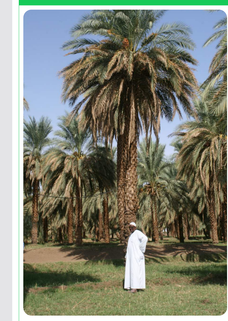
Fact Sheet - **Plants of Sudan**

Phoenix dactylifera

Family name: **Arecaceae**

Common name: **Arecaceae**

Local name: نخل (Nakhal), بلح (Balah), نخيل (Nakheel) – تمر (Temor)



Cultivated

Role in Biodiversity

- Biodiversity increases according to the number of varieties within the species.
- Important source of food and shelter to other plant species and animals.
- Breathing roots help aerate waterlogged soils in diverse ecosystems.

Environment and Growing

Phoenix dactylifera is adaptable to differing growing conditions. It grows well in abundant groundwater, well-drained deep sandy loam soils, and abundant sunshine. Rainfall at flowering is detrimental, reduces pollination efficiency, and causes rotting. Fruits are produced only in hot, dry climates.

Growth requirements:

- Temperatures ranging from 18 to 22°C during flowering and from 25 to 29°C during fruiting.
- PH range 8.0-10.0.

Reproduction and Communication

- *Phoenix dactylifera* is reproduced by seeds and vegetatively by coppicing. It has unisexual flowers on separate trees. Natural pollination is by wind, bees and other insects. Artificial pollination techniques are used for commercial production. Trees fruit when about 4 to 5 years old and reach their full bearing capacity at 10 to 15 years.

Life span

Over 100 years.

Size

23- 30 m

Parts

The tree has one slender, single stem trunk topped with a crown of arching feather-like fronds.

Edit / Translate

Roots are numerous, grow from the base of the trunk.

Leaves are 4–6 m (13–20 ft) long, with spines on the petiole, and pinnate, with about 150 leaflets.

Male flowers waxy and creamy with 6 stamens and no carpels; female flowers whitish, with 6 rudimentary stamens and 3 carpels.

Fruits oval-cylindrical, with colour ranging from dark brown to bright red or yellow.

Seeds are cylindrical, very hard stone grooved down one side.

INTRODUCTION

Tree

Phoenix dactylifera, the date palm, is a dioecious palm tree cultivated mainly for its edible sweet fruits in many tropical and subtropical regions (Middle East to western India, northern Africa). The tree grows singly or with several stems from a single root system and terminates in a crown of shining, pinnate leaves. It has deferent sex floral spikes branch emerge from the axils of leaves. Dates hold deep historical significance and are revered across cultures as a vital component of global food security.

In Sudan, date palm is cultivated in riverbeds and banks and near naturally occurring wadis from the **Egyptian border in the north all the way along the Nile south of Khartoum until Sennar. In addition to the banks of the Nile, isolated occurrences of cultivated date trees occur in the Red Sea hills in the vicinity of Port Sudan, in Kassala, along the Atbra River, in the deserts around Dongola, and far Southwest in Darfur. Date palm is cultivated mainly for its fruits, which are eaten by almost all of the Sudanese for breaking fast during Ramadan. Other parts of the tree are also utilized for many purposes.**

LIVELIHOODS / CULTURE

Cultivation

Vegetative propagation: Date palm is propagated by cuttings (offshoots), which is the famous traditional method.

Offshoots selection: The offshoots are produced from the meristems (which are rapidly dividing and developing meristematic cells) located in the axils of the fronds close to the soil surface and are part of the mother and identical to it (all palm varieties, female and male, produce offshoots at the beginning of their life (up to about 10 years). The number of offshoots varies according to the variety (8-33). The area where the offshoot is attached to the base of the mother palm is called the weaning area.

Separating time: In general, the best time to separate the offshoot is either June-August, or February-March.

Separation steps

- Pruning (locally called qart) the fronds to about half their length, then tying them lightly near the tip so as not to hinder the uprooting process.
- Removing the soil from around the shoot to be separated until its connection to the mother (weaning) is visible, then its base is revealed.
- Separating the shoot from the mother, which is done by placing a "lever" between the mother and the branch, then hitting it with a heavy hammer until the branch is separated with part of the roots.

Planting and watering steps

- Pruning the offshoots well from the green mass fibers leaving the heart (the centre of offshoots) at a height of 4-6 cm above the surface of its base.
- Digging a hole with dimensions suitable for the size of the offshoots and filling it with coarse sand.
- Planting the offshoots under the surface of the soil at a depth of 4-5 cm and completely covering it with coarse sand.
- Daily watering during the first two months of planting, then once every three days during the third and fourth months, then every four days in the fifth and sixth months.

Pollination: The most important agricultural process for producing dates is pollination, which is known in the northern region as **qafouza**. It begins after the palm tree blooms by placing part of the male flowers on the female flowers. Without performing this process, the resulting dates will be immature. It is called **sees**. Pollination begins in the last week of January and continues until the end of March.

Date palm pollination process

https://youtu.be/YpAYT0RGINI

Harvesting: Date harvesting season begins in the second half of September and ends in the first week of October every year. Dates are the easiest crop to harvest. Despite the manual methods of harvesting and collecting, they are collected in a few days. The fruit-bearing palm branches, locally called sheiba, are cut and dropped from the top of the tree. The owners of the crop and their relatives usually gather to help separate the dates from the branches and collect them in piles that they spread out under the sun in areas designated for drying.

Date harvesting

https://www.facebook.com/watch/?v=548655330934410

https://www.facebook.com/watch/?v=836321600370342

Cultural Value

Date palm is mainly grown for its fruits, but the whole tree is utilized.

- Leaves provide palm frond which is the raw material used in basketry, making mats, brooms, hut walls, ropes, thatching and string.
- Stems are often used for construction, providing supports and rafters for houses.
- Stems and leaves are used as a fire wood for fuel.
- Leaves, fruits, and seeds are used as fodder, especially in dry periods.
- Many of the palm leaves or frond products used in Sudanese folklore. Here are examples:

The mat or **brish**, made of red-dyed fronds used in wedding .1 ceremonies such as the bridal **jirtq** ceremonies and the bride's dance.

The **brish** long mat is used in prayer in mosques, in breaking .2 the fast in Ramadan on the streets, and in knowledge circles in the Qur'an memorization rooms.

Brish white mat is made from strong white fronds used to .3 place dead person while carried to the graves.

Green leaves, called **jareed**, are used to decorate the house .4 on the day of the groom's henna, and the groom carries one of them on this day as a symbol of blessing the coming life.

Many popular foods are made from the fruits, such as fermented gorasa. Others include:

- Fruits used to make a fermented, alcoholic beverage or **arqi**.
- Fruits used to make a fermented, none alcoholic beverage called **sharbout**.
- Fruits are highly utilized during Ramadan usually to break the fast.
- Mahs tribe in the northern state is famous for building what is known as the **quosaiba**, out of mud only, to preserve dates.

Handmade: Broom

Medicinal and health uses

- Fruits are eaten raw to treat anemia and constipation by Kababeesh tribe in northern Sudan.
- Seeds decoction is orally used to treat uteritis by Barti tribe in Fangoga area in Sinar state.
- Roasted seeds are used to treat urinary tract infections, and externally for treating Tinea Corporis in children by Mahas tribe in northern Sudan.
- Fruits are given with honey to women to facilitate ovulation and childbirth, for chronic constipation and anthelmintic by Mahas tribe in northern Sudan.

Cultural Expressions

songs: https://youtu.be/pvff0Y26FQA

THREATS

- Climate change.
- Endemic enemies like termites, moth, scale insects, and rodents.

Image(s) source :

Link(s)

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