

COMMENTARY**INDIGENOUS KNOWLEDGE OF HEALTH BENEFITS OF MORAMA
PLANT AMONG RESPONDENTS IN GHANTSI AND JWANENG AREAS OF
BOTSWANA****Chingwaru W, Faria ML, Saravia C and A Cencic***

This field survey was carried out under the auspices of the INCO Morama II research project, which sought to assess the benefits of the consumption, domestication and commercialisation of morama beans, especially to the communities where the beans are found, mainly in drier parts of Botswana, Namibia and South Africa. The survey sought to obtain information on the health benefits of morama plant among the population living in areas where morama beans grow, in the Ghantsi and Jwaneng areas of Botswana. This survey was preamble to the laboratory research seeking to establish the exact mechanisms by which morama beans and tubers helped in immune-modulation and treatment of diseases, which was underway at the time of this communication.

With problems of malnutrition due to droughts, famine, poverty, wars as well as diseases associated with loss of immunity, developing crops with nutritional and medical importance, and commercial potential, is paramount to the people affected and to the world at large. Can morama plant offer these benefits?

Morama (*Tylosema esculentum* and *T. fassoglensis*) is a leguminous plant, the beans and tuber of which are mainly gathered from the wild and eaten by the San people and other groups (BaKgalagadi, for instance) of Southern Africa, and is largely unknown to the rest of the people in Africa, [1]. It is considered 'under-utilised', although care has to be taken to prevent loss of heritage of the indigenous people should the plant be commercialised. Morama beans are widely believed to have potential to solve world's nutritional deficiencies, and in fighting of diseases due to their chemical composition. Morama beans, like other beans, are known to be rich in proteins (32-45%) and unsaturated fatty acids (30-42%) of its large seeds (20-30g), phytoestrogens, (especially flavonones), phytates and trypsin inhibitors, among many nutrients [1, 2].

Discussions with focus groups and key informants (villagers, headmen, traditional healers, clinic nurses and traditional midwives) were carried out, asking general questions on food habits, their socio-cultural profiles, and specific questions on health benefits of consuming morama plant parts. Generally all people in the discussion groups said they knew morama beans were good to human body, but they did not know the specific nutrients contained. All respondents had eaten the bean, roasted or boiled. They also stated that they like these beans very much. They compared their taste to peanuts, and stated that morama beans make one feel satisfied after consumption. Some stated that they would prefer morama to meat. There was consensus that eating morama makes one energetic, gain weight, to feel good, and want to drink more water. Generally the beans are boiled when still young and tender, and the dry beans are roasted in charcoal heated sand (*in situ* on ground or in a pot).

Although respondents relied on formal modern medicine, some also used traditional medicine and consulted traditional doctors for treatment of and relief from various health problems. Knowledge of the medicinal uses of morama seemed to be privy to traditional healers and traditional birth attendants. Those who used medicine from traditional practitioners did not know most or all the herbs included in the concoctions since the practitioners did not disclose such information. Only those members of the community who had acquired such knowledge from their ancestors would gather the medicines themselves. For common ailments there was communal knowledge of the herbal medicines to take.

There was a claim that eating morama beans makes one live longer. Morama bean extract was reported to treat diarrhoea. Very few people confirmed consuming the morama tuber. The tuber can be consumed when it matures, otherwise one can vomit; however, it was claimed that children can eat the uncooked immature tuber without problems. A mixture of morama tuber and *Harpagophytum procumbens* (devil's claw) was claimed to boost the immune system. Liquid extract from the morama tuber on its own, or mixed with ground *Acacia nigrescens* (mokala) bean and ground *Acokanthera oppositifolia* (serokolo) tuber, was being used to treat diarrhoea, stomach cramps, headaches, to prevent hypertension, and to 'clean out' infections from the body upon vomiting. A mixture of morama root and leaves can be ground and made into tea, which helps to improve women's health, especially in post menstrual periods. Some people stated that morama bean can be fed to lactating mothers to enhance milk production. A mixture of pound and roasted morama bean and tuber can be fed to children and nursing mothers to improve their appetite and to enhance milk production in the latter. One traditional healer reported that a ground mixture of morama beans and *Ntcono* (a wild cucumber), is used to make tea, which works as a food supplement for undernourished children. Morama beans were reportedly being fed to children born from HIV infected mothers as a supplement in the Prevention of Mother-to-Child Transmission of HIV (PMTCT) programme. There was also a sentiment that consumption of morama beans improves blood circulation. Morama beans can be mixed with *Prunum* (red berry/morotologa) to make a chest rub which soothes against flu attack, generally improving breathing. A few of the respondents revealed that morama oil extract can be used as a body lotion to prevent itchiness of the skin. The oil is also used ritually as a cleanser for girls after their first menstruation. The high oil content of the bean was said to prevent constipation as it lubricates the alimentary contents, some asserted.

Most respondents did not know any side effects of moderate consumption of morama beans; however, over consumption was reported to cause diarrhoea and flatulence. Some people could eat lots of morama beans to make themselves develop diarrhoea, as a way to 'clean' the alimentary canal, and to prevent constipation. In one instance, it was stated that consumption of morama beans can cause heart problems due to their high oil content. Largely, these effects depend on individuals.

In conclusion, morama beans and tubers were claimed to have nutritional and medical importance; the people who consume it knew about its nutritious nature. Morama is

largely an invincible part of the heritage of the people in the sites visited; they all showed interest in the development of the bean for their livelihoods, its availability now being affected by water unavailability and land use policy changes. Development of morama production technology is one of the ways to improve food security and combating diseases affecting the communities where the plant is found. Nevertheless, domestication of morama needs to involve indigenous populations and use of already existent participative structures. Know-how as well as technical and economic support have to be provided to local farmers and a general state orientation has to be intertwined with such in-site NGO's and other local agencies, preventing loss of heritage of the indigenous people, should the bean be commercialised.

REFERENCES

1. **Fox FW and ME Norwood-Young** *Food from the veld*. Delta Books, Johannesburg. 1982.
2. **Mbewe MN** The domestication of Marama beans (*Tylosema esculentum*) Proceedings international Conference on the development of new crops, Jerusalem, Israel. 1992.