

## SYNTHESIS OF THE THEMATIC DISCUSSION ON NUTRITION AND HEALTH

### 1. STATE OF KNOWLEDGE

Know many antidotal-type facts/stories about Moringa & Nutrition:

- We have seen it reduce levels of Malnutrition in infants within 2 – 4 weeks.
- We have seen it help children maintain body weights and energy level.
- We have seen it increases productivity through better school marks and work strength.
- We have seen it reduce children's susceptibility to other diseases (i.e. measles, parasites, respiratory infections).
- We have seen it assist mothers who were anemic.
- We have seen it help increase the production of mother's milk.

Know from the analysis of vitamins, minerals and amino acid contents of Moringa, thus we can *project* benefits and best consumption quantities (in comparison with standard RDA of vitamins/minerals/amino acids).

To treat mild to moderately malnourished children, it has been suggested that one should supplement 1 tablespoon of Moringa powder to every meal; assuming that a recovering child will eat several small meals per day, with an increasing appetite.

To maintain a healthy diet, it has been suggested that one should supplement 1 teaspoon of Moringa powder to each meal; assuming that individuals will eat 3 times a day.

For an anemic and/or pregnant woman, and for lactating mothers, it has been suggested that Moringa consumption should vary per hemoglobin levels; yet the consumption as per the maintenance of a healthy diet would be the baseline.

For general family health, Moringa – in any form (leaves, powder, fruit etc) – should be added to each meal.

Know from the scientific/academic world that Moringa may potentially play an important role in medicine as ideas shift from those of infectious diseases to lifestyle diseases and from curative medicine to preventative medicine. This is particularly relevant in the context of the Developing World given their available resources.

Some examples of today's diseases are: HIV/AIDS, hypertension, type II diabetes, blood pressure, parasitic infections.

It is also believed that Moringa may play the role of antioxidant (given its presence of A, E, C), thus potentially adding to the benefits of Moringa consumption with regard to the fight against old age, heart diseases, cancer, Alzheimer's, respiratory distress syndrome, immune injuries (rheumatoid arthritis, lupus), and AIDS.

Current research is encouraging with regard to Moringa's possible attributes in strengthening the immune system to fight off diseases such as: malnutrition, sexually transmitted infections, tuberculosis, opportunistic infections, and parasitic infections. These are each contributing to the development of AIDS and are often very dangerous.

Thus, given its presumed nutritional values, Moringa may potentially aid in the fight against diseases that work to break the body down (i.e. nutritionally, Moringa may help to support the immune system, thus possibly delaying the onset of AIDS from HIV).

Additionally, it is hoped that further research will confirm Moringa's possible role in providing local treatment (where modern technologies are not available) of diseases such as diabetes and osteoporosis.

We know the potential versatility of Moringa and Moringa byproducts:

Moringa may be used as food – a direct source for alimentation or an ingredient in preparations. As such, there are many preparations and ways of consuming Moringa:

- Leaves: in sauce – either whole or as powder, added to porridge, as a spice or as juice;
- Pods/fruit: added to stews/sauces, as a vegetable;
- Seeds: grilled as nuts; and
- Roots.

Many cultural/traditional stories of other medicinal purposes/uses of Moringa. Moringa may also be used as a food additive: organizations are currently exploring the possibility of Moringa's industrial use, as an additive to other common goods (i.e. fortifier).

We know (from a food security view) that Moringa meets the "needs" or requirements of local populations in terms of its: availability, accessibility, utilization.

Availability:

Moringa is already growing (& may be grown) across Sub-Saharan Africa.  
Moringa is spontaneous in many regions.  
Moringa is hearty and drought "tolerant".

Accessibility:

Cost per quantity/consumed is currently very inexpensive thus making Moringa accessible to very poor populations (unlike imported medicine, food goods or other supplements).  
May be most accessible through subsistence agriculture activities:  
by health centers themselves where it is suggested that centers grow intensive plots of 3 sq. meters and a small number of full-grown trees in order to have access to pods & seeds).  
by farmers themselves where it is suggested that farmers grow 2 to 4 trees, and possibly allowing Moringa to naturally evolve into more.

Utilization:

Local populations can easily learn the various uses and preparations of Moringa because a) many are already familiar with the tree; and/or b) Moringa mirrors other indigenous crops/preparations.

## **2. STATE OF THE UNKNOWN (AND POSSIBLE AREAS FOR FURTHER EXPLORATION)**

### **2-1 Moringa is virtually an unknown.**

Currently, Moringa promotion and use is inhibited by the lack of awareness of Moringa's potential attributes and thus, the relatively few organizations/institutions involved with Moringa research and promotion. Specifically, there is a lack of:

Intellectual support  
Networks and wide-range dissemination/reach capacities  
Resources (both financial and human) to fuel Moringa's promotion.

In comparison to the "Knowns" – we know that both the satisfaction and the sustainability of Moringa are high. Specifically, Trees of Life indicated a behavioral change in regular use of Moringa from 34% to 80% after an intensive promotion program.

Additionally, we "Know" that Moringa is being used and studied worldwide. What is now needed is an exploration of experienced and respected channels so that promotion of Moringa's uses can be more intensive and backed with the results of various Moringa studies.

### **2-2 Promoters of Moringa need to know how to more respectfully promote it in both national and global markets.**

Specifically, all Moringa players need to consider the methods and language used in Moringa promotion and pay heed to maintain a professional stance, without incidences of false claims, inadequate documentation, or an overabundance of antidotal information. Specifically, in order to increase Moringa's reputation as a true player in the nutrition field, promoters should:

- Identify respectable dissemination channels.
- Use culturally appropriate interventions and language.
- Seek more documentation of valid research results from other Moringa Players.
- Seek statistics both before and after Moringa interventions, thus creating baseline studies from which one can monitor or chart the progress made with Moringa.
- There are many individual Moringa experts who are unfortunately duplicating both efforts and resources, thus it would do all Moringa Players good to establish a system of information exchange and communication.

Currently there is very inconsistent terminology being used to describe Moringa and its "potential" attributes. All Moringa Players must take care to speak in terms of possibilities until concrete and accredited research is available to prove otherwise.

The more unsubstantiated claims Moringa Players make, the slower will be Moringa's acceptance and respectability.

### **3. PRIORITIES FOR FUTURE ACTION**

#### **3-1 More Research.**

This includes:

- More general documentation of Moringa's affects; more baseline studies; more research progress reports.
- More academic information/research, specifically in Moringa nutrients bio-availability, means and levels of preparation/consumption; doses (per varying age ranges – children, pregnant mothers) when used as a nutrition supplement, etc.
- More overall research regarding Moringa's possible contribution to the fight against: HIV, hypertension, opportunistic infections, skin conditions, etc.
- More research regarding Moringa cultivation. Specifically including methods for both intensive leaf production and seed/pod production; exploration of agricultural and nutritional attributes of other Moringa species, and exploration in seed selection as it relates to leaf growth, pod growth, speed, size, taste, etc.

It is up to us, the Moringa Players, to generate an INTEREST within the scientific, nutritional, medical and academic community, to encourage and finance more research.

#### **3-2 Establishment of Effective Social Marketing Plans.**

This includes:

- Documenting ways of conveying/sharing Moringa information – paying particular interest to the language used and "not used." It is important to only convey/share what is known, and clearly state that "the rest" is still being researched.
- Document and share innovative and successful way of cultivating people's interest.
- Maintain an awareness of the cultural context of each individual situation/location, and thus incorporate the appropriate sensitivities into Moringa campaigns.

Possible channels for Moringa promotion are:

- Local and National Governments, specifically their Departments of Health, Agriculture, Rural Development, Education and Women & Family.
- International organizations able to create, implement and/or financially support Moringa/Nutritional/Agricultural campaigns.
- Local non-governmental organizations (NGOs) involved with nutrition, food security, agriculture, women and children, etc.
- Religious Organizations who may be able to promote Moringa via their ecumenical channels as well as their community outreach programs.
- Schools, where teachers instruct children who in turn take the knowledge home to their parents.
- Secondary school students, where they may practice both agriculture and health related activities, as well as produce local Moringa for school consumption.
- Other valuable individuals to be incorporated in Moringa promotion activities include: Farmers Associations; Agriculture Extension Agents; Healthcare workers; Mid – wives; Forestation agents; Farmer to farmer programs; Mother to mother programs; Specific organizations working with or for children; and Prisons.

Possible tools for Moringa promotion are:

- Mass media and computers (i.e.: TV, Radio, Films, Videos, Music, and Skits).
- Books, booklets, comic books, pamphlets.
- Story boards and posters.
- T-Shirts and hats.
- Advertising campaigns.
- Community field days.
- Demonstration fields.

**3-3 Create Moringa Standards, in order assure quality promotional activities and present a united Moringa front.**

This would include:

- Documenting appropriate terminology and then dissemination among Moringa Players/Promoters.
- Establishing consistent quality standards for Moringa (meaning ways in which it is dried/processed in order to ensure relatively little change in the levels of nutritious elements).
- Emphasize Moringa's major contribution to the development field - - its availability as a sustainable local/indigenous resource.

**3-4 Create a Moringa Network**

In order to fulfill the many suggestions and ideas that come from this presentation, and in order to maintain the momentum that has been established at this International Moringa Conference, it is suggested that we should create a network of Moringa Players. This network could possibly be established via a website, or by linking each other by an internet Newsletter. Suggested topics for sharing are:

- New research
- New ideas (promotion, agriculture, consumption, oil production, water purification, etc.)
- Database of common "Standards."
- Links to other organizations.