are mainly obtained through purchase. Cafés, *spaza* shops and supermarkets, as well as wholesalers and hawkers, supply food to urban residents. A *spaza* is a room, garage or extension of a house, in which goods are sold. A café is separated from the house and typically larger

than a *spaza*. The cereal wholesalers are usually also millers where farmers can bring their cereal crops and obtain milled cereals.

Millet is available in none of these retail or wholesale outlets and has apparently never been commercially sold in Polokwane. Sorghum-based products are sold by all kinds of food suppliers except for hawkers. Sorghum (or *mabele* in Sepedi) represents about 20 per cent of the cereal by volume sold by wholesalers (maize is 80 per cent of the total). The sorghum-based products available are malt (in bulk or branded), finely or coarsely ground sorghum, and instant sorghum meal. Finely ground sorghum is the most widely distributed product. Raw sorghum (not ground) is not available at all. Liquor stores supplying commercial sorghum beer were not visited but home-brewers were interviewed.

Supermarkets or wholesalers are the main suppliers of sorghum for most of the interviewees. The *spaza* shops and cafés, which are located closer to consumers' homes, are usually visited when small items are missing, but if there is no sorghum in the house, most families wait until the next time that they go to large retail outlets.

Shopping is not necessarily an exclusively female activity, so women do not always know where the shopping is done. Men shop for convenience (if they are retired or if their workplace is close to shops) and to save money: 'I go to the shop with a list written by my wife and I buy only the items written on the list'. In some households, nobody is really in charge of shopping: every earner can and does shop. The choice of a shop is governed mainly by price. Only two interviewees, both from the high-income group, chose a shop because of the services it provided. 'There's [the] mill that sells *mabele*, but . . . we don't like the poor service . . . we prefer going to the super-market and buying smaller quantities.'

Shopping is done once a month when salaries are paid. People buy all their groceries, including cereals, from wholesalers and supermarkets. They complement these with fresh products bought at *spazas* or cafés. Most people (26 of 28) purchase sorghum regularly, about once a month or once every two months, in amounts of 10 kg or 5 kg. Nobody spoke about buying 80 kg, 50 kg or even 25 kg of sorghum, as is done with maize.

Sorghum flour is about 15–20 per cent more expensive than maize flour. There are three reasons for this difference in price [personal communication, Professor John Taylor (Department of Food Science, University of Pretoria)]. Value-added tax (VAT) at 14 per cent is imposed on sorghum while maize is zero-rated (an inheritance from apartheid economic policy). As the staple food of most South Africans, maize is a loss leader used to attract customers to shops. Sorghum is consumed on special occasions and ceremonies, and consequently many consumers are ready to pay more for sorghum than for maize.

The price of sorghum increased a great deal in the month before the survey. Many interviewees remembered the previous price (about R22 for 10 kg) but do not yet seem to have fully absorbed the new price (about R32 for 10 kg). Price seems not to influence the customer profile: sorghum is the staple food of low-income households yet no one complained about its price.

### **3.3 Millet and sorghum consumption**

People in Polokwane generally have three meals a day, and cooking is a female activity. A breakfast of soft porridge, bread or breakfast cereal is eaten at home and shared by the

whole family whenever their schedules make it possible. However, breakfast menus can differ among family members. Lunch is often eaten out: lunch-boxes including bread are commonly prepared at home for lunch at the workplace; people also have lunch at restaurants or buy food at take-away shops. Many small restaurants around the Pietersburg taxi rank offer meat and vegetables served with maize or sorghum porridge. People generally dine at home and the evening meal consists of a porridge-based dish.

### 3.3.1 Consumption of millet

As millet or *leotša* (in Sepedi) is not available in town, most of the people who were interviewed have never eaten it, even if they know that millet is used to cook the porridge that they call 'green pap'. A few elderly people say they used to eat *leotša* long ago, before arriving in town. These people, and others with links to rural areas, know that millet is used to cook *kgodu*, a porridge mixing pumpkin and *leotša*; and to make beer, *maheu* and *tototo*, a strong liquor still prepared in rural areas. '[T]ototo is still made but people don't speak about it because it is not allowed'. Some old people who used to eat millet sometimes miss it: 'I would like to consume *leotša* again but I don't find it. . . I would buy it if ground millet were available in Seshego'. But many do not agree: 'I didn't like *leotša*, I used to vomit when I was a child and had to eat that'. People who have never tried millet are not eager to consume it. 'I went there [to Sekhukhune] once and I saw a kid eating green pap. I would never try'.

### 3.3.2 Consumption of products derived from sorghum

The majority of those interviewed consider maize to be their staple food, but all of them consume sorghum, mainly as soft porridge for breakfast. For some sorghum is their staple food.

Soft sorghum porridge is consumed by all but two of the respondents. In nine of the 28 households it is the breakfast meal of the whole family every morning, or at least several times a week, while in seven other households it is cooked only over weekends. Depending on tastes and how much money is available, soft porridge can be improved by adding milk, peanut butter or margarine. Soft porridge can be regular or sour. Traditionally, sour porridge (or *ting*) requires sorghum to ferment in water overnight. Some households still stick to this recipe. Others find it more convenient to add an acidic product (mayonnaise, vinegar, tartaric acid or lemon juice) to cooked soft porridge to reproduce the sourness of *ting*. Soft porridge can also be prepared using instant sorghum powder.

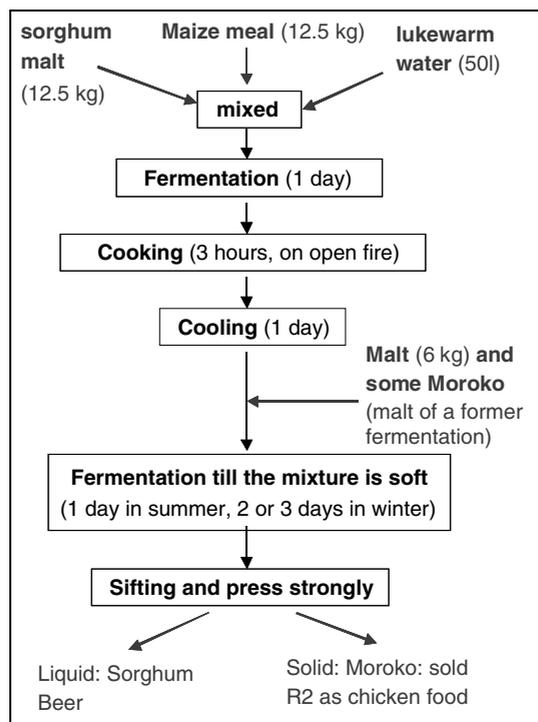
Thick sorghum porridge (also called '*mabele* porridge', 'brown porridge' or 'stiff porridge') is not consumed as often as soft porridge. Almost half the Africans who were interviewed never consume thick sorghum porridge (11 of 26), and the whites who consume soft sorghum porridge do not eat the thick porridge. On the other hand, in some households it is consumed very regularly: daily (six of 28) or even twice a day (two out of 28), weekly or several times a week (three of 28) or once or twice a month (four of 28). Thick porridge is consumed at home for lunch and for dinner, or outside the home in restaurants or take-aways. The porridge is served with meat (chicken, beef, mutton, tripe, chicken feet), '*mashotja*' (*mopane* worms) or '*inkomazi*' (sour milk).

*Ting* is a sour porridge prepared with sorghum flour that is allowed to ferment in a bucket. *Ting* may be made from coarse flour, fine flour or a mixture of sorghum flour

and mealie rice (broken maize). At home, *ting* is consumed for breakfast as soft porridge served with margarine and sugar, or for lunch and dinner as thick porridge served with a side dish of tripe or meat stew. As thick porridge, *ting* is available during ceremonies where some respondents, who do not prepare it at home, 'queue for it': 'I like it but I don't know how to cook it. I consume it during funerals and weddings. *Ting* is sour and I like the sourness. The colour is better [than that of regular porridge].'

Sorghum beer is considered to be 'the African beer'. Asked about which sorghum-based products they know, most interviewees spontaneously mention sorghum beer even if they do not consume it. In town, sorghum beer is sold by liquor stores and by small-scale brewers in the townships, and is also brewed at home for private purposes. African men consume commercial sorghum beer, processed by the big breweries and sold in liquor stores. Most of the opinions we collected about it were negative. It is made out of sorghum grain, maize, water and yeast, and considered as more alcoholic than home-brewed beer. According to the interviewees, its consumption is an economic choice more than a matter of preference: 'Commercial sorghum beer is for unemployed men because it is cheaper. Employed people drink "normal" beer like Castle.'

A clandestine activity during apartheid, home brewing for sale has never stopped in the township's backyards. Two brewers, John and Promise, were interviewed in Seshego. Both of them use unbranded sorghum malt and maize meal to process their beer and do not add any yeast or sugar. Promise said: 'with sugar and yeast, the beer becomes too strong'. Both of them describe the process of brewing as in Figure 1. Brand name malt or 'beer powder' is available in any shop; brewers are familiar with it but prefer



**Figure 1: Brewing beer at home for sale to others**

using raw malt provided by *spazas*. Both men and women attend the home-brewers to drink beer, but middle-aged men (40–50 years old) seem to be the regular customers. Beer can be taken away or drunk in the garden. It is cheap compared with commercial beer (around R2 per litre). Customers say they come as often as three times a week, depending on money they have, and if beer is available. They order from two to eight pots of 1–1.5 litres each. One also drinks regular commercial beer, while others only drink home-brewed beer. Consumers as well as non-consumers consider that home-brewed beer is healthier: ‘they [the old consumers] say it is healthy. I believe them because it is natural; there’s no preservative’.

Beer is also brewed at home for private use. Some women can brew several times a year, but the frequency of home brewing varies between families. Many interviewees know a little about brewing but only three of them, Julia, Johanna and Thato, who still have links with the rural areas, could describe the whole process accurately. It starts with malt production and two different techniques are employed for this. For both, the malt is ground lightly before brewing. One procedure consists of soaking the grain, draining it, spreading it under a bag to make it germinate; in the second method, the grain is left in water to germinate and then the water is drained off. Thato and Johanna brew differently from John and Promise. As in traditional Pedi recipes (Quin, 1959), no maize meal or any other starch was added to the sorghum malt.

Traditional rituals are an occasion for brewing because Pedi people believe that it is necessary to have sorghum beer when communicating with their ancestors. Sorghum beer ‘brings us closer to the gods’. To keep ancestors informed about what happens in the family, to worship them but also to avoid trouble or ask them for help, rituals are organised. Then home-brewed beer is shared between people and a small quantity is poured or spat out in a sacred place dedicated to the ancestors. Sacred places are frequently seen in Seshego’s backyards. They may be a simple circle delimited by a round piece of concrete, or a tree in the garden. Some people will not practice this habit for reasons of status or education: ‘in my family. . . we didn’t speak to the ancestors because my grandfather considered us too educated to do these kind of things’. Religious reasons are also evinced: ‘all alcohol is forbidden for ZCC people’ [ZCC: the Zion Christian Church, which forbids its members to consume alcohol]. Besides traditional rituals, beer is brewed at home for parties: ‘my mother brews beer . . . to save money. You make beer so you don’t have to buy Castle. It is cheaper. And moreover people like it.’ It is a way to welcome people and to respect expectations of traditional social behaviour. Drinking beer ‘is the African way to speak with people’.

### 3.3.3 Food and drink seldom or never consumed in town

*Maheu*, or *metogo*, a non-alcoholic fermented liquid made out of sorghum porridge, used to be an important drink for Pedi people (Quin, 1959). An industrial maize-based *maheu* is available in the shops. People know it but consider it as very different from the traditional one. Julia says *maheu* is not prepared in town because ‘[here] we use just one plate to eat and we mix sorghum with meat. At the village we used two plates, one for porridge and one for *sesebo* [relish]. So when some porridge remains it is not spoiled by the relish. Making *maheu* was ‘a way to use the *mabele* porridge that remains.’

*Lewa* is a whole-grain stew prepared with sorghum, maize or beans. In season, marula nuts (*Sclerocarya birrea caffra*) are added after cooking. *Lewa* is a well-known dish (to six of the 28 respondents). Some people consume it when they visit rural villages but cannot do so in town because sorghum grains are not available there.

*Kgodu*, a traditional porridge made of pumpkin (*Cucurbita* sp.) and sorghum flour, is less frequently mentioned than *lewa*, but was still cooked by an old lady interviewed in Seshego.

### 3.3.4 By-products of sorghum beer

Julia and Thato also cooked *moroko*, the solid residue after the beer has been strained, and ate it after first adding sugar. *Moroko* was a nutritious element of the traditional Pedi diet (Quin, 1959) and was useful in preventing pellagra. Two interviewees spoke about *lešeleba*, a product derived from the cooking stage of beer processing, which can be consumed cold as a soft porridge.

## 3.4 Consumers and trends in consumption

'Everybody consumes *mabele*, all races, all ages . . . my kids eat "Morvite". I grew up with *mabele*', stated the white manager of a supermarket. But even if the two white ladies interviewed occasionally eat sorghum as a soft porridge at breakfast, African people clearly perceive sorghum as a food for black people. 'African people are the big consumers of *mabele*'.

Many people (10 of 28) considered the members of the Zion Christian Church (ZCC) to be big consumers of sorghum. The ZCC is the largest church in South Africa; its members represent almost 10 per cent of South Africans (Statistics SA, 1998a). Six interviewees who are Zionists were obviously consumers on a large scale. They all consumed thick sorghum porridge regularly: four did so every day, one every week and one every fortnight. It is believed that this Church advises its members to eat sorghum for health reasons or to respect African traditions. Some Zionists say openly they eat sorghum because of church advice: 'in 1994 I joined the ZCC and I've increased my consumption of sorghum'.

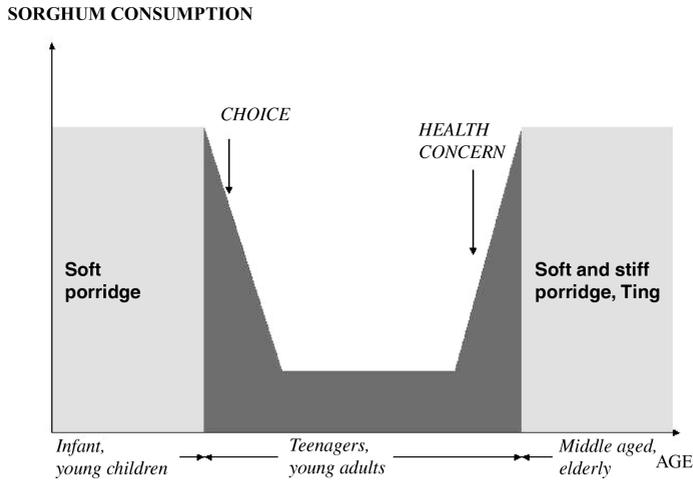
Eight of the 28 respondents presumed that rural people would consume more sorghum than urban residents. They explained the difference by the availability of other products in town: rural people would consume sorghum because they do not have access to other products. 'I used to eat sorghum because we farmed it and there was nothing else available'.

The respondents perceive an influence of social status on the consumption of sorghum, but points of view are contradictory: Although *mabele* is more expensive than maize, sorghum can be considered as a food for poor families: 'unemployed people go for it because it is cheaper'. On the other hand, some believe a return to sorghum is beginning among 'educated people': 'It becomes a trend for educated people to go back to *mabele* because they believe it is healthier'.

Age is a significant influence on the consumption of sorghum-based products (Figure 2).

Infants and young children consume sorghum because adults consider sorghum is good for them and as they are young, they eat what they are given. 'We give [sorghum] to the baby because we think it gives weight and feeds them well'.

Mothers use very fine sorghum as weaning food, when the baby is three months old, or as an intermediate product between the weaning food (usually baby cereal like 'Purity' or 'Nestum') and regular sorghum. Infants and children eat sorghum as soft porridge.

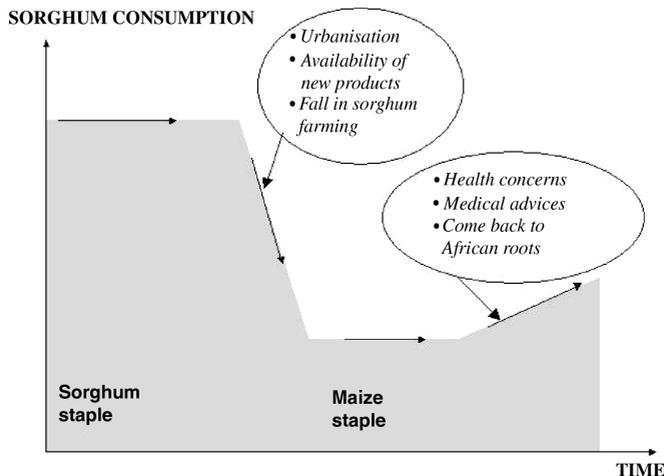


**Figure 2: Consumption of sorghum-based products at different ages**

Teenagers and young people below the age of 30 years were seen by nine of the respondents as consuming small amounts of sorghum, because they dislike the colour of the product: ‘they compare sorghum with soil because of the colour’, and its traditional image: ‘they consider it as olden-day porridge’. Some may refuse sorghum because ‘they have eaten too much of it as young children’.

Middle-aged and elderly people are believed by nearly half the respondents (12 of 28) to consume sorghum-based in large quantities, influenced by health concerns, by medical advice (four out of 28) and also by habit. ‘Adults consume *mabele* because of doctor’s prescription . . . and from habit old people have to eat *mabele*’.

Over time, people have noted a downward trend (Figure 3) in sorghum consumption. Old and middle-aged people remember that long ago sorghum was their staple food. ‘At home as a girl I didn’t see mealie-meal before I was 6 or 7 years old’. Urbanisation



**Figure 3: Perceptions of trends in consumption**

and the availability of other products, but also a fall in sorghum production owing to the difficulties of farming, were put forward as explanations for the changes in diet. 'Before, people had no choice. Now ... rice and white porridge have taken the place of thick porridge'. However, some interviewees perceived a recent upward trend in sorghum consumption, because people are turning to the product for health and cultural reasons. '*Mabele* was like a traditional food and people fell for western food ... but now they go back to their roots because of medical advice.'

### 3.5 Sorghum perception and criteria of choice

The interviewees were unanimous in their belief that sorghum is a healthy food. Medical and church (especially ZCC) advice, traditional knowledge, 'our grandmothers told us that sorghum was healthier', and their own experience, have convinced them of the values of sorghum. They claimed that sorghum was indicated for high blood pressure and diabetes and could help to heal *sekgalaka* (stomach-ache), *sesabo* (urticaria), constipation and red spots on newborn babies. Special sorghum-based healing recipes are known to cure chicken pox, peptic ulcers or to give a sexual boost. Sorghum is supposed to be healthier than maize because it contains less starch, or less sugar. Sorghum is also considered as more nutritious: 'I feel stronger when I eat *mabele*, with maize I get tired'.

Sorghum carries an image of African tradition. People know that it was the staple food of African people in the past. As sorghum beer is part of traditional rituals, it enhances this image. African traditions and rituals are part of the urban environment. As with sacred places in backyards, 'traditional corners' which contain the utensils for ritual can be found in the living rooms of township houses. For urban Africans, consuming sorghum could mean going back to their African roots, towards a kind of ancestral wisdom. This image of traditional products is mainly positive for adults like the respondents but is supposed to be negative for teenagers and children: '... At home the kids influence the shopping a lot. That's a reason why we don't go back to our roots even if we would like to.'

#### 3.5.1 Inconvenient

Many interviewees consider sorghum less convenient than maize. It takes too long and is too difficult to cook, and therefore is inappropriate to weekday urban breakfasts. As people leave home early in morning to go to work, there is not enough time to cook sorghum. People prefer to cook maize-meal or to eat ready-made bread or breakfast cereals (mainly 'Weet-Bix' and 'Kellogg's'). 'You have to check all the time when you cook it [sorghum]. It is different from maize. On weekdays I leave the house at 6:30; I just can't do it'. Moreover, sorghum porridge is difficult to preserve after it has been cooked. Sorghum porridge has to be consumed warm, as soon as it is ready. When it is cold, it dries out, and the texture is not appetising. 'If you cook it too early it becomes too tough and the kids could not eat it'. Some people consider that eating cooked and cooled sorghum porridge was not a problem in the past. 'It was better [before]. You could eat it even when it was cold. Now you can't'. The son of an interviewee considers that serving *inkomazi* (sour milk) with cold sorghum porridge makes it acceptable: 'cold *mabele* is good but with *inkomazi*'.

#### 3.5.2 Colour of sorghum porridge

Sorghum porridge is commonly called 'the brown' while maize porridge is called 'the white'. Middle-aged women who are concerned about health associate the brown

colour of sorghum with higher nutritional values. Aware of the nutritional qualities of brown bread compared with white, they transfer this comparison to brown and white porridge. 'I think it is good because it is dark, it's less refined, it is healthier'. On the other hand, the dark colour would be a disadvantage for some consumers, especially young ones, who compare brown porridge with soil, or worse.

More specifically, a Zionist man who is a big consumer of sorghum distinguished three kinds of sorghum according to their colour. 'There are three kinds of *mabele* porridge: dark (or brown), reddish and white. The red one is the best. I don't look at the brand but at the colour'. Another interviewee complained that sorghum flour contains different kinds of sorghum. 'Another problem is that it isn't pure, a lot of different sorghum are mixed. Before you could make the differences between the different *mabele*'.

### 3.5.3 Texture

The packaging of ground sorghum gives little indication of the product's texture. The big brands (King Corn, Nola and Monati) provide ground sorghum in two different qualities, fine and coarse. Consumers identify other degrees in terms of the texture, which is an important criterion to assess and choose sorghum flour. One interviewee identifies four grades of sorghum. 'Grade 1 is super fine *mabele*, Grade 2 is fine *mabele*, Grade 3 is rough *mabele* and Grade 4 is coarse *mabele*. I buy grade 2 for soft porridge and porridge. Grade 1 is just for newborn babies and little kids. I buy grade 4 to make *ting* for ceremonies.'

Dissatisfied by the textures available on the market, some people look for intermediate textures: 'Sometimes we buy coarse *mabele* but then we mix it with the fine one because we don't like coarse *mabele* by itself'.

### 3.5.4 Brands

As their husbands are often in charge of the shopping, women are often unaware of which brands are purchased. It was found difficult to check this during our home visits, because the products are not stored in their original packaging but in plastic boxes. Half the interviewees are partial to specific brands. In these cases, brands are associated with specific texture or colour. The most frequently cited brands are both national and local brands. However, people seem to be more closely attached to shops where they are regular customers than to brand names. An interviewee reports that a brand is not a guarantee. 'I don't look at the brand but at the colour . . . the quality is not constant so it is better to check'.

### 3.5.5 Price

The respondents chose cheap places at which to shop, but surprisingly enough price does not explain either the choice of maize instead of sorghum or the choice of a specific brand of sorghum flour.

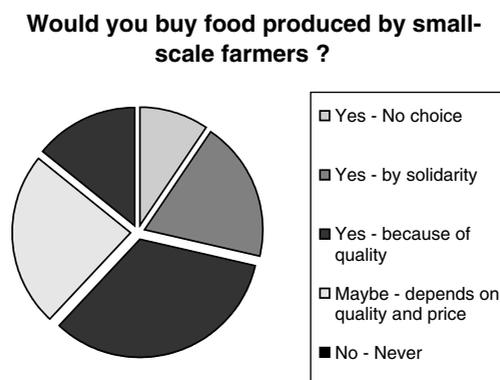
## 3.6 New products

Asked whether they would like to purchase new products made from sorghum or *leotša*, interviewees expressed a demand for three different groups of products.

- There is a demand, especially among elderly people or people with rural links, for traditional African food made out of sorghum or millet. This includes ground millet and whole sorghum grain for cooking *lewa* and traditional *maheu*. The market could however be fairly small, because many interviewees are reluctant to consume these products. A cereal wholesaler in town informed the interviewer: '*Leotša*, we don't sell it; it is just for birds'.
- A demand was reported for sorghum-based products popular with children. One interviewee suggests including sorghum in infants' cereals used as weaning foods (such as 'Purity' or 'Nestum'). But perhaps, because babies already consume fine sorghum flour, the main target should be older children and teenagers. Respondents suggested using sorghum to make biscuits, breakfast cereals, or adding sorghum to 'YogiSip', a drinking yogurt popular with young people. One mother said that she prepares soft porridge from sorghum mixed with 'ProNutro' (ready-made cereal with different flavourings) to make it acceptable for her son.
- There is an unsatisfied demand for new sorghum-based products, which are convenient for breakfast. People complained that sorghum porridge takes too long to cook for weekday breakfasts. However, instant sorghum products do exist. 'Instant Maltabella' (Bokomo) was not well known in the area but six interviewees have used 'Morvite' (King Corn). Three appreciated it: 'there's a new product, "Morvite". It doesn't take time to cook. The kids like it.' Two have tried the product but do not like it. Although there are many instant breakfast foods on the market, the demand for convenient sorghum-based breakfast products remains unsatisfied, and four people said that they would be interested in finding products such as 'Weet-Bix' (a popular breakfast cereal) but made from sorghum.

### 3.7 Perceptions of small-scale farmers

The interviewees were conscious of the difficulties that small-scale farmers face in South Africa. They indicated lack of land, of skill, of equipment and inputs, scarcity of water and rainfall and lack of access to the market as problems that farmers have to face. The interviewees can be classed in four groups according to their attitudes and readiness to accept food produced locally by small-scale farmers and processed by small-scale food business (Figure 4). Seven interviewees had no opinion regarding the question, and the universe of respondents was reduced to 21.



**Figure 4: Attitudes towards products of small-scale farms**

The 'no, never' group (three of 21) is brand-oriented, and show a preference for industrially processed food. Their immediate reaction to purchasing the output of small farmers is negative, as they believe it to be of poor quality: 'I won't buy local, I'd rather buy a brand because I think that small farming production is not good'.

The 'indifferent' group includes two respondents who do not really care about the provenance of food. They may be poor, and their main concern is to provide food for the family. Wherever the product comes from, if it is affordable, it is good. 'Food is food. So we will buy it. We have no reason to reject food'. Another five classified in this group would buy products derived from the produce of small-scale farmers once they were convinced that the quality and price suited them. 'I would try before to be sure of the quality. But you know, the first argument for people today it's the price'.

Four interviewees were classed in the 'solidarity' group. These were higher-income respondents, ready to buy the products of small-scale farmers because they think these farmers have to be supported. The solidarity they feel with such farmers, rather than consideration of the products, motivates their answer: 'they must be given a chance to farm'.

Seven, or one-third, were considered to fall in the 'lover, or expert' group, who would prefer buying local products coming from small-scale farms because of the better quality of these products. Most of them have links with the rural world. 'The vegetables and fruit coming from commercial farming are more attractive because they are bigger. It's just because they use new methods of farming. On the other hand, small farmers produce naturally, they depend more on nature. Their products are less attractive but I would be more confident, because they are more natural.'

Some indicated that they already consumed the produce of small-scale farmers. 'The products we buy at the mill [are] already produced by small farmers because they bring their *mabele* here to grind it.'

#### 4. CONCLUSION

Our research on the consumption of traditional cereals has shown that changes have occurred in consumption practices from the traditions of the past, as described by Quin (1959). People have abandoned products made from millet or whole-grain sorghum because they were not available in the local shops. Changes in the way of life made some products or processes inconvenient for urban wage-earners. People now eat early in the morning before going to work, or late in the evening; they go to restaurants, and they have a choice between different staples. Consuming traditional cereals is no longer a practice determined by the physical environment; it has become a matter of choice.

Sorghum consumption is however still very important in Polokwane. Its availability and its place in interviewees' diets as well as the volumes sold by wholesalers, show that sorghum consumption in Polokwane is far to be insignificant. Even if maize is more widespread than sorghum, sorghum has remained or become a staple food for some families. Moreover, everybody regardless of social status, race, gender or age consumes sorghum.

The reasons why sorghum has retained a niche in the urban diet could be:

- the availability of sorghum flour at reasonable prices (produced by large farms and processed by industrial millers)

- its undisputed image of healthy and nutritious food, encouraged by churches and physicians
- the willingness of many people to respect an 'African tradition'. It appears that some people want to preserve their cultural heritage with regard to sorghum consumption among other things.

These findings are in line with Bricas (1998), who describes food patterns in modern urban Africa as a combination of three different elements: 'rural tradition', 'individualism' and 'urban socialisation'. Most individuals shift from one to another according to the time of day or week, but all three are present in different proportions in the life and behaviour of every individual. Sorghum products themselves (different porridges, beer), and where and in what company they are consumed (individually, in groups, at home, in restaurants, in bars), reflect these different elements. Their values are also either traditional ('food of the ancestors') or modern ('healthy', 'symbol of identity').

The products currently on the market do not totally meet the consumers' demands for foods derived from indigenous cereals. The need for tradition or the need for modernity may underlie their unsatisfied demand.

- Need for tradition: some people miss traditional products not available in urban markets such as whole sorghum seeds, traditional *maheu* and millet; some look for sorghum-based flours with characteristics similar to those of the past: (a) a wider range of flour in terms of texture from grade 1 (very fine) to grade 4 (coarse), (b) a wider range of ground sorghum in terms of colour providing flour from brown, red and white sorghum without mixing it as it is done currently, (c) a sorghum flour which allows the porridge to be preserved after cooking and eaten cold as was possible in the past.
- Need for modernity: many consumers want to continue eating sorghum products but look for products which are convenient and could be adapted to the urban life-style, such as a ready-to-eat breakfast cereal similar to 'Weet-Bix', or bread or biscuits made from sorghum products, which would be attractive to young consumers.

This demand could represent an opportunity for the small-scale farmers of Limpopo province who are well regarded by urban consumers: if the quality and price of the products suit them, a majority of consumers would purchase a product identified as locally produced by small-scale farmers.

However, when marketing products made from traditional cereals in town there will be competition with other cereal products (maize, bread, rice and breakfast cereals) and with the sorghum-based products already available in town. The research provides some information which can help to develop a marketing strategy to reach the urban market:

- First, the shopping habits of the people in town should be taken into account. Sorghum products should be distributed through modern channels such as supermarkets and wholesalers. For sorghum flour, the best packaging size would be 5 or 10 kg.
- To differentiate sorghum products from maize, bread, rice or cereal breakfast foods, the positive inner image of sorghum perceived by the consumers should be emphasised. Advertisements communicating the traditional character and the nutritional quality of the products could be productive. The middle-aged and old people seem to be particularly influenced by messages about health and ready to change their diet if they think it will help them to be well.

Following a qualitative approach, the present study has described perceptions of some consumers of Polokwane regarding traditional cereals. These findings about the potential interest of urban consumers in products made from traditional cereals provided by small-scale producers are encouraging, but they reflect only the conditions and experience of Polokwane. The hypotheses developed here cannot be generalised without further investigation and must be verified by studies on a larger scale.

## REFERENCES

- BABBIE, E & MOUTON, J, 2001. *The practice of social research*. Cape Town: Oxford University Press.
- BICHARD, A, 2002. *Sorghum and millet consumption patterns in the Limpopo Province of South Africa*. Qualitative Survey in Urban Area (Polokwane). Report. Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD), University of Pretoria, Service de Coopération et d'Action Culturelle – Ministère des Affaires Etrangères (SCAC–MAE).
- BOURNE, TL & STEYN, K, 2000. Rural/urban nutrition-related differentials among adult population groups in South Africa, with special emphasis on the black population. *SA Journal of Clinical Nutrition*, 13(1): 23–28.
- BRICAS, N, 1998. *Cadre conceptuel et méthodologique pour l'analyse de la consommation alimentaire urbaine en Afrique*. Rome: Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) and FAO. Série Urbanisation, alimentation et filières vivrières.
- DEPARTMENT OF AGRICULTURE, 2001. *The strategic plan for South African agriculture*. Pretoria: Directorate Agricultural Information Services, Department of Agriculture.
- FOOD AND AGRICULTURAL ORGANISATION (FAO), 1988. *Traditional food plants*. Food and Nutrition Paper. Rome: FAO.
- MAY, J, 1998. *Poverty and Inequality in South Africa*. Report prepared for the Office of the Executive Deputy President and the Inter-Ministerial Committee for Poverty and Inequality. Summary Report, 13 May 1998. <http://www.welfare.gov.za/Documents/1998/Pov.htm>
- POPKIN, BM, 1994. The nutrition transition in low-income countries: an emerging crisis. *Nutrition Review*, 52(9): 285–98.
- QUIN, PJ, 1959. *Foods and feeding habits of the Pedi*. Johannesburg: Witwatersrand University Press.
- STATISTICS SOUTH AFRICA, 1998a. *Census 1996. Overview*. <http://www.statssa.gov.za/census01/Census96/HTML/overview96.htm>
- STATISTICS SOUTH AFRICA, 1998b. *The People of South Africa*. Population Census 1996 Census by wards, Polokwane [NP354]. <http://www.statssa.gov.za/census01/Census96/HTML/default.htm>
- STATISTICS SOUTH AFRICA, 1998c. *Population density per electoral wards*. [http://www.statssa.gov.za/census01/Census96/Wards/catb/maps/NP354\\_pop.jpg](http://www.statssa.gov.za/census01/Census96/Wards/catb/maps/NP354_pop.jpg)

