

MORINGA LEAF POWDER

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INTRODUCTION

The leaves of the *Moringa oleifera* tree are very nutritious. They can be consumed fresh, cooked or dried. Since dried Moringa leaves retain their nutrient content, it is possible to convert them into leaf powder. When there is an abundance of leaves, this leaf powder can be made and stored easily. Moringa Leaf Powder is an excellent nutritional supplement and can be added to any dish.

PLANTING & GROWING MORINGA OLEIFERA

There are 13 identified species of Moringa. The most popular is *Moringa oleifera*, a fast-growing tree grown throughout the tropics and sub-tropics. Moringa grows best at temperatures between 25-35°C (77-95°F); it is fairly drought tolerant but grows best with annual rainfall of 250-1500mm (10-60in); it prefers altitudes below 600m (2000ft) but can survive at 1200m (4000ft) in the tropics; it does not tolerate prolonged flooding or poor drainage; Moringa prefers well-drained sandy-loam or loam with a pH of 5.0-9.0; and it can be propagated by seeds or cuttings.¹

Moringa is a versatile plant that can be grown as a tree or as a "perennial-vegetable" under intensive cultivation. Moringa trees can grow up to 4m (15ft) a year reaching a height of 15m (50ft) and can live for approximately 20 years. Regular pruning or trimming is recommended to encourage branching and leaf production.

Under intensive cultivation, Moringa is direct-seeded or transplanted at close spacings into a fertile garden bed and then regularly trimmed. This intensive method produces the maximum quantity of leaves possible in a small plot. Studies in Nicaragua determined that optimum spacing for maximum production in intensive plots was 10cm x 10cm (4in x 4in). Disadvantages of this method are that it does not allow for seed production and it requires increased maintenance for irrigation, fertilization, and pest control.²

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USING MORINGA LEAF POWDER

Moringa Leaf Powder can be added to any food or beverage and it will increase the vitamin, mineral and protein content. For healthy individuals, a few spoonfuls of Moringa Leaf Powder can be added to any meal to make it more nutritious. Since the nutrient content of Moringa Leaf Powder decreases if exposed to heat, add the powder after the food or drink has been prepared, just before serving.

Moringa Leaf Powder has the greatest impact on those who are more vulnerable: malnourished children, pregnant or lactating women, children at weaning age, HIV/AIDS patients, and the elderly. Malnourished children ages 1-3 years should consume three rounded tablespoons (25g) of Moringa Leaf Powder each day. Pregnant or lactating women should consume six rounded tablespoons (50g) of Moringa Leaf Powder each day. According to FAO/WHO standards, these amounts provide the following in terms of RDA³:

Nutrient	%RDA in 25g powder for children	%RDA in 50g 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%

WEBSITES

MORINGA

<http://moringatrees.org/>

<http://www.moringanews.org/>

<http://www.treesforlife.org/project/moringa/default.en.asp>

http://www.hdra.org.uk/pdfs/international_programme/Moringa.pdf

SOLAR DEHYDRATOR

<http://www.echotech.org/technical/technotes/Solar%20Dehydrator.pdf>

<http://www.i4at.org/surv/soldehyd.htm>

<http://www.pathtofreedom.com/pathproject/offthegrid/solarfooddryer.shtml>

SOURCES

1. Palada, M.C. and L.C. Chang. 2003. Suggested Cultural Practices for Moringa. AVRDC.
2. Foidl, N, et al. 2001. The Potential of *Moringa oleifera* for agricultural and industrial uses.
3. Fuglie, L. 2001. *The Miracle Tree*. Church World Service. p.114.