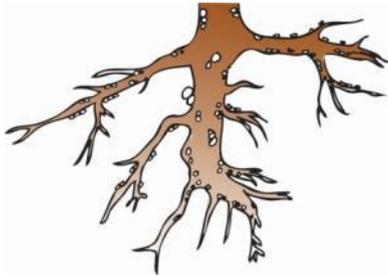


Technical Bulletin #97:

Nitrogen Fixing Trees

Nitrogen fixing trees (NFT) have the ability to take nitrogen from the air and pass it on to other plants through the soil. This process is visible on the roots of NFTs in the form of white 'nodules'.

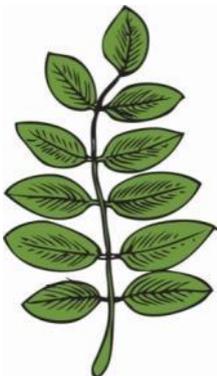


NFT are often deep-rooted and accessing nutrients deep in the soil. As they drop their leaves, the nutrients in the leaves are recycled giving access to other plants in the system. Their leaves are also high in nitrogen, making them ideal material for compost and mulch.

These qualities make NFTs a vital part of all agro-forestry systems.

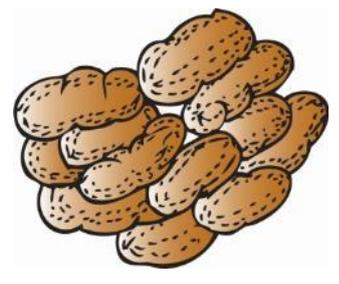
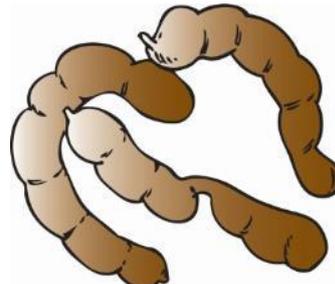
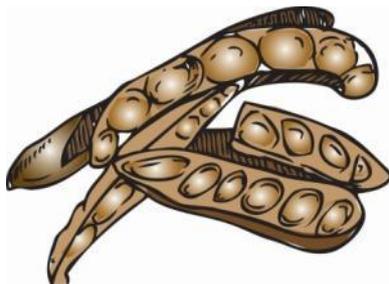
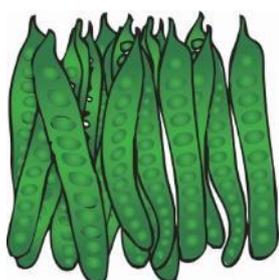
There are thousands of different varieties of nitrogen fixing trees found throughout the world. The majority NFTs grow in the humid tropics. NFTs most commonly belong to the *Fabaceae* or *Leguminosae* family. It is easy to recognize NFTs as most of them share common features.

Leaves: Many nitrogen fixing trees have leaves that resemble a feather. The leaves can be broad or very small, but they typically form a similar shape.



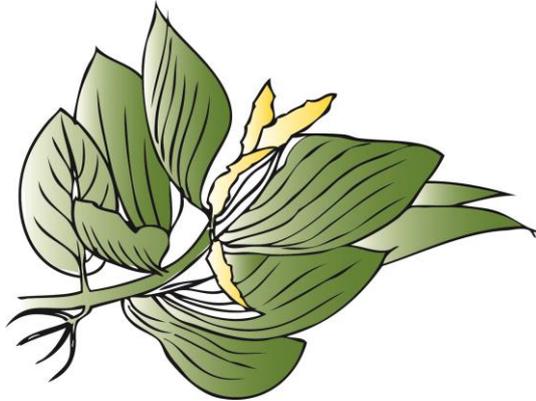
While this leaf formation is very common for NFTs, there are a few species that do not fit this trend and need to be identified by other characteristics.

Seed Pods: All NFTs form 'pods' as the fruit, or seed, of the plant. Other plants such as peanuts and beans also fix nitrogen, share the seed pod characteristic, and are useful in crop rotations.

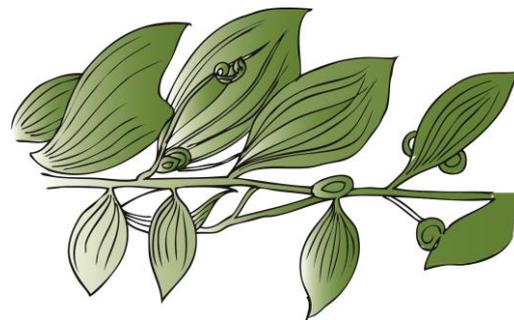


***Acacia Auriculformis* and *Acacia Manguim* are two common, useful NFTs. They are fast growing, produce fuel-woods and are a great source of pulp for paper production**

***Acacia Auriculformis*:** At maturity the leaves do not follow the 'feather' pattern, although the pattern is present when they first emerge during germination. The seed pods resemble ears.



***Acacia Mangium*:** Note the rounded, wide leaves and the curly shape of the seed pods.



Common Nitrogen-fixing trees found in Cambodia

- *Acacia Pennata* (Sa Om)
- *Acacia Auriculformis* (Acacia sleuk touch)
- *Albiza Lebbeck* (Chres)
- *Dalbergia cochinchinensis* (Kra ngoung)
- *Gliricidia sepium* (Snaov)
- *Acacia mangium*
- *Sesbania grandiflora* (Angkea dev)
- *Pterocarpus indicus* (Thnong)
- *Tamarindus indica* (Am pil)
- *Leucaena: leucocephala* and *diversifolia* (Kanthumthet)
- *Mimosa pudica*
- *Senna siamea* (Cassia)

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