KMS INDUSTRY STAKEHOLDERS’ MEETING N° 2
ONGWEDIVA RDC, 2 - 3 DECEMBER 2008

WORKSHOP REPORT

Prepared by Michel Mallet & Padelia Phillipus
CRIAA SA-DC, Windhoek, January 2009
Reviewed by Steve Carr, NBRI
WORKSHOP OPENING AND INTRODUCTION

Opening address

The workshop was officially opened at 9:00 by Steve Carr (SC), National Co-ordinator of the Indigenous Plant Task Team (IPTT) and Senior Agricultural Researcher at the National Botanical Research Institute (NBRI) of the Ministry of Agriculture, Water and Forestry (MAWF).

SC welcomed all the participants: producer representatives, processors, support institutions and government officials, and thanked them for coming to this second Stakeholders’ Meeting.

He re-emphasised that Kalahari Melon Seeds (KMS) is a priority resource for the IPTT’s Indigenous Natural Product programme, and the development of a KMS industry forum has been endorsed by the IPTT. The process of supporting this development is funded as a project by the IPTT.

This second workshop is a follow up from the first stakeholders’ meeting held in March 2008. It further builds on two other technical workshops took place during the year, a training workshop on KMS marketing for the North Central Regions (NCRs) in August and a first regional workshop on KMS for Caprivi and East-Kavango in October.

SC stressed that there are crucial challenges for developing KMS as a valuable resource and the stakeholders’ consultations and co-operation are essential for the development of the industry. He recalled that at the first meeting of March 2008, it was agreed by those present to create this industry forum with specific objectives and develop a code of practice to defend the good credentials of KMS oil. The roles, composition and organisation of such forum had been debated but not concluded. Stakeholders had requested more time to think it over and to consult within their organisations.

SC wished all the participants a fruitful workshop.

Introduction to the workshop: objectives and programme

Michel Mallet (MM) presented the objectives and programme of the workshop (see draft programme in Annex-1), which included the following four specific topics:

1. To review the progress of the 2008 KMS marketing season
2. To prepare the 2009 production season and marketing campaign
3. To plan the field-testing of improved KMS planting seeds early 2009
4. To decide on the KMS industry development (next steps).

He explained that the timing of the different sessions should be flexible in order to do justice to the topics and allow sufficient time for discussions (and translations if and when needed), while aiming at closing the meeting around lunch time on day-2.
Introduction of participants

The participants introduced themselves (see list of participants in Annex-2), stated the organisation they represent and their involvement in the KMS industry, and briefly explained their expectations for the workshop.

The participants’ expectations are summarised below:

- How to improve the supply of KMS, to involve as many farmers as possible, to reach the grass-root farmers
- To learn from the experience in the NCRs and strategise for the Caprivi Region
- How to expand the income generation for producers and communities, to support conservancies and rural communities in marketing KMS, to market mahangu and KMS together
- How to improve production technology
- How to satisfy the market demand and customers
- To strengthen the industry, to speak with one voice, to achieve our objectives, to coordinate our efforts.

The workshop was well attended with 26 participants, excluding the 2 organisers from CRIAA, representing a cross-section of KMS stakeholders mainly from the NCRs:

- KMS producers (11): Eudafano Women Co-operative (3), King Nehale Conservancy (2), Onankali Community Trust (1), NCRs’ Regional Farmers’ Co-operatives (4), Tulongeni Twahangana Producers (1)
- KMS oil processor (2): Eudafano Factory (2)
- NGO service providers in the NCRs (2): NNFU-Oshakati (1) and NACSO-CESP/Rössing Foundation-Ondangwa (1)
- Service providers in Caprivi representing emerging KMS producers (3): CEDP (1), CFN-DOF (1) and IRDNC (1)
- Public service providers in the NCRs (6): DEES-MAWF (4), MTI (1) and NAB (1)
- Windhoek-based institutions (2): NBRI-MAWF (1) and ICEMA-MET (1)

MM reflected on the good representation of stakeholders, most of whom attended the first workshop. He praised the participation of Eudafano Women Co-operative (EWC), which has been the pioneer in Namibia of the KMS oil production and niche-marketing through very hard work.

He also explained that not all interested persons could be invited because this meeting was not a general information workshop but reserved for stakeholders directly involved in the KMS industry. MM also briefed the participants on the invited stakeholders, who could not make it to the workshop (OOP, RDC-Ongwediva, DAPP-Outapi, CFN-DOF Rundu, IRDNC West-Caprivi and Likwama).

M. Mallet also brought the apology from Bianca Braun, conducting the KMS Breeding Project for the IPTT at Farm Jena near Mariental, who wanted to attend but was kept occupied by the last steps of the seed multiplication programme.

Once again, special thanks are extended to Annanias Usiku of MTI for his English-Oshiwambo translating and interpreting of presentations and discussions at crucial times.

A list of acronyms and abbreviations is provided at the end of this report before the annexes.
1. PROGRESS AND CONSTRAINTS OF THE 2008 MARKETING CAMPAIGN

Participants were asked to report back on the 2008 marketing campaign of KMS and express their views for improving the next production season and marketing campaign.

1.1) Progress in Caprivi

Richard Sihan (CEDP) reported as the focal person/co-ordinator for KMS development in Caprivi (as agreed at the October workshop).

1.1.1) Activities undertaken:
• Identification of local cultivars was initiated in the Kongola/Kwando-Mashi areas where CEDP is active. Seeds were collected for sampling and replanting in the 2008/09 cultivation seasons. Samples of seeds were provided to CRIAA in October for oil analysis (oil content and composition).
• A regional workshop (organised by ICEMA and CRIAA) took place early October with stakeholders from East and West Caprivi, and East Kavango.
• Information dissemination was conducted in the CEDP area and 124 farmers were identified to re-plant seeds with high oil content.

1.1.2) Problems experienced:
• Elephants are a specific threat to crops, including Kalahari melons. However, conflict management with wildlife is a broader issue being tackled by conservancies and community forests with the support of service providers (IRDNC, NNF, CEDP) and Government. Wildlife corridors and “chilli bombs” are means used to contain the problem.
• Price too low: the KMS price offered so far, i.e. N$3.50/kg, is not considered sufficient by producers (a price between N$4.00 and N$4.50/kg would be more appropriate).
• Competition with Devil’s Claw: harvesting of Devil’s Claw is currently considered as a more remuneratively rewarding activity.

1.1.3) Way forward:
• To encourage planting of KMS: this is the next step to be promoted, by CEDP in particular.
• Seeds to be distributed to farmers: CEDP purchase local seeds in 2008 for replanting in 2008/09 season because not all interested farmers have planting seeds of KM with good oil content.
• No intercropping: as part of the “conservation agriculture” promoted by CEDP, monocropping with annual crop rotation is advised, but intercropping is not.
• Further research: the identification of local cultivars and sampling of seeds from harvested KM is to continue.

1.1.4) Discussion and conclusion:
• There is real a potential for KMS production and marketing at community level in East-Caprivi, but this will require some funding to promote and develop it.
• If and when the volume of KMS marketed is enough, local processing into oil should be the most sustainable way to proceed, logistically and economically. In the meantime, KMS not used for re-planting could be sold to EWC in Ondangwa or to Windhoek.
1.2) North Central Regions

Participants reported that the marketing of KMS is progressing well and is not finished. KMS producer group representatives and EWC expressed their views as follows.

1.2.1) KMS producer groups:
- KMS production is labour intensive
- Some KM produce more seeds (can range from 30 to 80 seeds per melon)
- The price offered to producers (N$3.00/kg) is too low; quality should be rewarded with a better price; the buying price at the factory-gate should take into account the distance of delivery, especially for far-away producers (for example in Omauni and Okongo)
- Some constituencies still need awareness on KMS, with more information dissemination required
- In one producing area, there was an overlap of responsibilities from two producers’ groups in organising collective marketing of KMS. The problem should be resolved with better communication and co-ordination at the local level because market facilitation is considered as the key to poverty alleviation for this income generating activity
- The EWC factory has been congested with a lot of KMS buying this year. To speed-up the buying process, the delivery by producer groups with their own transport should be encouraged rather than to rely only on the factory truck.

1.2.2) Eudafano Women Co-operative and Factory:
- KMS storage at the factory has been expanded to cope with increased deliveries
- So far quality has been good except in some cases where KMS were not cleaned (sand, dried pieces of fruit) or the bags were dirty
- At the factory, before storing KMS for processing the seeds are pre-cleaned and repacked in new bags (weighed, marked and recorded)
- Buying of KMS will need to be extended towards December/January, even if the rains will cause a problem
- A price increase for 2009 marketing season will have to be negotiated (the intention to increase the price is there, but the figures have to be agreed within EWC first)
- For 2009, EWC plans to purchase 100 tonnes of KMS.

1.2.3) Discussion and conclusion:
- Some producer group representatives raised the question on how the KMS price is determined (the question was not fully answered)
- There was a common understanding that increased production and marketing can provide better returns to producers
- Recommendations for improving KMS storage at producers’ level were discussed: clean environment from DDT spraying, animal and animal feed contamination, chemical contamination etc. Information on quality precautions and requirements needs to be prepared and disseminated
- Only traceable and quality controlled KMS should be acceptable for marketing
- At a strategic level the risk of having low production years remains. The constitution of a strategic stock of KMS in good years was recommended to processors to cope with the unavoidable inter-annual variation in the supply from KMS producers.
2. KMS BREEDING PROJECT: IMPROVED PLANTING SEEDS (CROSSES) TO BE TESTED BY FARMERS

Michel Mallet introduced the topic referring to the documents provided to the participants and facilitated the discussions that followed.

2.1) General presentation

- **Background** to the IPTT/NBRI Breeding project (see Annex-3)

- **Objectives**: ultimately, 1 or few improved varieties with the following characteristics:
  - High oil quality: increased % linoleic fatty acid
  - Good agronomy: better germination, stronger growing, better fruit and seed yields
  - Good processing: higher oil content (and soft seeds)

- **Progress achieved so far**:
  Three generations of crossing and selection
  First 3 lines to be tested (see Annex-4)

- **Next steps**:
  Farmers’ field testing/trials (and recording)
  Feed-back to the Breeding Project

2.2) Testing by farmers of KMS improved crosses

The general conditions of the farmers’ tests were presented as follows.

- **3 selected crosses (improved KMS) to be tested**
  But will only be available in early January 2009

- Around 3’000 planting seeds per cross expected (to be confirmed)
  Should be far enough seeds for testing

- **Farmers’ testing in at least 5 regions**
  With at least one farmer per region (Omusati, Ohangwena, Oshana, Oshikoto and Caprivi)
  More tests by more farmers and more regions welcome but logistic support, access and monitoring constraints

- **Small test plots** with marking where seeds planted
  Backstopping to test farmers will be limited

- Selected crosses to be grown the **same way as traditional cultivars**
  Characters and performance that are important to farmers must be noted
2.3) Testing plots - Performance evaluation of the 3 selected crosses compared with “normal” varieties/cultivars

The specific performance evaluation criteria were presented and discussed:

- Germination % and date (50% of seeds germinated)
- Plant established %
- Growing flowering, fruiting, pests and disease
- Harvest date
- Total number of fruits per plot (+kg)
- Sample of fruit weight (at least 10 fruits)
- Weight of seeds (kg) on fruit sample
- Overall evaluation by farmer (including post-harvest)
- Afterwards, seed samples to be analysed in lab for:
  - oil content
  - oil composition
  - seed size, weight of 1’000 seeds, 1-litre weight

2.4) Farmers’ test plots

Volunteer farmers will follow a testing protocol to obtain quantitative results through the recording of comparative performance. There will be limited backstopping from the project.

The critical issues to be considered by test farmers were discussed:

- Farmers plot access for seed delivery and monitoring:
  No problem

- Marking of planting spots and recording requirements:
  Marking with pegs to be sure where the planted crosses are germinating

- Mono or intercropping on plots:
  Farmers free to decide

- Qualitative evaluation with limited recording:
  Yes, should also be encouraged with farmers who won’t be able to follow the full testing protocol and quantitative recording

- Number of seeds per planting station:
  2 seeds per planting spot recommended

- Thinning and density of plants:
  Plant density: around 5mx5m or 6mx6m for either mono- or inter-cropped
  Other melons to be weeded out from the test plots

- Size of plots required:
  With at least 10 planting spots per plot, the plot size should be at least 5m x 5m = 250m²
  Depending on its shape, the plot size could be 25m x 10m, 20m x 12.5m or 15m x 15 m
2.5) Interested farmers

The workshop participants agreed that the project should involve as many farmers as feasible into qualitative testing, beyond those who will follow the full testing protocol.

For each region, stakeholders draft a list of farmers who would be in a position to follow the full testing protocol. Most workshop participants included themselves in the list.

- **Caprivi**: 4 farmers (more to be confirmed)
- **Oshikoto**: 4 farmers (more to be confirmed)
  - KNC/Omuthiya: x1
  - Kuupenda assoc.: x1
  - MTI: x1
  - DEES: x1
- **Oshana**: 3 farmers (more to be confirmed)
  - Eheke: x1
  - DEES (Vicky Naudili): x 2
- **Ohangwena**: 6 farmers (more to be confirmed)
  - Epembe (TTP): x 1
  - Ondobe (EWC): x 1
  - Ondha (EWC): x 1
  - DEES (including Eenhana): x 3
- **Omusati**: 6 farmers (more to be confirmed)
  - Onheilewa (ORFC): x 1
  - Afoti (ORFC): x 1
  - Onakahke (EWC): x 1
  - Okalongo ADC (DEES): x 1 (Ms Kauna Shapenga)
  - Okando (ORFC): x 1 (Josephina Nekongo)

The final list of testing farmers will be communicated to CRIAA (Padelia) later in December or early January latest.
3. DEVELOPMENTS SINCE LAST MEETING IN MARCH 2008

MM briefed the meeting on the developments that took place since the first Stakeholders’ Meeting in March 2008.

3.1) Market development

- The confidence of international buyers (TBSI, Aldivia) in a reliable and increased supply of Namibian KMS oil is being rebuilt (with the assistance of PhytoTrade Africa)
- A uniform export price of KMS oil has been agreed upon (with TBSI and Aldivia-PhytoTrade Africa)
- There is an understanding amongst Namibian KMS producers and processors for scaling up the volume of KMS marketed and constituting a strategic stock (seeds and/or oil)
- Namibian stakeholders are committed to improving quality management (quality control, traceability...) and maintaining the good reputation of the trade (community trade, producers’ benefits, social and environmental responsibility)
- With Geographical Indication (GI), the results for KMS oil are inconclusive
  - Besides technical difficulties to define KMS oil as a GI, the policy/legal environment and the state of international negotiations are not fully conducive
  - The GI instruments as discussed in the first workshop should, however, be kept as a potential tool for managing the reputation of the product, especially if a code of good practice is defined and implemented.
- Organic and Fair Trade certification for cosmetic products is becoming more in demand in international markets and stakeholders must prepare for it.
- Branding is also a promising marketing tool, and is different from certification.

3.2) Processing and export

- EWC and OOP are scaling up processing of KMS in Ondangwa
- The KMS oil demand for 2008/09 is between 6t and 8t (around 50t - 60t of KMS)
- A buffer stock of KMS and/or KMS oil is needed
- KMS oil exports resumed in September 2008 and the next shipment is due for December
- Issues for 2009:
  - How will the supply of KMS be in 2009?
  - Will storage capacity and processing efficiency improve at the factories to sustain an increased supply?
  - New KMS price for 2009: will it be discussed at the next meeting?
  - What about the supply of KMS from Caprivi (and from other regions)?

3.3) Projects: KMS development

Two projects are underway for the development of KMS:
3.3.1) NNFU/NAB:
- Mahangu/Maize and KMS marketing in northern regions by six Regional Farmers’ Organisations (RFOs)
- The project is implemented by NNFU and RFOs in NCRs, Kavango and Caprivi, and funded by NAB.

3.3.2) CRIAA SA-DC/IPTT:
The KMS Development Project implemented by CRIAA and funded by IPTT (Aug. 2008-May 2009) is also supported by PTA. It consists of the following components:

- KMS stakeholders’ meetings:
  - The next workshop is planned for March/April 2009

- Supply chain development:
  - Information and training workshop for NCRs in August 08
  - Regional workshop for Caprivi and East-Kavango held in October 08 with ICEMA
  - Backstopping visits to producer groups in NCRs (18 so far) in collaboration with the Grain Marketing Facilitator (NNFU/NAB project)
  - Next marketing workshop in April 2009
  - Promotion and training materials

- Breeding project:
  - Farmers testing of new planting seeds (reminder: no “special treatment” of test plots)
  - Would it be possible to organise a special evaluation meeting at completion of the tests with the farmers involved?

- Monitoring and evaluation (M&E) of the 2008/09 marketing campaign:
  - Documenting the supply scaling-up, quality and reputation management, benefits to producers and communities
  - Sampling for oil content and oil composition, including KMS from Caprivi and cooking melon seeds
  - Final project report by May/June 2009

- Next phase:
  - Programme to be defined and funds to be raised: IPTT, MCA?
  - To include certification?

3.4) Discussion

The discussion revolved around two questions:

- What is the share of the local market compared to the export market for KMS oil?
  As the local market represents around 1% to 2% of total sales, is it not risky to rely on the export market only?

  - Stakeholders agreed that the local marketing of KMS oil requires more attention in order to reduce the dependency on foreign markets, which may be affected by the current financial crisis.
- It was also recognised that promoting the local consumption of KMS oil on a significant scale will require reducing its selling price. Will it be financially viable for local processors (and producers)? How will this impact on the currently good export price? Foreign buyers will certainly question a high export price if the local price is much lower.

- How is the KMS oil price / demand trend for export? This is a difficult question. There should be a direct relation between price and the supply/demand situation. At current export price (relatively high) the export demand will only grow to a certain extent (cosmetic formulators will use an expensive oil in a smaller proportion in their products and a cheaper oil in a larger volume). To be able to export much more KMS oil, the price may have to significantly reduce. But it is not presently known in accurate figures.

- Certification is certainly an appropriate way to keep price up

- The other important aspect for niche marketing is to manage the supply and the demand. For instance, not being able to supply an existing demand may compromise the entire market and trying to oversupply a limited market may push the price down.
4.  WAY FORWARD FOR THE KMS INDUSTRY

The stakeholders debated the development of the Namibian KMS industry and made resolutions for defining a way forward for their industry.

4.1) Increasing the local consumption of KMS oil
- To 25%? or to 10% at least? How? Possible ways are:
  - Promotion and publicity campaigns (as for fish)
  - Developing markets in hotels, lodges, for tourists...
  - Marketing KMS oil as cooking oil
  - Eudafano is willing to pursue these opportunities but has not yet received any support
- A local marketing strategy need to be elaborated
- The local price versus the export price need to be looked at carefully
- A strategic stock of KMS/oil needed (in proper storage)
- KMS oil should not be the only product to develop and market. R&D and value-addition are also needed for other products from Kalahari melons (flour? tea? ...)

4.2) Information, sensitisation and training
- Stakeholders need to extend information on KMS to their areas through promotion efforts, information sessions and extension messages
- More sensitisation is needed towards communities through:
  - Translated information brochures/leaflets
  - Extension message on quality
  - Caution messages on DDT and other chemicals
- Training for beginners for good seed extraction (including Caprivi)
  - Illustrated best practice manual (with translation)
  - Farmer to farmer extension
  - Sponsorship needed to cover costs.

4.3) Clarifying the types of melon seeds for marketing
- Beyond KMS, would cooking melon and water melon seeds be marketable?
- Testing of cooking melon seeds (for oil content and composition) is being conducted (preliminary results are encouraging)
- Sweet watermelon seeds have of a lower oil content, which is a problem for processors
- What about the “introgressed” melon lines, locally called Epuputa (sing.) lipuputa (plur.) in the NCRs?
- Should the different types of seeds be marketed in different bags? Should they be marketed at different prices?
- These issues should be looked into at the next meeting.

4.4) Building collection centres?
- Only where large volumes of KMS are marketed. But the cost may be high?
- Where possible, the ADCs of MAWF should be used.
4.5) Technology to make seed extraction less labour intensive?

- Potential mechanisation of seed extraction was debated with two preliminary conclusions:
  - Small-scale machines and devices have been developed but they do not seem to be very efficient
  - Most women participants argued that there was nothing wrong with the traditional methods
- Participants discussed different improved ways to extract melon seeds:
  - Tate Shali and Tate Hasheela have methods they would like to share with other stakeholders
  - A demonstration (or a visit?) could be organised at the occasion of the next meeting.

4.6) Quality standards for KMS

Stakeholders agreed that there is a need to define strict quality standards for KMS.

*The minimum quality requirements are clearly as follows:*
- No contamination: soil, chemicals, clean storage, animal waste (rodent excrements etc.)
- Free of insects
- Clean seeds, free of dried pulp and skin
- No immature seeds (floating in water)
- Dry seeds
- Fresh seeds
- Pure seeds?

*However, defining quality standards for KMS would require the following steps:*

- Define quality factors
- Define acceptable limits for each factors
- Define quality grades: grade-1, grade-2 ... and rejects
- This must be an industry decision, the next step will be:
  - How the quality standards are administered and enforced?
    - Voluntary standards or enforced standards?
    - Self-administered by the Industry or legally proclaimed (through the Agronomy Act, for instance)?

This last issue is raising another question.

- Would the KMS Industry be willing and able to contribute N$ to its own development, even if only a small percentage at the start? Where to raise additional funds?

4.7) Next stakeholders meeting

Participants agreed that the next meeting may need to be longer (2 days or 2 ½ days) to have sufficient time to deal with the formalisation of the industry body.
5. CONCLUDING REMARKS AND CLOSING OF WORKSHOP

SC concluded the workshop with the following remarks.

“The KMS Industry Stakeholders second meeting had a good attendance, reflecting the high level of interest among the participants in the opportunity presented by the emerging KMS oil industry to obtain extra income.

Once again, as in the previous meeting, the level of interest and participation by the participants was of a high standard, with active discussion and questions being asked. Encouraging is the attendance and participation of the Caprivi representatives, as the KMS oil industry addresses the need for expansion of its supply as a way of increasing and cementing Namibia’s participation and share in the industry over the longer term.

The important issues for the industry needing discussion, understanding and clarity, as reflected in the agenda, were dealt with in an attempt to address and overcome the challenges facing producers and processors. These issues and challenges have been discussed at length over the past one and a half days and captured in the “way forward”. These include:

1. scaling up supply,
2. storage,
3. security for the industry (stockpiling),
4. quality and reputation management,
5. local marketing and new products,
6. a code of practice,
7. the evolution of standards.

Commitment was also given by the stakeholders to support the breeding programme once the seeds are made available.

The meeting has been important in that it gives credibility to the discussions and endorses the way forward for the KMS industry at this time.

It is clear from the workshop that the feeling of the participants is that the KMS oil industry should continue to pursue its current course. There is recognition by the meeting that the issues and challenges are important for taking forward the opportunity in order to derive benefits from KM and its oil.

There remain many challenges on the road forward, but these are to be expected when rolling out a new industry. Risk is always an element in this process, but by working together towards a common goal, most obstacles can be overcome”.

SC then thanked the participants for the fruitful meeting and wished them a safe journey back home, before declaring the workshop closed.
ACRONYMS AND ABBREVIATIONS

ADC Agricultural Development Centres (MAWF)
CBNRM Community-Based Natural Resource Management
CEDP Community Economic Development Project (Caprivi)
CESP Community Enterprise Support Project
CFN Community Forestry in Namibia
CRIAA SA-DC Centre for Research, Information, Action in Africa - Southern Africa Development & Consulting
CT Community Trade
DAPP Development Aid People to People
DEES Directorate of Extension & Engineering Services (MAWF)
DOF Directorate of Forestry (MAWF)
EWC Eudaftano Women Co-operative Pty Ltd
EWMM Eudaftano Women Marula Manufacturing Pty Ltd (Eudaftano factory company)
GI Geographical Indication
ICEMA Integrated Community-based Ecosystem Management (Project) (MET)
IPTT Indigenous Plant Task Team
IRDNC Integrated Rural Development and Nature Conservation
KM Kalahari Melon
KMS Kalahari Melon Seed
KNC King Nehale Conservancy (Omuthiya)
MCA Millennium Challenge Account
MAWF Ministry of Agriculture, Water & Forestry
MET Ministry of Environment & Tourism
MTI Ministry of Trade & Industry
NAB Namibian Agronomic Board
NACSO Namibia Association of CBNRM Support Organisations
NBRI National Botanical Research Institute
NCD North Central Division (MAWF)
NCRs North Central Regions (i.e. Omusati, Oshana, Ohangwena, Oshikoto)
NNFU Namibia National Farmers’ Union
OCT Onankali Community Trust
OOP Oontanga Oil Producers cc
PTA PhytoTrade Africa (The Southern Africa Natural Product Trade Association)
RDC Rural Development Centre
RF Rössing Foundation
RFCs Regional Farmers’ Co-operatives
SADC Southern Africa Development Community
\ tonne (1’000kg)
TBSI The Body Shop International
TTP Tulongeni Twahangana Producers (Eenhana/Epembe)
## Workshop objectives:

1. To review the progress of the 2008 KMS marketing campaign
2. To prepare the KMS promotion campaign for the 2008/09 production & marketing seasons
3. To plan the field-testing of improved KMS planting seeds (selected crosses from the Breeding project)
4. To strengthen the KMS industry stakeholders’ forum following the 1st industry meeting (March 08)

### DAY 1:

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<td>Registration</td>
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<td>8:30 - 8:45</td>
<td>Opening: welcome and prayer</td>
<td>S. Carr</td>
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<td>8:45 - 9:15</td>
<td>Introduction to the workshop: objectives and programme</td>
<td>M. Mallet / All</td>
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| 9:15 - 10:30 | **1. Progress & constraints of the 2008 marketing campaign:**  
- Views from producers (NCRs, Caprivi, Kavango)  
- Views from processors  
- Views from support organisations | M. Mallet / P. Phillipus |
| 10:30 - 11:00 | Tea break                                                                                 |                         |
| 11:00 - 12:00 | **Progress & constraints of the 2008 marketing campaign:**  
- Discussions and recommendations | M. Mallet / P. Phillipus |
| 12:00 - 13:00 | **2. Preparing KMS promotion for 2008/09 production season:**  
- Presentation, discussion and resolutions | M. Mallet / P. Phillipus |
| 13:00 - 14:00 | Lunch                                                                                      |                         |
| 14:00 - 15:30 | **3. KMS Breeding & field-testing of improved planting seeds:**  
- Presentation  
- Discussion and resolutions | M. Mallet / S. Carr     |
| 15:30 - 16:00 | Tea break                                                                                 |                         |
| 16:00 - 17:00 | **4. Preparing the 2009 marketing campaign:**  
- Improvements needed  
- Discussion and recommendations | M. Mallet / P. Phillipus |

### DAY 2:

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| 8:00 - 8:30 | Recap of Day-1  
Developments since the last meeting in March | M. Mallet               |
| 8:00 - 10:30 | **5. KMS industry development:**  
- Strengthening the good reputation, developing a code of practice  
- Discussion and resolutions | M. Mallet / P. Phillipus |
| 10:30 - 11:00 | Tea break                                                                                 |                         |
| 11:00 - 13:00 | **6. KMS industry forum:**  
- Roles of stakeholders, plan of action  
- Discussion and resolutions | M. Mallet / S. Carr     |
<p>| 13:00 - 14:00 | Lunch                                                                                      |                         |
| 14:00 - 15:00 | Summary of the way forward                                                               | M. Mallet               |
| 15:00 - 15:30 | Conclusion and recommendations, closing of workshop                                       | S. Carr                 |
| 15:30 - 16:00 | Workshop administration: transport allowance payment                                       | CRIAA SA-DC             |</p>
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<td>Ongha</td>
<td>Meryam Kautwima</td>
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<td>1</td>
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<td>1</td>
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<td>I. Johannes Shali</td>
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<td>1</td>
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<td>Uukumwe RFC (Oshikoto)</td>
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<td>Selma Nakaziko</td>
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<td>Johanna Uupindi</td>
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<td>MTI</td>
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</tbody>
</table>

**Total Participants:** 28
Background
The supply of KMS by small-holder farmers and the marketing of KMS Oil have been supported by the Indigenous Plant Task Team (IPTT) since its start in 2000. The National Botanical Research Institute (NBRI) contributed to the development of this sector by collecting *Citrullus lanatus* landraces (traditional varieties) in northern Namibia, describing them and storing seeds in the National Plant Genetic Resources Centre. Initial evaluation of these landraces for their suitability to produce KMS oil was carried out in 2003-2005 and forms the basis of the breeding project.

The continued support to the sector resulted in steady growth in production, as well as market demand. The IPTT in collaboration with CRIAA SA-DC and the NBRI has since drawn up a development plan for the KMS sector, of which this project is a part. It is planned that the results of the breeding project are channelled directly to KMS growers in order to contribute to the improvement of quantity and quality of KMS oil produced.

Aims
Close collaboration between producers, processors and the final market of the oil has made it possible to clearly define the aims of the breeding project.

- Cosmetic market requirement: high quality oil with a high percentage of linoleic fatty acid
- Agricultural production traits: good germination, ability to perform well under dry and hot conditions, number and size of fruit produced, percentage of seed per fruit, seed mass per fruit
- Processing characteristics: high oil content of the seeds.

Method
The trials conducted through the NBRI identified six *Citrullus lanatus* landraces that carry characteristics needed to produce KMS oil. However, these characteristics need to be combined into a single variety. The method followed involves the crossing of the parent lines in all possible combinations by manual pollination. The crosses are then planted out and evaluated for the characteristics under selection. The crosses that perform above average for more than three of the traits under selection are then used as the parents of the next crosses.

Progress
So far two cycles of crossing and then selection have been carried out. The third crossing generation is currently been grown. Progress in selection has been relatively fast as it was possible to grow the crossing population as well as the testing population consecutively in one season. It is therefore possible to already make superior crosses available for testing by KMS growers.

Field testing of selected KMS crosses
KMS growers are given the opportunity to test the selected crosses, which combine the desired traits. The success of the breeding project partly depends on the feedback given by growers on the performance of the crosses in comparison to the usually grown KMS. Growers are requested to grow seeds of the selected crosses in the same way they grow their traditional oil melons. Plants should be marked with numbers to be able to identify them. The characteristics that are important to growers should be noted. Then the crosses as well as the melons grown from own seed should be evaluated and compared for those characteristics.

Next steps
The breeder will be given feedback on the evaluations in writing or even in the form of a meeting. It will then be decided how the feedback information can be used to further guide the breeding project in taking up new selection criteria or perhaps redirect some existing criteria.
The Kalahari Melon Seed Breeding Project

Selected KMS crosses for evaluation by KMS growers in Northern Namibia 2008/09

KMS 07-2

- Round to elongated fruit
- Seeds white with red border
- Good germination
- Average fruit mass of 1.5 kg
- 3.2 % of fruit mass are seeds
- 32 % seed oil extracted
- 67 % linoleic acid in seed oil

KMS 07-17

- Elongated fruit
- Seeds white with red border
- Average germination
- Average fruit mass of 1.4 kg
- 3.5 % of fruit mass are seeds
- 32 % seed oil extracted
- 67 % linoleic acid in seed oil

KMS 06-27

- Elongated fruit
- Brown – black seeds
- Good germination
- Average fruit mass of 1 kg
- 3.5 % of fruit mass are seeds
- 26 % seed oil extracted
- 69 % linoleic acid in seed oil

Compiled by Bianca Braun
Press clipping on the workshop
(New Era, 5 December 2008)

Local Oils Find Foreign Markets

By William J. Mbungu

OSHAKATI – Marula and watermelon seed oil have effectively entered the international market as cosmetic ingredients.

Spearheaded and co-ordinated by the French non-governmental organisation, the Centre for Research, Information, Action in Africa (Cria), in conjunction with local stakeholders, the project has become a milestone in the development of the natural oil industry in Namibia, mainly because of expanding market opportunities for indigenous natural products.

Cria Executive Director Michael Mallett told New Era that the Kalahari melon seeds (KMS) and marula products are raising increasing interest in Namibia and internationally, as diversified sources of income for women producers, commercial farmers, conservancies and community forests. KMS oil processors at Otosungwa are currently expanding their operations to respond to local and international market demand. Only recently, Cria conducted a workshop at Ongwediva Rural Development Centre attended by natural resources industry stakeholders to review projects, prepare promotion campaigns for the production and marketing season, plus the field-testing of improved planting needs and strengthen the industry stakeholders forum. Stakeholders were also briefed about and discussed the emerging melon seeds industry and value-chains in Namibia and SADC region, and the reputation and quality of the product on which the niche market is based. Participants at the workshop were from the ministries of Agriculture, Water and Forestry, Trade and Industry, and Environment and Tourism.

Others were from Edafano Women Cooperative, Oshakati Community Forest Project, Onhanga Oil Producers, Kung Nebale Conservancy, regional farmers cooperatives from Okahandja, Oshana, Okahandja and Otosungwa, Böbling Foundation, the Namibian Agronomic Board as well as conservancies and community forest projects in the Caprivi and Kavango regions.

Similar workshops were held recently at Kungola for the emerging melon seeds producers of the Caprivi and Kavango regions. Said Mallett: “As far as we are concerned, planting and co-ordinating the industry’s scaling-up is becoming a crucial challenge. Industry stakeholders need to consult each other and decide on the best practical way forward.”