



THE INCO MARAMA II PROJECT

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<http://www.marama.life.ku.dk/>

MARAMA



What is INCO MARAMA II

**Development of
Innovative and
Healthful Marama
Bean (*Tylosema
esculentum*) Products
Targeting Niche
Markets**



A TAILING MARAMA PLANT

THE INCO MARAMA II PROJECT

- Starting date: 1 Jan 2007
- Duration: 3 years
- Budget from EC: 1.3 million
- 7 Consortium members representing 3 African and 3 European countries



A MARAMA CRACKING PASTIME???



Partners



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MARAMA BEANS

➤ Marama bean is an underutilized legume crop native to the Kalahari Desert and neighbouring sandy regions of Botswana and Namibia and the Transvaal region of South Africa.

➤ It forms part of the diet of the indigenous population in these countries





A FRESH AND FLESHY MARAMA BEAN



TAILING FORM OF MARAMA PLANT, WITH A BIG TUBER BELOW



MARAMA BEANS ROASTED IN HOT SOIL



MARAMA BEANS READY FOR SALE



MATURE GREEN AND DRY PODS AND BEANS

Tylosema beans



Tylosema fassoglensis

Flat seeds



Tylosema sculentum

Rounded seeds

Picture gallery



MARAMA BEANS WITH NATURALLY OPENED PODS



**MARAMA BEAN A PLAY THING???- NO
MAP OF BOTSWANA**



**A BIG DUG OUT MARAMA TUBER BELOW
GROUND SURFACE**



**A BIG DUG OUT MARAMA TUBER BELOW
GROUND SURFACE**

Context and objectives:

- To improve food safety and diversify livelihoods for poor people in Southern Africa through the development of healthful marama bean products.
- The products will be targeted to niche markets initially in Southern Africa as well as internationally.



Activities



- To work closely with small and medium enterprises (SMEs) in Southern Africa
- Gain knowledge for commercial processing of the marama bean, including factors which influence the product quality.

Specific Activities

1. Conducting consumer and market studies in Southern Africa to investigate the acceptability of marama bean and its products and to identify potential target markets for the products
2. Optimizing post-harvest methods for dehulling and processing the beans for development of a range of high quality value added marama-based food products including marama oil, marama texturized protein products, roasted marama nuts and marama milk



A HEAVY TUBER ABOUT 20KG

Activities

- To work closely with small and medium enterprises (SMEs) in Southern Africa
- Gain knowledge for commercial processing of the marama bean, including factors which influence the product quality.

Specific Activities

3. Evaluating the quality of the processed products including texture, flavour and taste, and the shelf life of the products during storage
4. Evaluating the health benefits of the marama bean and its products by investigation of anti-microbial activity; immunomodulatory and physiologic activities; antioxidant activity; direct anti-HIV properties and anti-carcinogenic activity on different cancer cell lines



A HEAVY TUBER ABOUT 20KG

Expected results and outcomes:

MARAMAII will add valuable information about the potential use of marama beans due to greater knowledge of how to produce marama bean products, factors influencing the shelf life of the products, and the nutritive value and potential antioxidant and anti-carcinogenic activity of marama beans and products. Manuals for production of the marama bean products will be part of the outcome.



Expected results and outcomes:

The project is expected to create awareness amongst the stakeholders of:

- the agricultural value chain of the potential of marama
- the range of products that could be produced
- the quality and desirable attributes of the bean and value added products
- the health effects of consuming the beans and products
- potential target markets for the bean products



A ROASTED AND CRACKED NUTTY MARAMA SNACK

Attempted Products



Marama oil –
Unsaturated, comparable
to Olive Oil_ UB



Marama butter- Yummy
NFTRC Botswana



Marama roasted nut snack-
Crunchy
NFTRC Botswana



Marama roasted-cracked
nuts, Jwaneng -Botswana



Marama milk processing process- Tasty, NFTRC
Botswana

Other products expected



Marama flour???
To be attempted –
University of Pretoria



Marama Nut Cookies???
Biscuits??? _ UP



Various marama snacks??



TAILING FORM OF MARAMA PLANT, WITH
A BIG TUBER BELOW

Tylosema esculentum



DRY OPEN PODS – BROWN
AND SOME GREEN



A MATURE MARAMA POD ATTACHED TO PLANT

- New application already foreseen
- New projects – new partners – new collaborations