

Département Amélioration des
Méthodes pour l'Innovation
Scientifique
CIRAD-AMIS



Mission Report.

Mahangu (pearl Millet) and sorghum consumption in urban
areas in Namibia.

April 11-13, 2002

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1 Context

The Namibian Ministry of Agriculture, Water and Rural Development (MAWRD), the Namibian Agronomic Board (NAB) and CRIAA-SA-DC, worked together for a few years to promote Mahangu (pearl millet) and Sorghum in Namibia. In June 2000, the MAWRD organised a workshop to develop a Strategy for the Multiple Use of Mahangu and Sorghum¹. These institutions have also created the Mahangu and Sorghum Task Team (MSTT) which meets once a month. In October 2000, the CIRAD-Food systems program conducted a first mission to contribute to the process of formulating strategies and action plans for the promotion of Mahangu, Sorghum and indigenous fruits in Namibia. It appeared that little was known about the marketing chains, and the consumption of Mahangu and Sorghum products (Who are the consumers/ non consumers? How they consume? Which products ? Why do they choose this or this product? What they would prefer ? etc)

The Namibian Ministry of Agriculture, together with the French Cooperation asked CIRAD to conduct a study on Mahangu and Sorghum consumption in urban areas. The University of Namibia (UNAM) is also part of the project with one professor or lecturer and students (see terms of references). CIRAD will supervise two French students and conduct two 10-day missions: one in May (16-25) and one either in September or in November 2002.

2 Objective of the mission

The objective of this short mission was to meet the different persons who are interested in « *the food consumption survey in Urban areas in Namibia* » and to prepare with them the arrival of the two CIRAD students: Sabine Leporrier and Antoine Leveau.

They will both arrive in Windhoek on May 4 (SA 70 flight). Sabine will stay 5 months (to Sept 26) and Antoine 6 months (to Oct. 29).

3 People met

Thursday 11

Ben Bennet (Ministry of Agriculture and Rural Development, Directorate of Planning),
Michel Mallet (CRIAA SA-DC),
Christof Brock (Namibian Agronomic Board) and
Annie Zapke (Namibian Agronomic Board).

Friday 12.

Flora Gheno (Service for Cooperation and Cultural Affaires- French Embassy)
Thierry Dauplais (Ministry of Agriculture and Rural Development, Directorate of)
Mr. P.H. Kanine (Central Bureau of Statistics),
Deputy Director (Central Bureau of Statistics, National Planning Commission),
Alwis Neerasinghe (Central Bureau of Statistics, National Planning Commission),
Sigried Mwalaa and Saskia den Adel CRIAA SA-DC

¹ The Output of this workshop is presented in a 69 pages document (MAWRD, NAB, CRIAA SA-DC, Jan. 2001).

Unfortunately, it was not possible to meet the people from UNAM, since neither Margareth Angula nor Professor Van Rooy (Head of the Social Science Department) were available.

4 Great expectations

All the persons we met are very interested in the results of the survey. We discussed with Ben Bennet, M. Mallet, C. Brock, and T. Dauplais, regarding their expectations of the survey. B. Bennet, M. Mallet and T. Dauplais were particularly interested in an attitudinal survey, and a typology of behaviour. M. Mallet felt that the millet consumption pattern is in a stage of recombination. In contrast to some other products (such as maize), the socio-economic determinants for millet consumption are not clear. He would like to have a better understanding of the trends that underlie the current patterns as well as a typology of the consumers and their habits. B. Bennet gave us a presentation of the complexity of the Mahangu chain ² and of the problems encountered in attempting to improve income from Mahangu production. These range from the production side (low yield and productivity, poor market access) to post-harvest and market access. The focus of our study is related to what was identified as "insufficient market for flour", and 5 bullet points: "market limited to traditional users, poor market penetration, competition with maize flour, rice and pasta, and short flour shelf-life". All these points should be properly documented.

C. Brock emphasised the price elasticity and the evaluation of the Willingness to pay for each quality attributes. Amongst the main attributes, he sets particular importance on the Unfermented/fermented type of flour. He also wishes to have a sensorial test, and to gather precise information on the behaviour of people in schools and hospitals. The shelf life issue (the fermented products do not last long in the store) was raised by Bennet, Mallet and Brock.

We also discussed the idea, in the quantitative part of the survey, of testing the receptivity of consumers to new high-value products such as "fermented packaged flour", or "fair trade products". The idea of taking advantage of the diversity and richness of traditional food preparation recipes was also proposed by M. Mallet. The results of the two first phases of the survey, will help to decide which products (and/or attributes) will be tested in priority.

It is not easy to say yet if it will be possible to answer all the questions. This will depend on the efficiency of the students and on the field conditions. Our ultimate aim is (to summarise the objectives of the terms of references) a detailed description of the different products, of the different ways to get access to them, to process them at the domestic level, and to consume them. (phase 1 and 2). The attitudes and expectations regarding the products will also be presented and analysed (phase 2). The main purpose of the quantitative phase (phase 3) is to confirm and quantify the relative importance of the different "types" of consumers found during the qualitative phase. Depending on the success of the implementation stage of the survey, and on the data analysis, it may be possible to assess the determinants of consumption versus non-consumption and secondly, amongst the consumers, to assess the relative importance of the different attributes. It will may eventually be possible to test the receptivity for a new product/concept, that would be identified after the two first stages.

The terms of references are explicit on the methodology, which consists of three phases:

² see mahangu problem tree in MAWRD, NAB, CRIAA-SA-DC, 2001, p.23

1. Identification of the Mahangu suppliers and users, identification of Mahangu products (2 weeks)
2. Qualitative survey-: in-depth interviews with individual and focus groups from several different backgrounds (age, activities, districts...). 6 Weeks
3. Quantitative survey consists of
 - A) Sampling.
 - B) Recruitment of surveyors (7 to 10 in each city). Training of the surveyors.
 - C) Test of the questionnaires.
 - D) The survey itself (2 weeks) + data entry (1 week),
 - E) Data cleaning (1 week)
 - F) Data analysis (1-2 months)

In order to increase the efficiency of the two first phases, we suggest that the students stay in the areas where Mahangu consumers live, in the cities, but also spend a few days in the rural areas in the North.

The people from the Central Bureau of Statistics, National Planning Commission, are ready to help with the sampling methodology (phase 3). They need a formal letter of request from the Ministry of Agriculture.

5 PLANNING OF ACTIVITIES AND MEETINGS. MAY-SEPTEMBER (proposal subject to UNAM students own planning)

April: Identification of 2 + 1 students and lecturer at UNAM

May 4: Arrival of the S. Leporrier and A. Leveau.

May 5-12: Meeting with partners (MAWNR, UNAM, NAB, CRIAA, MSTT...).

Identification of products/users/suppliers....

First individual interviews in Windhoek.

Preparation of focus group meeting.

May 13-20: Oshakati for all 4 students (with a vehicle if possible).

Meeting and identification of partners,

Identification of products/users.....

First individual interviews in Oshakati and in the producing rural areas (with a stay of several days in the villages)

Preparation of focus group meeting.

May 16: (Thursday): Arrival of S. Dury in Windhoek (in the evening)

May 17: Departure to Windhoek (flight)

May 17-20 Meeting with the students in Oshakati.

Field visit. Individual interviews and preparation of focus group meetings.

Visit of small scale mills.

May 21: return to Windhoek (car) (Visit of small scale mills in Otavi on the way back)

May 22: individual interviews in Windhoek

May 23: (thursday): Meeting of the MSTT (afternoon)

May 25: Departure of S. Dury from Windhoek to Yaoundé.

Departure of S. Leporrier and counterpart from Windhoek to Oshakati..

May 27-31: continuation of individual interviews and preparation of focus group meetings,
In Windhoek and Oshakati

June 1-15: focus group meetings

June 16-20: report on phase 2 (individual interviews and focus groups).

Preparation of the "uantitative"questionnaire

June 24-28: meeting of the MSTT.

Discussion on the preliminary results, and on the proposed questionnaire, on the
sampling methodology.

Recruitment and training of surveyors.

July 1-5: test of the questionnaires

July 5-20: Quantitative survey in Windhoek and Oshakati.

(+data entry.)

July 22-26: data cleaning

August: data analysis and final report writing.

August 26-30: Presentation of the results in Oshakati to the partners, key informants, including
consumers (from the focus group for example)

15 September: final report to be finished for Oshakati.

15 October: final report to be completed for Windhoek.

6 partnerships

6.1 UNAM

The counterparts from UNAM have not been clearly identified yet, nor have the students. Margareth Angula seems to be interested. It is urgent that students become involved in the next few weeks. We suggest that **two or three students** from UNAM could conduct their study together with Sabine and Antoine (counterparts): one in Oshakati and one in Windhoek (for the household/individual consumption) and one for collective consumption (schools, hospitals...) both in Windhoek and Oshakati.

6.2 Support from the Central Bureau of Statistics

The data from the 2001 census are only preliminary (see annex). According to Dr. Kanine, from the Central Bureau of Statistics, and in charge of the Census, the details will not be available in the next few months for our study area.

The Permanent Secretary from the Central Bureau of Statistics can provide us with detailed maps of Oshakati and Windhoek, and can also help us to choose the sample for the third phase of the study (quantitative phase). They only require a formal letter of request from the Ministry of Agriculture.

7 Accomodation

Sabine and Antoine have been invited to share the apartments of the French volunteers (CSN) in Windhoek and Oshakati. They will have to share the costs (water, electricity, rent, etc). However, they will also need to stay in the areas where Mahangu consumers live. In Windhoek, this will be Katutura, the former township. As far as we know, there is no hotel or guesthouse in these areas. According to our guides, Sigried Mwaala and Saskia den Adel from CRIAA, it may be possible to rent a room for a week or a month in a private household.

We asked our colleagues to find out people from Katutura who might be interested. The students may change from one week to another.

It was also noted by M. Mallet that a few days in the production areas will provide Sabine and Antoine with information on the "traditional"/rural uses of Mahangu. It will also be harvest time.

We suggest that they go to the northern region one week after their arrival in Namibia. There, they will have to arrange with the local partners and authorities to stay a few days (3-5) in a village.

Car

The students will have access to a car.

Financial arrangements

The Namibian funds for the project (UNAM professor and students + local expenses) are managed by the Namibian Agronomic Board (Annie Zapke).

8 Field visit

The Friday afternoon was devoted to a visit in Katutura, with Sigried Mwalaa and Saskia den Adel from CRIAA SA-DC. We went to two open markets : in Okuryangava and in "Single quarters" and to 4 different small supermarkets: STOP and SHOP in Okuryangava, SPAR in Okuryangava/ombili, ELAGO STORE and Oshanga King in Wanaheda. We also visited a supermarket in the centre of Windhoek.

In every place we visited we found Mahangu flour. In all supermarkets (large and small), we found the flour processed and packaged by the Namibian mills. The most common form was the pure one,

packaged in 2.5kg paper bags. We also found the mixed flour, and the two forms (pure and mixed) in 10kg paper bags. We also found some sorghum preparations for beer (made in South Africa). In the large supermarket in the centre of Windhoek, we found all the industrial processed and packaged products in large quantities. We did not see any other brand (in particular from the small scale milling companies).

These "modern" packaged products were not found on the open market, where women were selling un-packaged millet flour. These retailers were also proposing different products from sorghum and millet that are used for beer preparation. We also talked to young ladies selling a soft drink (*Oshikundu*) made out of millet. According to our colleagues, the flour from the Namibian mills is not fermented, while the flour from the open market is fermented. Mrs Mwaala gave us some translation of what we saw, in two Namibian languages: Oshidonga and Oshikwanyama.

Lexicon (to be completed):

Oshidonga	Oshikwanyama	English	French	Meaning
uusila	oufila	flour	farine	
omahangu	omahangu	millet	mil	
omushokolo	iilyalyaaka	sorghum	sorgho	
oshikundu	oshikundu	oshikundu	<i>idem</i>	made from sorghum and millet
uuhutu	ohkundu	bran	son	

We did not find sorghum beer in the supermarkets, or in the open markets. It is however produced and consumed (and given/sold ?) but at different places and different times of the day. This should not be forgotten during the phase 1 and 2 of the survey.

9 Bibliography and notes

1. MAWRD, NAB, CRIAA SA-DC, 2001, Promoting Mahangu and Sorghum in Namibia. January. 69 p.

A reference.

Part one: Strategy and Action Plan

Part two: Workshop Proceedings

+Appendix

2. Mallet M. du Plessis P. 2001. **Mahangu Post-harvet Systems. A summary of current knowledge about pearl millet post- harvest issues in Namibia.** Research report. MAWRD, NAB. CRIAA SA-DC. march. 47 p. + maps.

A reference.

A comprehensive synthesis on what is existing on Millet and sorghum in Namibia. From Production to consumption. Very detailed bibliography.

3. Goli T., Ndiaye JL., 2000. **Mahangu, Sorghum and indigenous fruits processing and promotion in Namibia.** CIRAD AMIIS-PAA. Mission Report. November. 16 p + appendices.

Comments on the strategy and action plan.

4 Mendelsohn J., el Obeid S., Roberts C., 2000, **A profile of north-central Namibia.** Ministry of Environment and Tourism, Gamsberg Macmillan Publishers, Windhoek. 79 p.

Very beautiful and well documented document, with many references (see p. 77). Students should read carefully the chapters "farming" (pp 51-61) and "Household economies" (pp 62-68).

Amongst others a reference that we should found :

Keyler,S. 1996. **Economics of the Namibian millet subsector.** PhD thesis, Michigan State University, USA.

5. Kandando R.J., Ngwira T.N. 1999. **Consumption of Pearl Millet (Mahangu) products in Namibia.** A consultancy report to the FAO Namibia, Windhoek. DRAFT. August. 51 p.

This report gives some indications on the consumption of the mahangu products but since the sampling methodology is unclear and the sample size is very small, we can not give much confidence to the statistical results. ("60 family household were interviewed in towns such Oshakati, Ongwediva, Ondangwa and in Windhoek, and the respondents were randomly selected") Moreover, the sample was certainly not representative as "74.1% of the respondents were tertiary qualifications holders".

4. Central Bureau of Statistics. (undated, 2002 ?) **Census Preliminary Results in Brief, Census 2001.** 19 p.

This document gives the following statistical results:

Concerning the whole country (p.(i)):

Number of Households:	347 916
Female population:	936 718
Male population:	890 136
Total Population:	1 826 854
Annual Average Growth Rate, 1991-2001 (%)	2.6
Average Size of Households (No of persons per Households):	5.1

Total Population by Sex and by constituency, Khomas Region, 2001 Census (p.10)

Constituency	No of HH	Population			Average HH size
		Total	Females	Males	
Hakahana	15 826	59 546	26 198	33 348	3.8
Katutura Central	4 074	20 988	11 536	9 452	5.2
Katutura East	3 165	17 737	9 536	8 201	5.6
Komasdal North	5 600	26 621	13 873	12 748	4.8
Soweto	2 553	13 809	7 210	6 599	5.4
Wanaheda	6 578	29 051	13 881	15 170	4.4
Windhoek East	5 627	16 643	8 536	8 107	3.0
Windhoek Rural	5 147	19 908	9 312	10 596	3.9
Windhoek West	10 005	38 969	20 435	18 534	3.9
<hr/>					
Total Household					
Population	58 575	243 272	120 517	122 755	4.2
<u>Special Population*</u>		<u>7 033</u>	<u>1 986</u>	<u>5 047</u>	
Total Population	58 575	250 305	122 503	127 802	

Total Population by Sex and by constituency, Oshana Region, 2001 Census (p.15)

Constituency	No of HH	Population			Average HH size
		Total	Females	Males	
Okaku	3 144	19 222	10 619	8 643	6.1
Okatana	2 426	15 562	8 575	6 987	6.4
Okatjali	426	2 815	1 541	1 274	6.6
Ompundja	713	4 423	2 451	1 972	6.2
Ondangwa	5 792	29 783	16 293	13 490	5.1
Ongwediva	5 166	27 396	15 368	12 028	5.3
Oshakati East	4 838	22 634	12 256	10 378	4.7
Oshakati West	4 309	20 015	10 955	9 060	4.6
Uukwiyu	2 933	11 894	6 491	5 403	4.1
Uuvudhiya	869	4 357	2 227	2 130	5.0
<hr/>					
Total Household					
Population	30 616	158 141	86 776	71 365	5.2
Special Population*		3 836	914	2 922	
Total Population	30 616	161 977	87 690	74 287	

**Special population consists of all those persons who did not belong to private households during the census reference night. These include the homeless, overnight travellers, persons in hospitals, prisons, hostels and lodges.*

Personal comments and questions:

1. The relevant constituency for the urban studied area have to be specified.
2. Women are more numerous than men, in all the Oshana Region (on average 1.22 women for one man), and in Windhoek (including Katutura central and East, Windhoek West). Is it related to labour migration of men, who according to Meldelsohn *et al* (2000, see map p. 62) go to Windhoek, Walvis Bay, Luderitz and Oranemund for work. Or to Cassinga, Kunene, Erongo, Otjozondjupa... to trade.
3. No socio-economic data is available, but the average household sizes show the disparities between one area to the other. For example, In the Oshana region (north) the average size is 5.2 while in Khomas region (around Windhoek) it is 4.2. Within the Khomas region, the Windhoek east HH average size is 3.0 while in Katutura east it reaches 5.6.

10 Les détails pratiques

On trouve tout les biens de consommation en Namibie. On a aussi des pharmacies...

Les choses à prévoir :

En France

Acheter et LIRE le livre « La Namibie, Un peuple, Un devenir » Karthala. De Ingolf Diener. Paris. Si possible rencontrer Ingolf Diener (Prof à Paris).

Un stage d'anglais intensif avant de partir selon le niveau

Un permis de conduire international

Des habits d'été (il fait beau la journée) et des habits chauds (les nuits sont fraîches. Il peut geler)

Si traitement en cours, des médicaments particuliers.

Prendre un téléphone portable si vous en avez un.

En arrivant :

dire qu'on est touriste à la douane

louer un cellphone (portable) ou acheter une carte pour son portable.

pendant le séjour : attention au SIDA (prévalence : 1 personne sur quatre est HIV positive)

Au retour:

une correction de l'anglais des rapports

Important !: all reports have to be written in english.

11 CONTACTS

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Saskia den Adel	<i>CRIAA</i>		<i>Idem</i>	<i>Idem</i>	<i>Idem</i>	<i>Idem</i>	<i>Idem</i>
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