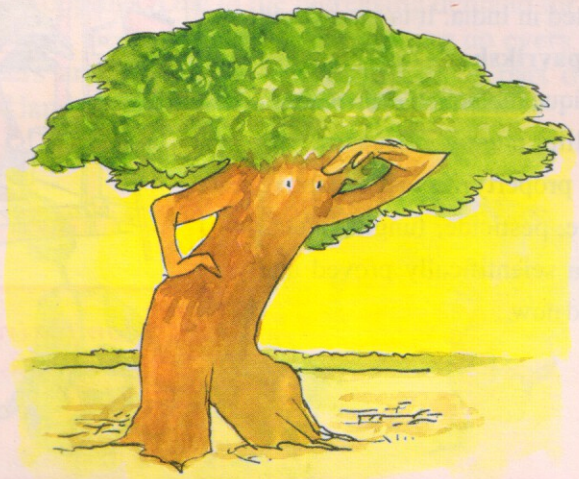
NEEM THE WONDER TREE



And I can survive where
None else can ....

VIVEKANANDA KENDRA

-nardep

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NEEM THE WONDER TREE

Neem is an arid zone tree widely distributed in India. It is considered as **"Kalpavriksha"** a holy plant due to its unique medicinal properties in controlling many diseases. Its unique property as an adaptive medicine, pesticide, fungicide etc., has been scientifically proved and validated now.

You complained of proplem soil, sir?

Neem as an Arid-zone tree

Neem is a highly drought resistant and also water efficient tree, suited to low rain fall area, though it can be cultivated in high rainfall areas also. The drought tolerance of neem have been utilised in agro-forestry. Now it is fast emerging as an economically important tree due to the prevalence of high price for Neem oil, Neem cake, kernel and its timber, the demand for which is steadily increasing year after year.

And i can survive where none else can ...

Cultivation and Establishment by Neem tree

New Neem plantations are raised from seedlings established from bird droppings. Due to the increasing demand for Neem products now, neem plantations are coming up every where and farmers are willing to set aside even a part of their cultivated land for neem cultivation.

I'm Holy

I'm a cash crop

And every part of me is useful

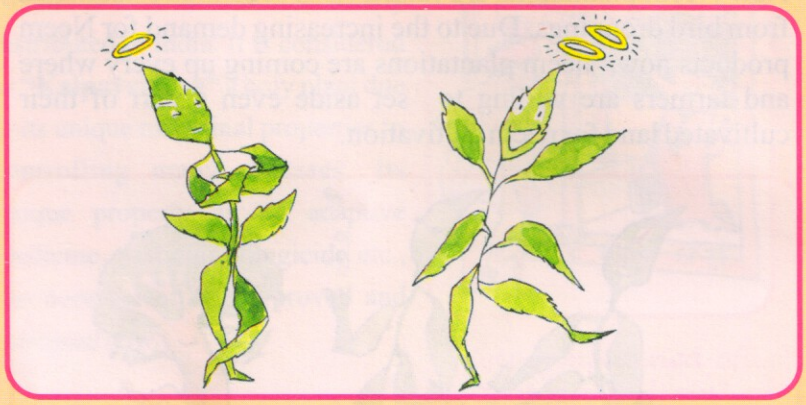
Selection of plus trees.

Though Neem is considered as a **"Tree of National importance",** no improved Neem variety have been developed. so far. There is also many diversity in the quality and yield of Neem tree. So while developing a plantation it is always important to select seeds stock from plus trees for raising seedling.

Some Important characteristics of a "plus tree" (good)

1. Trees having a regular yield.
2. Bigger flower bunches with maximum number of fertile flowers

3. Bigger fruits with strong stalks
4. Trees with early flowering habit
5. Fruits of large size and kernel .



I'm a plus tree

And i'm genetically superior plus tree!

Raising of Seedling

Seeds collected from plus trees, after proper drying, are to be sowed within 3 months as their viability will be lost on prolonged storage. The potting mixture may be prepared with sand, cowdung and top soil at 1:1:1 ratio adding 7 - 10 Kg rock phosphate, 1 Kg Azotobacter and 1 kg phosphobactor. Microbial

oh! they've pampered me lazy ...

bio fertiliser has been found to enhance the growth and establishment of neem seedlings. It is always advisable to plant a year old seedlings preferably just before the on set of south west monsoon, i.e. in June. Our research trials showed that the plant will establish well without any chemical fertiliser.The application of phosphetic and Nitrogen fertiliser enhances the growth but the excessive application of Nitrogen fertiliser like urea invites lot of pest and disease.

Harvesting and yield

A normal plant with average management starts flowering with in 5 - 6 years and regular yields from 7th year onwards. Neem tree is known for its erratic flowering. It is noticed that the flowering will be optimum in arid environment and will be less in humid and moist climate. The tree may not even flower at all in hunid environ ment.

Useful stress is good for flowering.

Tips for optimisation for flowering

Based on our research trials it is found the following environment helps in optimum flowering and yield

1. Branches should be pruned after two weeks after the receeding of the south west monsoon, i.e. in the last week of December. Pruning reduces the Carbon Nitrogen (CN) ratio and also provides a biological stress. which trigger flower initiation.

C.N Ratio:

C.N.Ratio of leaf is also one of the major factors responsible

20 - 30% Pruning please!

for flower initiation. It is found that the ideal leaf C.N. ratio for flowering is balanced 5:1 This can be achieved by balanced manuring and pruning. Extent and timing of pruning also have to be regularised for maximum flower initiation. Pruning of 30% of the inner sub branches of trees with excess growth and 20% of sub branches of tress with normal growth will normally lead to optimum flowering.

Spacing of Neem tree

The minimum space recommended for a neem tree is 3 feet x 3 feet with an average of 500 trees per hectare. For a tree like Neem which normally grow for 60 - 80 years, it is ideal to have 200 - 250 plants per hectare with provision of adequate space for inter cropping. Planting 400 - 500 trees / hectare and thinning later by cutting 200 - 250 plants after 5 - 6 years also can be done for optimum utility of the space.

Post Harvesting Technology:

a) Collection of neem fruits:

Normally fruits are collected from bird droppings or directly

from the ground below the tress after the decay of the fleshy part of mature fruits after falling. Delay in collection will result in fungal infestation and the oil extracted from this may have Aflatoxin which is injurious to humans and live stock during its internal use as medicine.

For getting Aflatoxin free Neem oil for medicinal purpose.

We found that seeds collected from tress within 3 - 4 days of falling, thoroughly washing them to get rid of fungal infection.

OK, Get ready for the wash...

and sub sequent drying and curing will yield Aflatoxin free neem oil suitable for internal use.

Neem seeds can be collected by spreading silpauline sheets.

b) Curing

The seeds collected should not be milled for oil extraction immediately. Scientific curing can increase the oil content from the average 35% to 45%. It was noticed that drying up to 10% moisture in the first month and gradually reducing the moisture up to 7% by periodical drying over a period of 4 months after harvest yielded the maximum oil content of 45%

Enough! Come in! Dont get dried up all at once...!

A nominal over all increase of 30 - 40% yield can be easily achieved by following the above mentioned simple agronomic measure. An increase of 10 - 12% in oil can be achieved by adapting proper drying and curing of seeds during post harvesting operations.

For further details please contact :

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