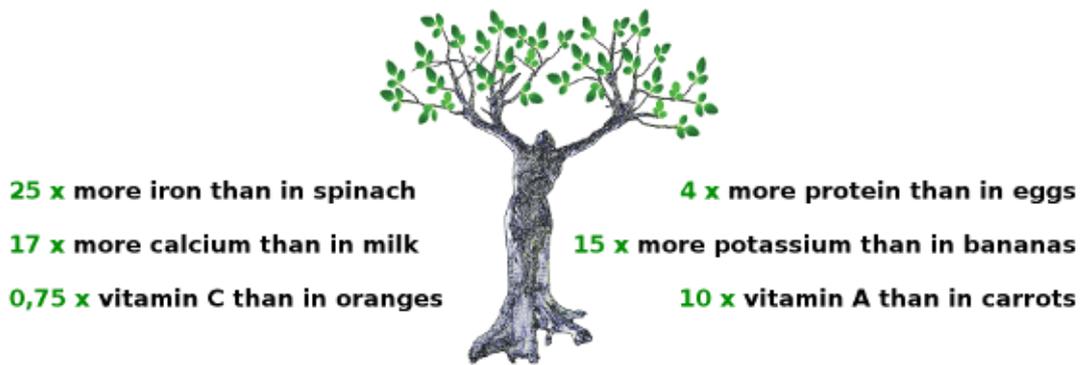


**Moringa Oleifera**  
**The Queen of Green!**



## Moringa - One superfood to rule them all!



Moringa Powder

[Moringa Oleifera Trees](#) has been identified as the vegetable with the highest nutritional value among many types of food species studied. Easy to cultivate and resistant to drought, the Moringa tree produces abundant leaves with a high concentration of proteins, vitamins, and minerals: 100 grams of fresh Moringa leaves provide the same amount of protein as an egg, as much iron as a steak, as much Vitamin C as an orange, and as much calcium as a glass of milk.

Given the world food crisis, the use of local resources like Moringa is critical to reduce the dependence of developing countries on imported goods, and to improve nutrition among poor households. Two or three trees in a courtyard are sufficient for the needs of one family.

## The Miracle Tree

Moringa Oleifera  
A Powerhouse of Nutrition



# Moringa Oleifera

## The Ideal Food for Obese and Malnourished

### Moringa leaves powder RDA

Nutrient in Moringa leaves powder	%RDA in 25g Moringa leaves powder for children	%RDA in 50g Moringa leaves powder for pregnant women
Protein	42%	21%
Calcium	125%	84%
Magnesium	61%	54%
Potassium	41%	22%
Iron	71%	94%
Vitamin A	310%	162%
Vitamin C	22%	9%

### Grow Your Own Multivitamin!

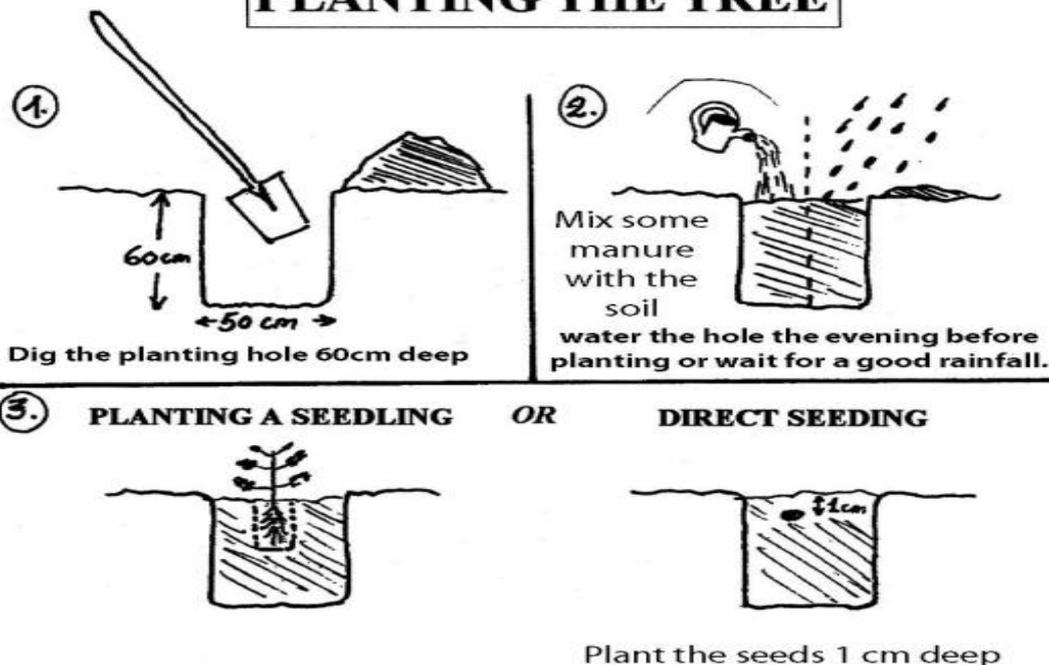


Germinate seeds, and it will produce Moringa trees that grows rapidly and continues to shower you with nutrients and more seeds for years to come. The Moringa plant is a fast growing tree that can go from seeds, up to 3 meters in its first year. Imagine all the possibilities moringa trees will give?

#### Moringa Plant, Grow, Cultivation

1. Find a sunny place.
2. Make square holes in the ground 30 to 60 cm deep
3. Fill the hole with loose ground
4. Plant the seed 1 cm deep
5. Give the ground some water but not too much, otherwise the seed may rotten.
6. Within 1-2 weeks the Miracle springs out the ground!

### PLANTING THE TREE



## Is Moringa maybe the best solution for urban agriculture?

Urbanization is changing human demands and straining natural resources. In order to support this lifestyle, the cities must adapt. The current trend of urbanization means that without making our cities more sustainable, there is little hope for a sustainable world.

Growing urban food in community orchards, market gardens, allotments, school grounds, as well as in private gardens, has numerous social, environmental and economic benefits. For example, it can reduce food miles and encourage people to eat more healthily... **Talking about eating healthily, there comes Moringa :)**

### How to Grow Moringa in a Square Meter



- Measure an area of land 4 m<sup>2</sup> to recondition the soil in the measured area by digging 2 ft deep and mixing the soil with equal proportion of manure and filling it back into the pit.
- Water thoroughly and allow the resulting mixture to decompose
- Divide the pot into four beds by crossing a piece of board to allow a passage
- Sow your moringa and harvest after 60 days of growth

### **Moringa Oleifera: a sustainable solution against malnutrition**

All year round fresh leaves that can feed a family of five for at least ten years with good nutritious moringa leaves and contribute to a sustainable livelihood.

**The ownership of one Moringa tree can make an enormous difference to a family's livelihood**

## **Moringa oleifera**

### **A plant with multiple medicinal uses and benefits**

Most parts of the Moringa tree are used in medical science. Traditional cultures in various parts of the world have long used Moringa in their herbal medicine repertoire for ailments ranging from gout to various inflammations and fevers. Every part of the Moringa tree has been used effectively against varying ailments.

Moringa can act as cardiac and circulatory stimulants, possess antitumor, antipyretic, antiepileptic, anti-inflammatory, antiulcer, antispasmodic, diuretic, antihypertensive, cholesterol lowering, antioxidant, antidiabetic, hepatoprotective, antibacterial and antifungal activities, and are being employed for the treatment of different ailments in the indigenous system of medicine.



### **MORINGA: A MEDICAL PHARMACOPOEIA**

Moringa oleifera is already highly esteemed by people in the tropics and sub-tropics for the many ways it is used medicinally by local herbalists. Some of these traditional uses reflect the nutritional content of the various tree parts.

- Vitamin A, which acts as a shield against eye disease, skin disease, heart ailments, diarrhea, and many other diseases.
- Vitamin C, fighting a host of illnesses including colds and flu.
- Calcium, which builds strong bones and teeth, and helps prevent osteoporosis.
- Potassium, essential for the functioning of the brain and nerves.
- Proteins, the basic building blocks of all our body cells.
- Its a long list...

**Moringa has been identified as the vegetable with the highest nutritional value among many types of food species studied.**

# Moringa Leaves Powder Preparation

## Wash the Moringa leaves

Wash the Moringa leaves in troughs using clean potable water to remove dirt. Wash Moringa leaves again in 1% saline solution for 3-5 minutes to remove microbes. Finally wash the Moringa Leaves again in clean water. The Moringa leaves are now ready for drying. Drain each trough after each wash: fresh Moringa leaves must always be washed with fresh water.

## Draining the Moringa Leaves

Strain water from the leaves in buckets that have been perforated, spread leaflets on trays made with food-grade mesh and leave to drain for 15 minutes before taking them to the dryer.

## Stripping the Moringa leaf leaflets

Strip all the leaflets from the Moringa leaf petiole. This can be done directly from the branches if the Moringa leaves have not been stripped off the main branch before transportation. At this stage, diseased and damaged Moringa leaves are discarded.

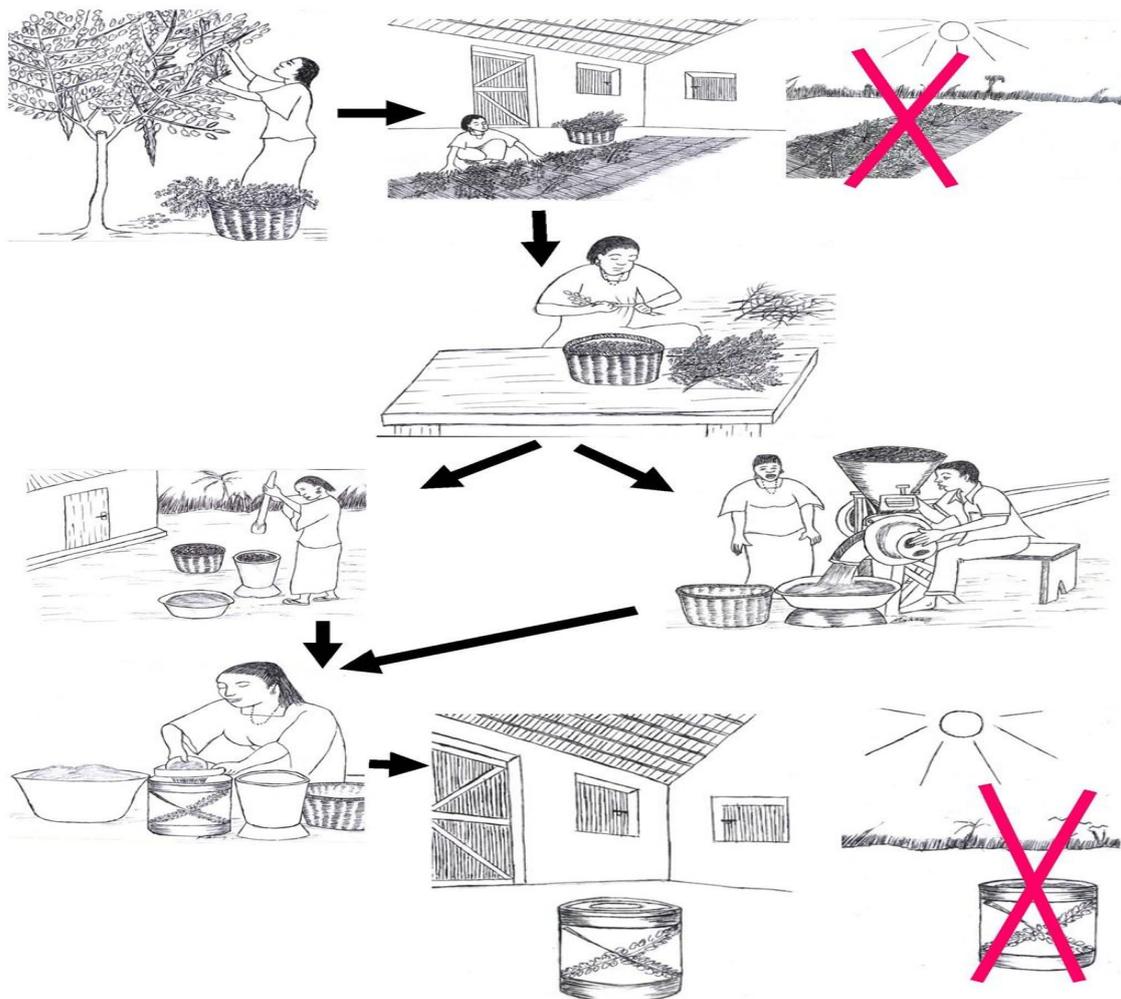
## Moringa Leaves Room Drying

Spread the Moringa leaflets thinly on mesh tied on racks (mosquito net mesh can be used) in a well-ventilated room. This room should be insect, rodent and dust proof with good air circulation.

It is advisable to turn the Moringa leaves over at least once, with sterile gloves, to improve uniform drying. The Moringa leaves should be completely dry within a maximum of 4 days. The loading density should not exceed 1 kg/m<sup>2</sup>.

## Milling the Moringa leaves into Moringa powder

Mill dry the Moringa leaves using a stainless steel hammer mill. The Moringa leaves can be pounded in a mortar, or milled with a kitchen blender. Small-scale processors can use a burr mill or rent a commercial hammer mill for routine milling of their products.



## Moringa Water Purification

Crushed Moringa seeds clarify and purify water to suit domestic use and lower the bacterial concentration in the water making it safe for drinking.

Water from varying sources will need different amounts of Moringa seeds powder because of the impurities present will not be the same. Experiments with a jar will help in working out the correct amount needed.

### How to Purify Water with Moringa Seeds



To purify 20 litres of water:  
De-hull and grind into a powder the seeds of Moringa oleifera.  
Put two heaping spoonfuls of the powder into a small bottle containing clean water.



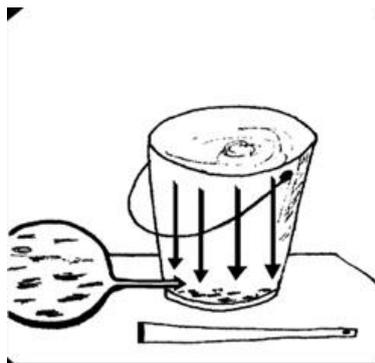
Shake the bottle for 5 minutes.



Filter the water through a cloth into the water to be purified.

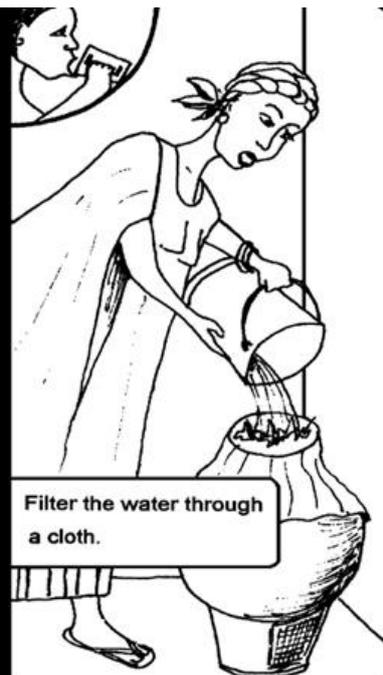


Stir the water rapidly for 2 minutes, then stir it slowly for 10 to 15 minutes.



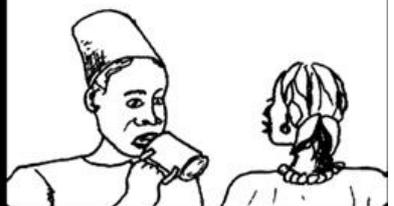
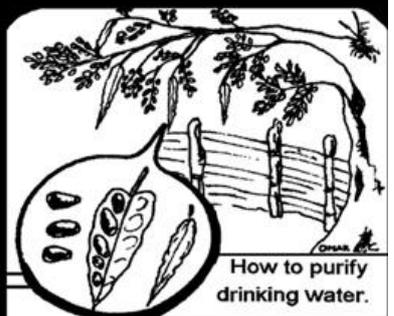
Let the bucket sit undisturbed for an hour, or until the water is clear.

Impurities in the water will sink to the bottom.



Filter the water through a cloth.

**AGADA - C.W.S.**  
B.P. 1000 Ziguinchor, Senegal



For your family's health.

## Moringa Oleifera Oil



Moringa oil is a great alternative in recipes that needs a nutty flavor. It is also a healthier choice to put in stir fry dishes and marinades. You can also use it as dressing for salads and vegetables.

Traditionally used for cooking and in other food preparations. Moringa oil has tremendous cosmetic value and is used in body and hair care as a moisturizer and skin conditioner. It can be used for perfume base as a fuel and for oiling machinery. Moringa oil can also be used to produce soap

Moringa's value has long since been known to the ancients. This may explain why the Egyptians placed vases of Moringa oil in their tombs, for use in the afterlife. It's potent antioxidant profile, which gives the oil its remarkable stability, is also the reason it's included in some of the best skin moisturizers, anti-aging creams, and other skin health products around the world.

### **Small amounts of Moringa oil can provide a more varied and nutritious diet**

Moringa oil is rich in vitamins A and C and unsaturated fatty acids. Moringa oil contains antiseptic and anti-inflammatory properties, which help heal minor skin complaints such as cuts, bruises, burns, insect bites, rashes and scrapes quickly.

### **Moringa oil is a concentrated source of food energy.**



## Moringa as a Climate Change Mitigation Strategy?

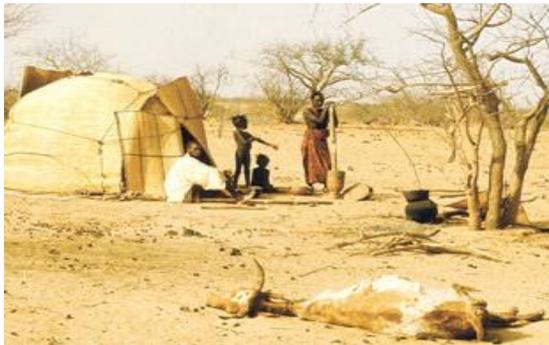
For hundreds of millions of people the threat of famine is connected to the change of the climate. The planting of trees, including the planting of the Moringa tree, can play one important role in mitigating the effects of climate change.



The effects of climate change are making droughts more of a norm than an exception. This is a pattern that places some of the most vulnerable communities in an increasingly precarious position when it comes to meeting basic food needs. By the time shortages and hunger reach "emergency" levels and warrant aid; families, communities, agricultural practices

and lands will have suffered greatly.

**Importing vitamin pills or nutrition bars is not a long term solution for chronic food shortages or climate change mitigation.**



To know which aid is really durable to combat food shortages and efficient for climate change mitigation, it is good to look at the potential that is already available in developing and third world countries. Moringa is a very simple and readily available solution.

For smallholder farmers in drylands, a failed harvest can mean months of malnutrition and hardship. "Conventional" crops are often not native and require expensive inputs, significant irrigation and land preparation in order to produce a successful harvest. This means that they are more vulnerable to droughts. Trees, on the other hand, often survive when other crops fail.

Moringa is a multipurpose plant that is difficult to overlook in today's battle with the climate. It is fast growing and well adapted to growing in adverse conditions where many plants would not be able to requiring at least 400mm of rain per annum. It presents itself as an easy plant for agri-business, poverty mitigation and a climate smart choice of plant to be developed for the benefit of present and future generations.

Sources <http://miracletrees.org/> , [https://www.youtube.com/watch?v=IWXZ47P\\_2BY](https://www.youtube.com/watch?v=IWXZ47P_2BY) ,  
<http://moringatrees.org/> , <https://www.youtube.com/watch?v=EtQRp5hRrQ4>