



THE INCO MARAMA II PROJECT

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



















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 3African and 3 European countries







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



AN OPENED FRESH POD WITH TWO FRESH BEANS









A FRESH AND FLESHY MARAMA BEAN



TAILING FORM OF MARAMA PLANT, WITH A BIG TUBER BELOW





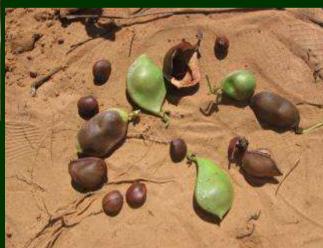




MARAMA BEANS ROASTED IN HOT SOIL



MARAMA BEANS READY FOR SALE





MATURE GREEN AND DRY PODS AND BEANS









Tylosema fasoglensis

Flat seeds



Tylosema beans



Tylosema sculentum

Rounded seeds





Picture gallery



MARAMA BEANS WITH NATURALLY OPENED PODS



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



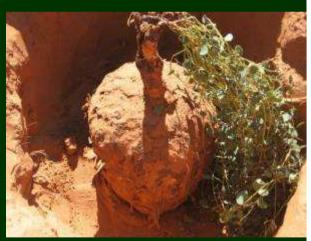






A BIG DUG OUT MARAMA TUBER BELOW GROUND SURFACE





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.



A HEAVY MARAMA TUBER ABOUT 20KG – Jwaneng Botswana





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



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- ➤ 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









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



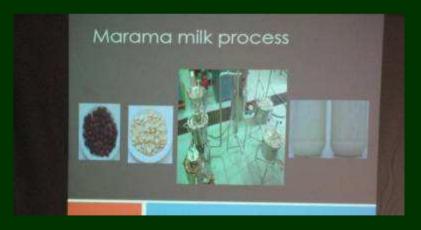
Marama butter- Yummy NFTRC Botswana



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??











Tylosema esculentum

TAILING FORM OF MARAMA PLANT, WITH A BIG TUBER BELOW

DRY OPEN PODS – BROWN AND SOME GREEN



A MATURE MARAMA POD ATTACHED TO PLANT

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