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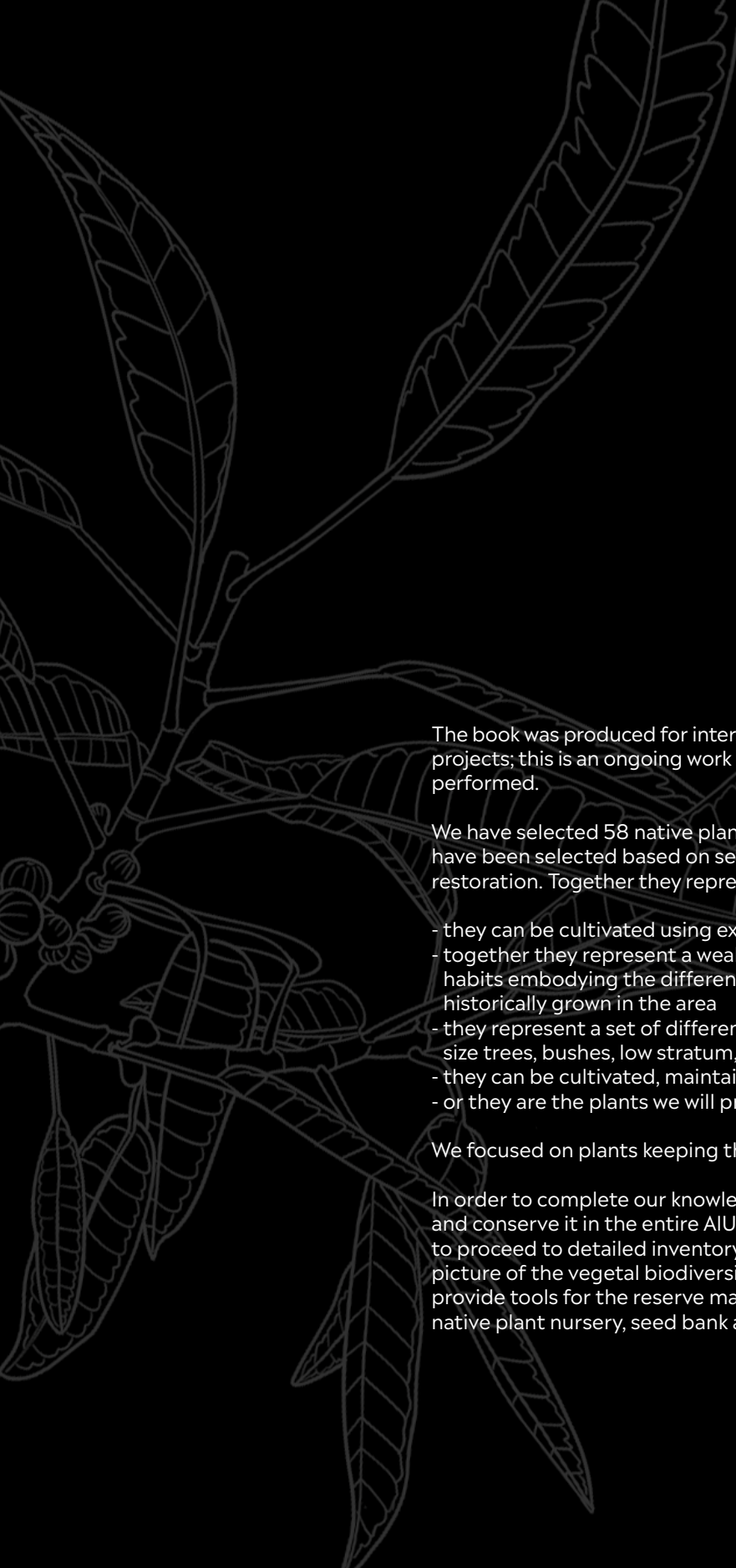
NATIVE SPECIES
FOR ALULA
LANDSCAPING

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AFALULA

FRENCH AGENCY
FOR ALULA
DEVELOPMENT



The book was produced for internal RCU purposes to provide resources for landscaping projects; this is an ongoing work and will be completed over time as more surveys are being performed.

We have selected 58 native plants for landscaping and wilderness regeneration. These have been selected based on several criteria to meet the objectives of landscaping and restoration. Together they represent about 20% of the potential plants of AIUla region.

- they can be cultivated using existing protocols,
- together they represent a wealth of forms and shapes, colours, smells and striking habits embodying the different natural environments (deserts, wadis) and the plants historically grown in the area
- they represent a set of different types of plants needed by landscapers: tall to medium size trees, bushes, low stratum, climbing plants, shade trees..
- they can be cultivated, maintained and tended sustainably
- or they are the plants we will primarily need to regenerate degraded areas in the reserves

We focused on plants keeping their foliage most of the year.

In order to complete our knowledge of the biodiversity and our capacity to monitor and conserve it in the entire AIUla region and align with AIUla charter, the next steps are to proceed to detailed inventory surveys to identify more plants and have an accurate picture of the vegetal biodiversity of AIUla, to set up a database and GIS system to provide tools for the reserve management and visitors and communities and to set up a native plant nursery, seed bank and laboratory to grow the needed plants.

NATIVE SPECIES for AIUla landscaping



SECOND EDITION
April 2020

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« Je préfère aux jardins arrangés et soignés ceux où le sol, riche par lui-même de plantes locales, permet le complet abandon de certaines parties, et je classerais volontiers les végétaux en deux camps, ceux que l'homme altère et transforme pour son usage, et ceux qui viennent spontanément. Rameaux, fleurs, fruits ou légumes, cueillez tant que vous voudrez les premiers. Vous en semez, vous en plantez, ils vous appartiennent (...) mais n'abîmez pas inutilement les secondes. Elles sont bien plus délicates, plus précieuses pour la science et pour l'art, ces mauvaises herbes, comme les appellent les laboureurs et les jardiniers. Elles sont vraies, elles sont des types, des êtres complets. »

George Sand à Nohant - Une maison d'artiste

« Rather than gardens arranged and cared for, I prefer those where the soil, intrinsically rich in local plants, allows the complete abandonment of some parts, and I willingly classify plants in two camps, those that man alters and transforms for his use and those that come spontaneously. Twigs, flowers, fruits or vegetables, pick the firsts as much as you want. You sow, you plant, they belong to you (...) but do not spoil the seconds unnecessarily. They are much more delicate, more precious for science and for art. These weeds as the plowmen and gardeners call them, are much more delicate. They are true; they are types, complete beings. »

Georges Sand at Nohant - An artist house (Translated from the original French text version)

تلك الطبيعة قف بنا يا ساري
الأرض حولك والسماء اهترتا
من كل ناطقة الجلال كأنها
دلّت على ملك الملوك
مَنْ شكّ فيه فنظرة في صنعه
كشف الغطاء عن الطرول
شبهتها بلقيس فوق سريرها
أو بابن داؤد وواسع ملكه
هوج الرياح خواشع في بابه
« أحمد شوقي »

حتى أريك بديع صنع الباري
لروائع الآيات والآثار
أم الكتاب على لسان القاري
فلم تدع لأدلة الفقهاء والأخبار
تمحو أثيم الشك والإنكار
وأشرقت منه الطبيعة غير ذات ستار
في نضرة ومواكب وجواري
ومعالم للعزّ فيه كبار
والطير فيه نواكس المنقار

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FOREWORD



In April 2018, Saudi Arabia and France signed an intergovernmental agreement regarding **the development of AlUla region, a flagship project** which will make AlUla, in the North-West of the kingdom, one of the country's **cultural capitals**. Saudi Arabia and France share a vision to implement **a new economic and touristic development model**, focused on the absolute preservation of the environment, respectful of history, and inclusive of local populations.

In accordance with the will of Saudi Arabia and of France, AlUla has the ambition to become, thanks to the most advanced knowledge and techniques, **a flagship project in terms of sustainable development**. As part of this the French agency, in close cooperation with the Royal Commission for AlUla, has wished to develop **a new environmentally sensitive approach to landscaping**, by promoting the cultivation of native sustainable plants rather than using exotic water-consuming species.

This involved, as a first step, the identification of eligible native species that can be cultivated locally, and it has been achieved through extensive field missions in the region. We have selected a wealth of forms/shapes, colors, smells and striking habits embodying the different natural environments (deserts, wadis) and the plants historically grown in the area in the oasis. Each plant has been carefully chosen for its ability to withstand the natural conditions of the region in terms of heat whilst minimizing the water use.

This book is the result of this thorough study. It is aimed at answering the main information needs of landscapers. In addition to the book, the interactive internet version provides access to a number of pictures and short films in order to allow the reader to become familiar with the potential of each plant selected. The right page provides the main key information needed to select the plant.

A nursery will be set up using state of the art technologies to grow the vegetation locally and sustainably, thus providing jobs and horticultural professional training to the communities. The plants grown will also be used to restore, where relevant, the degraded natural ecosystems.

Why landscaping with native plants ?

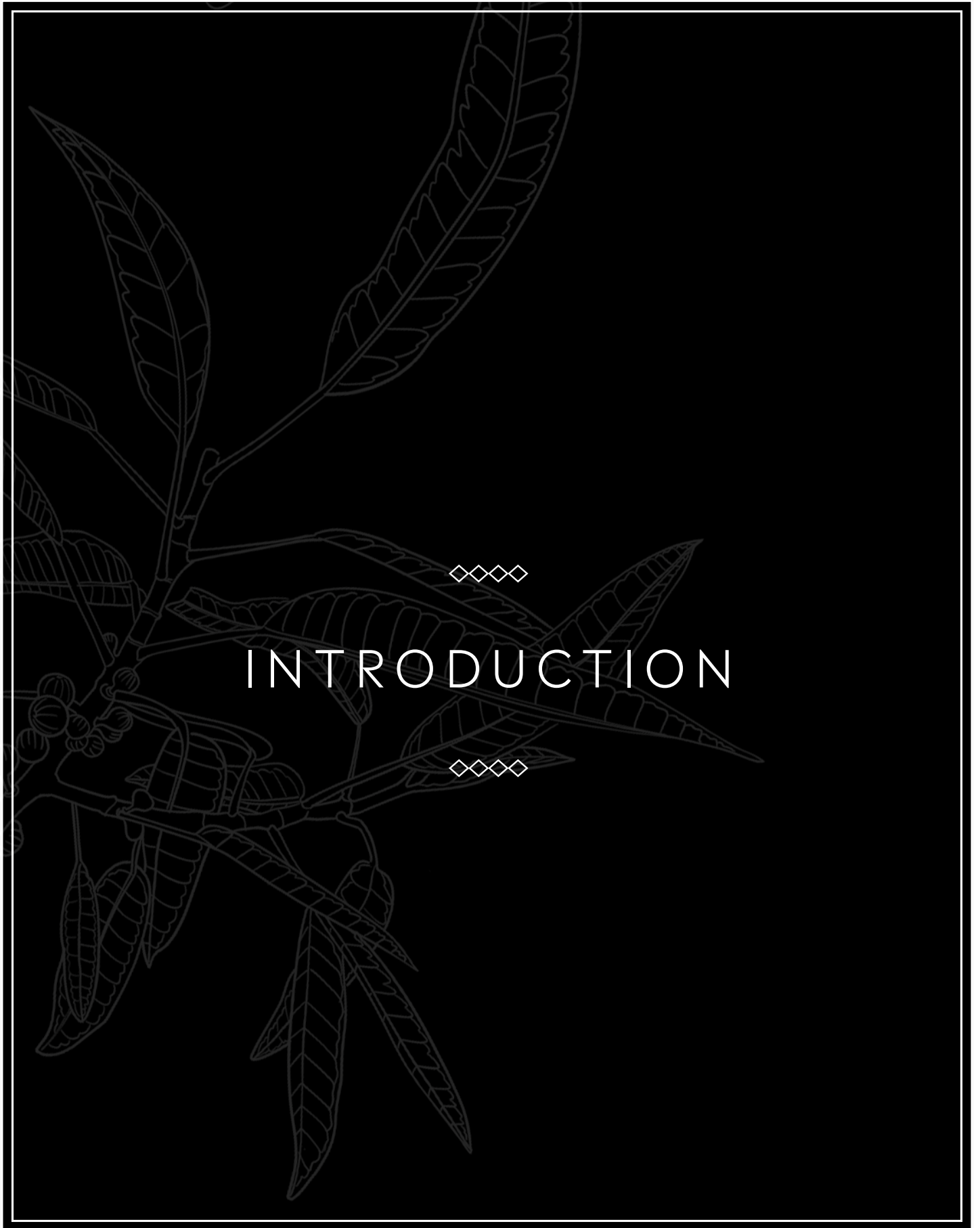


A native plant is an indigenous plant species of a given region. This includes plants that occur naturally or have existed for a long time in an area.

Gardens have long been a way to get closer to “nature”, which has been interpreted over the centuries in different ways, e.g. from a very controlled nature (of which “French garden” style remains the better example) to a wilder style (such as the “English Garden” of the 19th century). Throughout garden history, all over the world, exoticism has always been a driving force. Today, a new trend has emerged and this drive has given way to a desire to reconnect with “authentic nature” as part of the nostalgia for lost natural landscapes and a general quest for nature experiences.

Traditional landscaping attempts to create a landscape that “looks” the same regardless of location. Naturescaping, in contrast, emphasizes selecting the plants that grow naturally at the site. Since native plants evolved to grow under local conditions, they do not require that the site be changed. They do not need the life support of watering (except during establishment) or chemical inputs. Beautiful in its own way, sustainable, healthier for the homeowner and easier and less expensive to maintain, landscaping using native species is proof of a commitment to the future.





ESTABLISHMENT OF THE SPECIES LIST



Our approach is based on several field missions performed in from fall 2018 to fall 2019 in the AlUla county. Field observations were focused on perennial plants with persistent leaves, since density and persistence are key aesthetic qualities expected by landscapers. Nevertheless, we also identified numerous broad-leaved or annual species.

Field inventories were thus not exhaustive. The aim was rather to identify a sufficient number of species for each type of landscape function (cf. next page). This contrasts with classical conservation focused inventories as we were seeking scenic/cultivable species rather than rare ones. Nevertheless, the selection of some rare species when relevant has also been considered. Species identification was based on reference Flora for the region (Mandalville, 1990; Migahid and Hammouda, 1979; Colenette, 1986) and neighboring countries (in particular Egypt and Oman). Validations were made based on photographs and herbarium sheets collected during the missions. We wish to thank Dr Abdulaziz Al Saeed from King Saud University for his valuable comments and kind scientific proof-reading and Mohammad Sulayem, Royal Commission for AlUla for his support to this project. Numerous areas of the AlUla county were explored in order to have an overview of the diversity of the vegetation associated with the various landscapes of the AlUla county (cf. maps).

Based on the field identification of occurring species, we made a selection of the most interesting species for landscaping. For this, we qualified each observed species in terms of relevant landscaping function, aesthetic value (shape, flowers, fruits ...) and smell. Each species that fulfilled at least two among the three criteria was selected as an interesting species for landscaping.

Then, each species was investigated to get all the information necessary for landscaping, including ecological preferences, plant production or maintenance...



CLASSES OF LANDSCAPE FUNCTIONS

Seven classes of landscape functions were defined in order to answer the needs of landscapers. These classes were adapted to the AlUla flora context. They are presented here in order of decreasing height:

High trunk trees (palms): This corresponds to tall palm trees that grow up to 10m in the right growing conditions (maintenance & irrigation)

Shade trees: These species are able to form large trees with a dense crown that provides efficient shade thanks to their umbrella shape. These trees can grow up to 8-15m.

Moderate size trees: These correspond to trees or large shrubs that are less erect, often densely branched at their base. These trees can grow up to 5-10m.

Shrubs and bushes: This class includes shrubs and bushes, presenting round/branched shapes. These plants can grow up to 2-4m.

Climbing or hanging plants: These correspond to woody or herbaceous plants, characterized by a liana or sagging port. These plants need specific supports to express their particular habit.

Low stratum & Tussocks: Low stratum corresponds to small perennial plants that can be 0.4-1m tall. This includes both low woody species and herbaceous ones. This class presents a large diversity of plant shapes that can be used to provide diverse herbaceous beds. Tussocks correspond to perennial herbs of large size (0.8-1.5m). This is a class often used in landscaping.

Ground covers: These plants include perennial or annual species able to provide a dense and aesthetic ground covering. Using these species is an efficient alternative to classical green lawn that requires a lot of watering. Some of these plants form carpets on the ground but others can grow up to 0.3m.



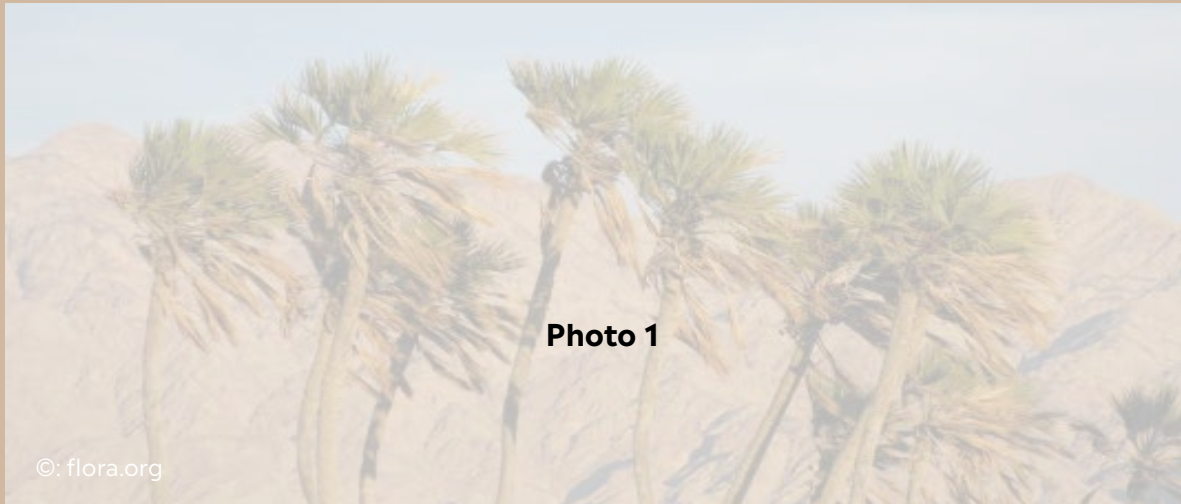
VERNACULAR NAME

الاسم العربي

Scientific name
Family

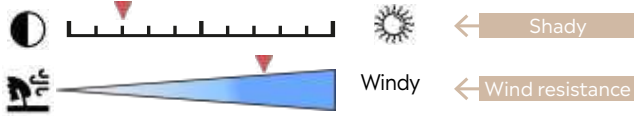
Introduction text including:

- Short botanical description of the species;
- Global range;
- Summary of main uses.



GROWING CONDITIONS

Micro-climate



Soil



- Soil acidity
- Soil texture
- Water needs
- Tolerance to high salinity

LANDSCAPING

Nursery crop

- Process of nursery crop

Planting

- Type of plantation
- Depth of plantation pit
- Fertilizers
- Accessories

Maintenance

- Maintenance recommendations

AESTHETIC VALUE

Appearance

- Height
- TYPE** Landscape type
- SHAPE** Short description of the plant shape

Foliage color →

Foliage

- Persistence of foliage
- Density of foliage

Flowering color →

Flowering

- Flowering description
- Flowering period

Fruit color →

Fruits

- Fruit description
- Fruit edible or not

Landscape uses

- Possible use 1
- Possible use 2
- etc.

VARIOUS

Description of various uses (see next page for icon meaning)



SHEET TEMPLATE

ICON MEANING



GROWING CONDITIONS

- Shady - Blazing sun
- Wind resistance
- Soil fertility
- Soil acidity
- Soil texture
- Water needs
- Resistance to salinity

LANDSCAPING

- Type of plantation
- Depth of plantation pit
- Fertilizers
- Accessories
- Maintenance

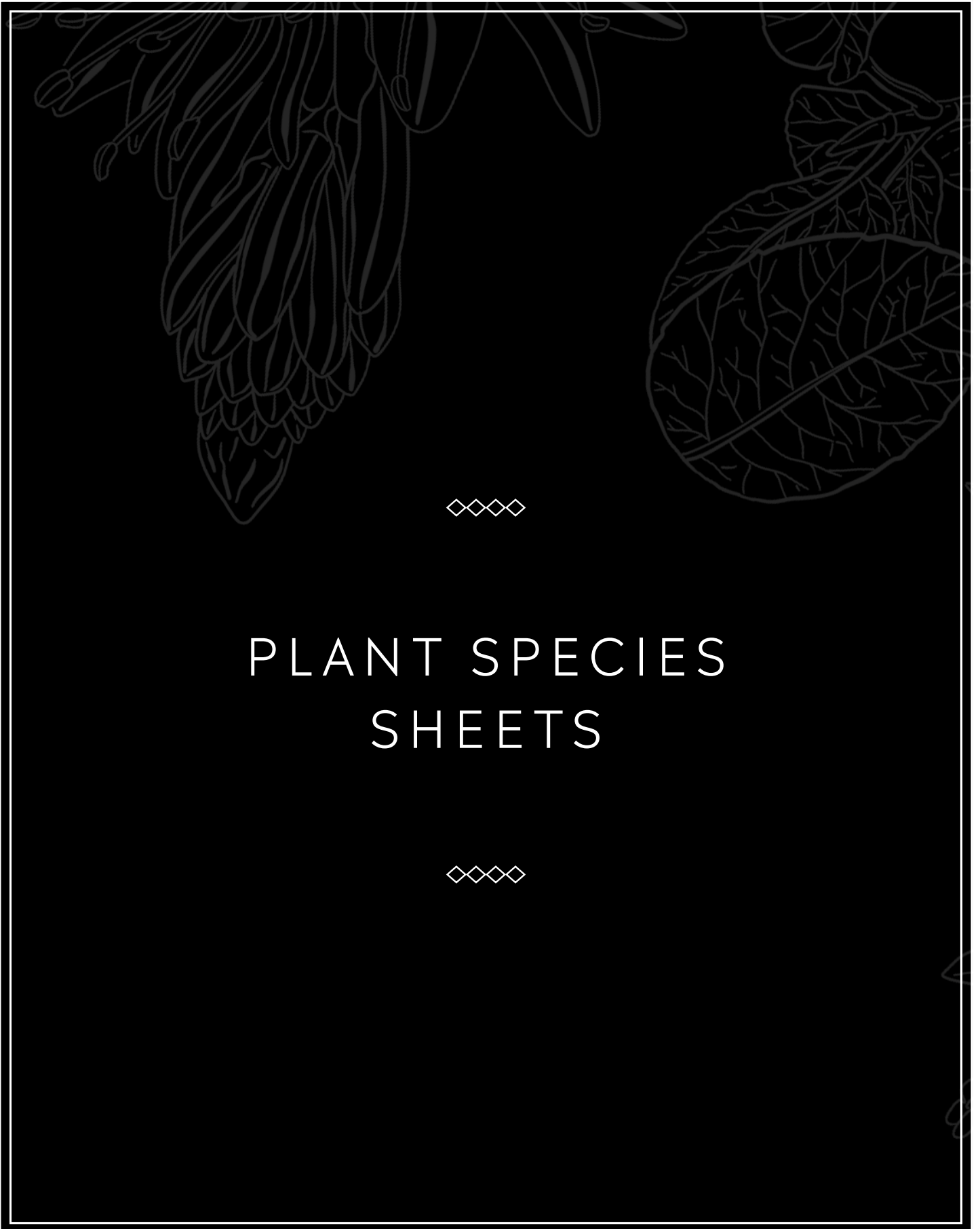
AESTHETIC VALUE

- Height
- TYPE Landscaping type of plant
- SHAPE Global shape
- Type of foliage
- Density of foliage
- Flower description
- Flowering period
- Fruit description
- Fruit edible or not

VARIOUS

- Medicinal properties
- Symbiotic relation
- Used for handicraft
- Aromatic plant or flower
- Used for human food
- Nursery uses
- Dangerous or toxic
- Provides fodder for livestock
- Attracts honey bees
- Oil - essential oils
- Information about flowers
- Used for decoration
- Risk of pests and diseases
- Interior plant - Bonzai
- Information about roots





PLANT SPECIES SHEETS



LIST OF SPECIES



SHRUBS AND BUSHES

- Calligonum comosum*
- Haloxylon persicum*
- Lycium shawii*
- Ochradenus baccatus*
- Retama raetam*
- Searsia tripartita*
- Withania somnifera*
- Ziziphus nummularia*

HIGH TRUNK TREES (PALMS)

- Hyphaene thebaica*
- Phoenix dactylifera*

SHADE TREES

- Acacia gerrardii*
- Acacia raddiana*
- Acacia tortilis*
- Ziziphus spina-christi*

MODERATE SIZE TREES

- Dodonaea viscosa*
- Ficus palmata*
- Ficus salicifolia*
- Salvadora persica*
- Maerua crassifolia*
- Moringa peregrina*
- Tamarix nilotica*

CLIMBING OR HANGING PLANTS

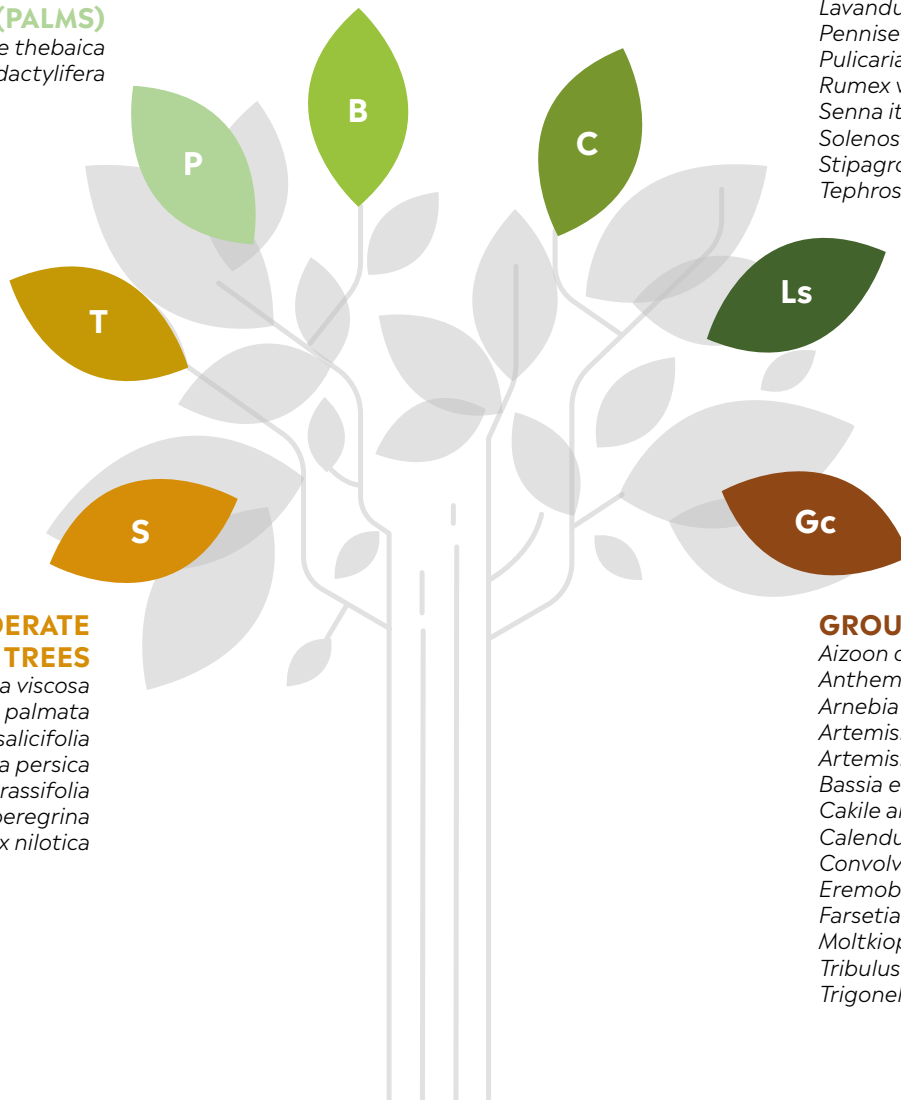
- Capparis cartilaginea*
- Capparis spinosa*
- Cucumis prophetarum*
- Pergularia tomentosa*

LOW STRATUM & TUSSOCKS

- Abutilon fruticosum*
- Aerva javanica*
- Asphodelus fistulosus*
- Asteriscus graveolens*
- Cenchrus ciliaris*
- Chrozophora tinctoria*
- Ferula sinaica*
- Gomphocarpus sinaicus*
- Hyparrhenia hirta*
- Kickxia pseudoscoparia*
- Lavandula coronopifolia*
- Lavandula pubescens*
- Pennisetum divisum*
- Pulicaria incisa*
- Rumex vesicarius*
- Senna italica*
- Solenostemma argel*
- Stipagrostis ciliata*
- Tephrosia apollinea*

GROUND COVERS

- Aizoon canariense*
- Anthemis deserti*
- Arnebia hispidissima*
- Artemisia monosperma*
- Artemisia scoparia*
- Bassia eriophora*
- Cakile arabica*
- Calendula tripterocarpa*
- Convolvulus spicatus*
- Eremobium aegyptiacum*
- Farsetia burtonae*
- Moltkiopsis ciliata*
- Tribulus terrestris*
- Trigonella stellata*





HIGH TRUNK TREES





EGYPTIAN DOUM PALM

Hyphaene thebaica (L.) Mart.

Areaceae

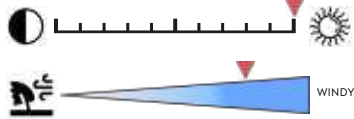
الدوم

Egyptian Doum Palm is a tree with a remarkable shape that shows ramification in its upper part. In the AlUla county the Doum palm can grow spontaneously in the presence of nearby groundwater. It has a large distribution area throughout the African continent, the Sinai Peninsula and the Arabian Peninsula. This palm is well known for many traditional uses in different regions.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to alkaline grounds
- Well-drained light soils, on loams or clays
- Irrigation is necessary until well established
- Tolerant to high salinity

LANDSCAPING

Nursery crop

- Vegetative reproduction allows the maintenance of desirable characteristics: it can be readily propagated by transplantation of basal offshoots

Transplant in pots of appropriate size to encourage optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 60cm
- Organic matter and biological solutions
- Mulching, stake, protection net

Maintenance

- Annual pruning is required



AESTHETIC VALUE

Appearance

- Up to 20m high
- TYPE** Palm tree

SHAPE High tree with separation of the trunk into 2 or 4 stems

Foliage

- Permanent foliage
- Dense foliage

Flowering

- Inflorescences form a dense cluster
- February -April

Fruits

- Agglomerated around branches
- Different parts of the fruit are edible at different ripening stages

Landscape uses

- High isolated tree
- Tree alignment
- Oasis

VARIOUS

- The orange fruit has a flavour of gingerbread. It is eaten raw and is also made into sweetmeats, molasses and cakes. The germinated seedlings, harvested just below the ground, are used as a vegetable
- The wood of the trunk provides timber to build frame houses or other constructions. The leaves of the palm were used by craftsmen in wickerwork to make baskets, mats and ropes

DATE-PALM

Phoenix dactylifera L.

Arecaceae

نخيل التمر

Phoenix dactylifera L., commonly known as date palm, is widely cultivated in the Kingdom of Saudi Arabia. This tree presents a typical shape of tall palm tree, with a single high trunk, terminated by a fan-shaped bouquet of long leaves. This tree has various uses for food and construction. The barnee is the main local variety.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to alkaline grounds
- Well-drained, deep soils, on sandy loams or sandy clays
- Moderate irrigation required to ensure growth and aesthetic habit
- Tolerant to saline soil

LANDSCAPING

Nursery crop

Vegetative reproduction allows the maintenance of desirable characteristics: it can be readily propagated by transplantation of basal offshoots. The local variety, barnee, is preferred

Transplant in pots of adapted size to the optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 60cm
- Organic matter and biological solutions
- Mulching, stake, protection net

Maintenance

- Annual pruning is required



AESTHETIC VALUE

Appearance

20-30m high

TYPE High trunk palms

SHAPE Oval tree shape, only one trunk, symmetrical canopy

Foliage

- Permanent foliage
- Dense foliage

Flowering

- Inflorescence is a dense white cluster
- April - May

Fruits

- Dates that are grouped into regimes
- Edible

Landscape uses

- High isolated tree
- Tree alignment
- Oasis

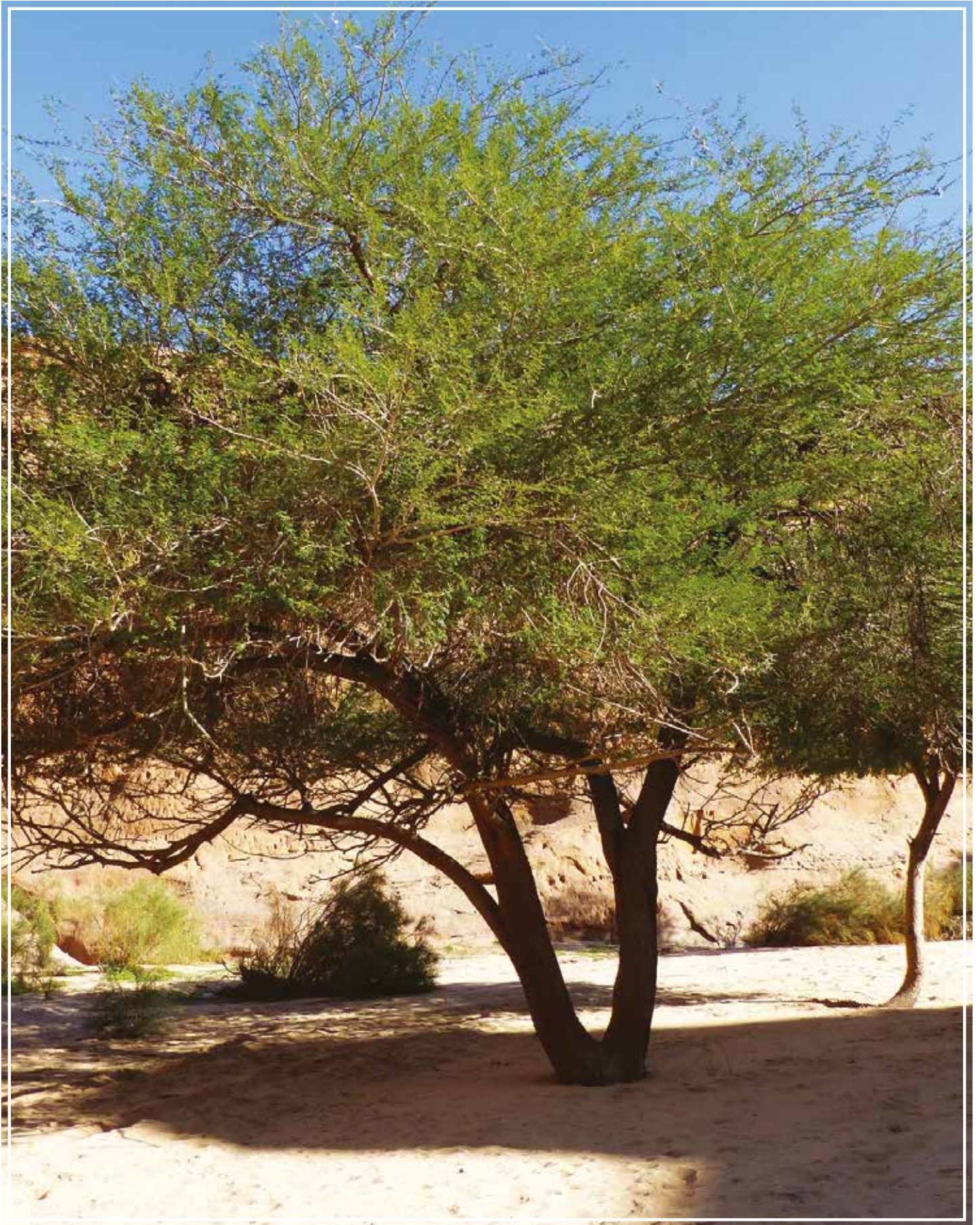
VARIOUS

- When pollinated, female trees produce large pendulous clusters of cylindrical orange to brown fruits. The dates and the sap from this tree are used for human food
- The wood of trunk can be used in construction
- Seed oil presents cosmetic properties
- Date Palms are affected by many pests, which may affect the trunk or the fruits



SHADE TREES





GREY-HAIRED ACACIA

Acacia gerrardii subsp. *negevensis* Zohary

Fabaceae

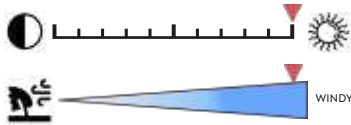
الطلح

The currently valid scientific name of this species is *Acacia pachyceras* O.Schwartz. This deciduous tree grows to 10m tall, shows umbrella-shaped habit, and provides deep shade. This species occurs from South and Central Africa to the Arabian Peninsula. It is quite common in the Arabian Peninsula, although it suffers from anthropogenic pressure, being used as timber fuel and being heavily grazed by livestock. In the wild, it improves the grazing lands, provides light shade to cattle without affecting the growth of herbaceous plants.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral or alkaline soils
- Sandy-loam, or loams slightly clayey
- Irrigation necessary until well established; a moderate watering can improve growth
- Moderate resistance to salinity

LANDSCAPING

Nursery crop

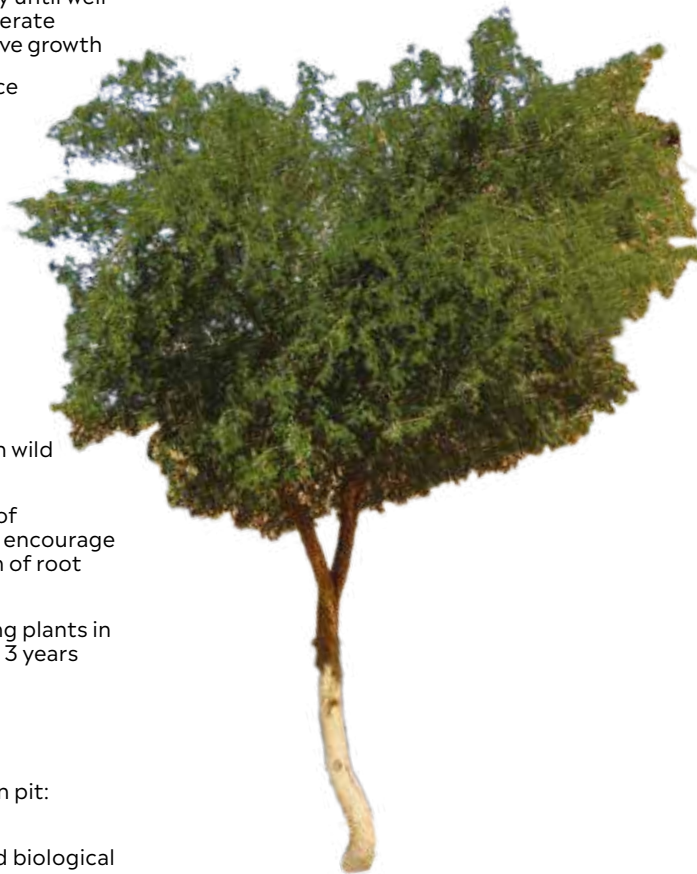
- Harvesting seeds in wild populations
- Transplant in pots of appropriate size to encourage the optimal growth of root system
- Production of young plants in nursery for at least 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 40cm
- Organic matter and biological solutions
- Mulching, stake, protection net

Maintenance

- Low maintenance only. By pruning, it can be trained as roof shapes or as multi-level roof shapes



AESTHETIC VALUE

Appearance

- 6-10m high
- TYPE** Shade-tree
- SHAPE** Umbrella-shaped

Foliage

- Can be leafless during a short period in winter
- Dense foliage

Flowering

- Small pale yellow flowers, globular, often numerous
- June - October

Fruits

- Curved pods
- Not edible

Landscape uses

- Tree alignment
- Isolated shade tree in open area
- Ornamental tree with singular shape

VARIOUS

- This is an attractive tree for honey bees, which find nectar in its flowers
- Its root system is quite deep. Its rhizosphere hosts many symbionts. The small lateral roots nodulate and fix nitrogen thanks to symbiotic bacteria. This species is known to develop arbuscular mycorrhiza
- Bark contains tannins that have medicinal uses

TWISTED ACACIA

سمر الراديانا

Acacia raddiana Savi

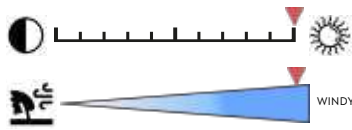
Fabaceae

The currently valid scientific name of this species is *Vachellia tortilis* subsp. *raddiana* (Savi) Brennan. It is a single-trunked tree that grows up to 15m tall, and shows an umbrella-shape habit. The flowers are small, pale yellow and rounded. The young branches, petioles and leaf-rachides are glabrous; the crown irregularly rounded. This Acacia occurs from Northern Africa through Egypt and Eastern Africa to the Arabian Peninsula.



GROWING CONDITIONS

Micro-climate



Soil



Neutral or alkaline soils



Sandy-loam, or loams slightly clayey



Irrigation necessary until well established; a moderate watering can improve growth



Able to grow under saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery for at least 3 years.

Planting



Pricking out



Depth of plantation pit: at least 40cm



Organic matter and biological solutions



Mulching, stake, protection net

Maintenance



Low maintenance only. By pruning, it can be trained as roof shapes or as multi-level roof shapes



AESTHETIC VALUE

Appearance



8-15m high

TYPE Shade-tree

SHAPE Umbrella-shaped

Foliage



Can be leafless during a short period in winter



Dense foliage

Flowering



Small pale yellow flowers, globular, often numerous



June - October

Fruits



Spiralled pods



Not edible

Landscape uses

Tree alignment

Isolated shade tree in open area

Afforestation

VARIOUS



This is an attractive tree for honey bees, which find nectar in its flowers



This is a highly aromatic tree



Its root system is quite deep. Its rhizosphere hosts many symbionts. The small lateral roots nodulate and fix nitrogen thanks to symbiotic bacteria. This species is known to develop arbuscular mycorrhiza

UMBRELLA-THORN ACACIA

سمر الحطب

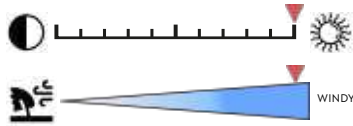
Acacia tortilis (Forssk.) Hayne
Fabaceae

The currently valid scientific name of this species is *Vachelia tortilis* var. *tortilis* (Forssk.) Galasso & Banfi. It is a tall flat-topped tree, with both hooked and straight spines. It can show various shapes: bush, shrub, umbrella, etc. The fruit is a spiralled pod. Its global range extends from South and Central Africa to the Arabian Peninsula. In the Arabian Peninsula the tree is overharvested for timber and fuel; it can also be used to produce gum. Furthermore, it improves the grazing lands and provides light shade to cattle without affecting the growth of herbaceous plants.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline soils
- Sandy; sandy loamy or rocky soils
- Irrigation necessary until well established; watering during summer will enhance growth
- Able to grow under saline conditions



LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Transplant in pots of appropriate size to encourage the optimal growth of root system
- Production of young plants in nursery for at least 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 40cm
- Organic matter and biological solutions
- Mulching, stake, protection net

Maintenance

- Low maintenance only. By pruning, it can be trained as large shrub, single or multiple-trunk shade tree

AESTHETIC VALUE

Appearance

- 5-10m high
- TYPE Shade-tree

SHAPE Flat-topped, inverted triangle

Foliage

- Can be leafless during a short period in winter
- Dense foliage

Flowering

- Small pale yellow flowers, globular, often numerous
- April - July

Fruits

- Spiraled pods
- Not edible

Landscape uses

- Vegetation screens
- Windbreak
- Afforestation
- Hedge

VARIOUS

- This tree has highly aromatic flowers
- Timber from the tree is used for furniture, wagon wheels, fence posts, cages, and pens
- The pods and foliage are used as fodder for desert grazing animals
- The plant has a symbiotic relationship with some soil bacteria, forming nodules on the roots and fixing atmospheric nitrogen

JUJUBE TREE

Ziziphus spina-christi (L.) Desf.

Rhamnaceae

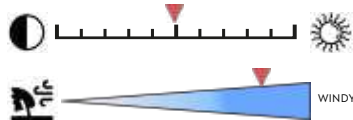
السدر البلدي

Jujube tree is a thorny tree probably native to Africa and western Asia. It shows numerous flexible and convoluted whitish branches. Able to grow up to 8m in cultivation, this tree shows high aesthetic qualities with very dense foliage, which persists throughout the year and can provide a deep shadow. It has been widely disseminated through ancient cultivation and naturalization. In ALULA county, it seems to be only present in cultivated fields.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline grounds
- Any type of soil
- Moderate requirement for irrigation, with the aim to obtain tall trees
- Non-saline land

LANDSCAPING

Nursery crop



Harvesting seeds in cultivated populations

Release the seed dormancy

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting



Pricking out



Depth of plantation pit: at least 40cm



Organic matter and biological solutions



Mulching, protection net

Maintenance



A pruning is possible, to give a high and slender shape like a shade tree



AESTHETIC VALUE

Appearance



Up to 7m high

TYPE Moderate size tree

SHAPE Bushy shrub into the wild, or little shade tree in farms

Foliage



Permanent foliage



Very dense weeping crown

Flowering



Tiny yellow flowers, umbel-like



February - May

Fruits



Similar to small apples of 1cm diameter



Edible

Landscape uses

Isolated tree

Tree alignment

Hedge

Erosion control / Windbreak

VARIOUS



The fruit is either eaten fresh, pickled, dried or used in confectionery. The juice can be made into a refreshing drink



The leaves provide excellent fodder for livestock and are used by pastoralists to feed race dromaderies

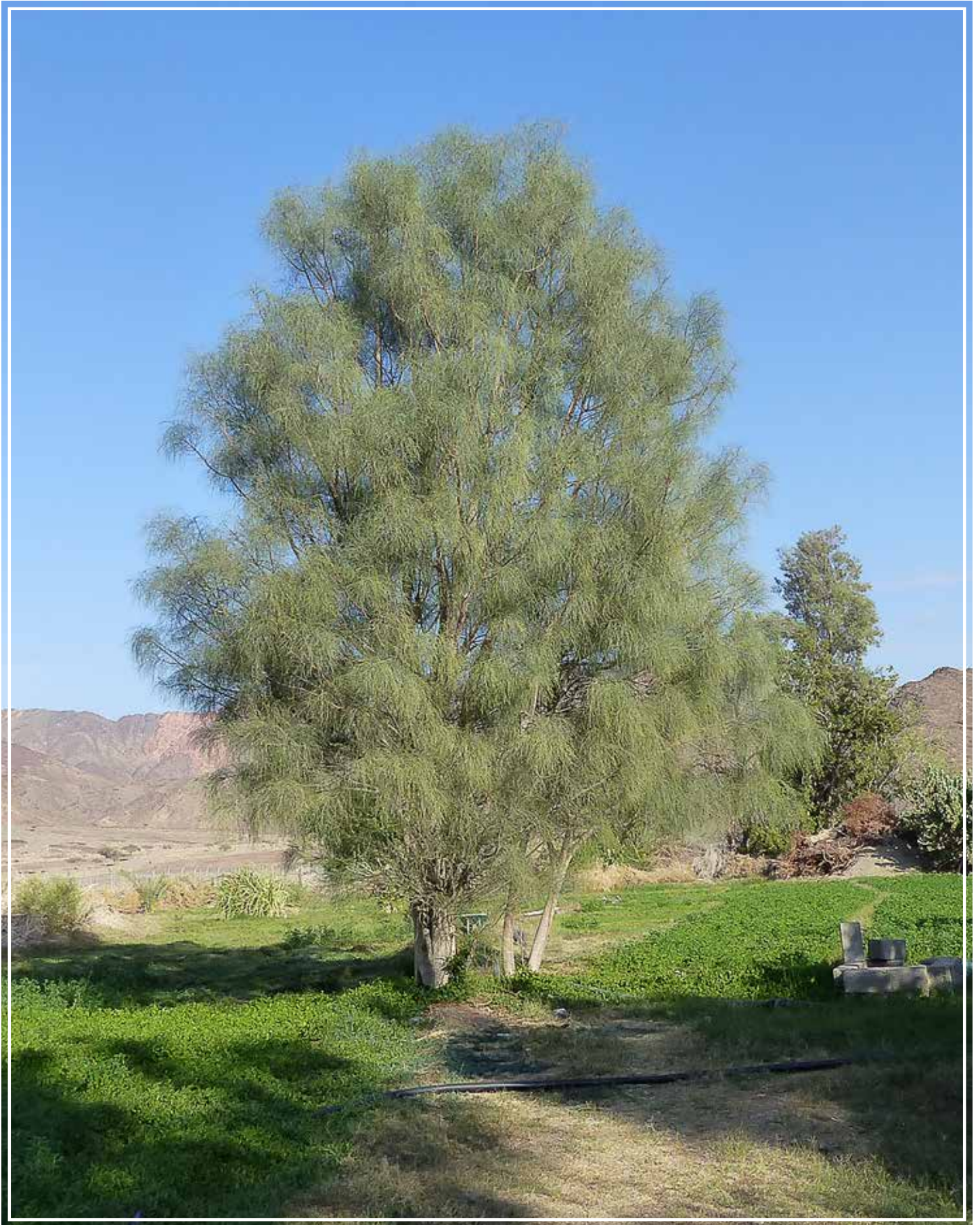


Medicinal properties: the dried fruit is used traditionally



MODERATE SIZE TREES





HOPBUSH

الشث

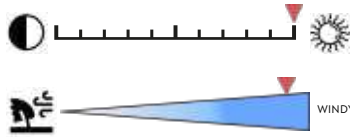
Dodonaea viscosa subsp. *angustifolia* (L.f.) J.G.West
Sapindaceae

Hopbush is an evergreen shrub or small tree, often cultivated in hedgerows, but also found wild in natural areas. The foliage is very dense, light green and persistent. Its winged fruits present an attractive appearance. Its distribution area is very extensive in the Southern hemisphere. The species is highly polymorphic, with several subspecies and varieties.



GROWING CONDITIONS

Micro-climate



Soil



Light and well drained soils (sands or sandy loams)

Irrigation is necessary until well established

Able to grow under saline conditions

LANDSCAPING

Nursery crop

Large quantities of seeds can be easily collected in wild populations on female trees (dioecious species)

Transplant in pots of appropriate size to encourage optimal growth of root system

Production of young seedling in nursery for 1-2 years

Planting

Plant in October-November before seedlings exceed 60cm

Depth of plantation pit: at least 50cm

Organic matter and biological solutions

Mulching, protection net

Maintenance

Low maintenance only. By pruning, it can be trained as a small tree or also as a large shrub



AESTHETIC VALUE

Appearance

Up to 5m high

TYPE Big shrub

SHAPE Multi-stemmed with variable shapes (spreading, dense or erect)

Foliage

Persistent foliage

Dense foliage

Flowering

Small unremarkable flowers

Early spring

Fruits

Cluster of attractive reddening fruits

Late spring

Landscape uses

Hedges / windbreak

Ornamental shrub

Massive isolated small tree

Slope stabilizer

VARIOUS

Plant very tolerant to pruning; it is useful to make windbreak hedges

Different parts of the plant are used for their medicinal properties (roots, bark, stem, leaves...)

This shrub is used in different countries to control gully and coastal dune erosion

WILD FIG

Ficus palmata Forssk.

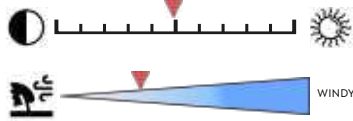
الحماط

Wild fig is a large shrub or small tree. The foliage is deciduous. In the season when it is leafless, the woody structure is visible and delivers another aesthetic value. Its main distribution area extends throughout North-East Africa, the Arabian Peninsula and Asia. Many traditional uses exist. This plant is known for several medicinal properties and is used for food, agriculture or handcraft.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or basic soils
- Sandy, sand-rocky or loamy soils
Well-drained soils
- Irrigation is necessary
until well established
- Suitable only for saline-free land

LANDSCAPING

Nursery crop

- Vegetative reproduction is the best option. Readily propagates from stem cuttings

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery requires 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 40cm
- Organic matter and biological solutions
- Mulching, protection net

Maintenance

- Requires no maintenance
- Pruning for appearance according to desired shape



AESTHETIC VALUE

Appearance

- 4-6m at maturity
- TYPE** Moderate size trees
- SHAPE** Tall shrub

Foliage

- Deciduous foliage
- Dense foliage

Flowering

- Flowers locked in the young fruit
- April - May

Fruits

- Green to purple fruits of 25mm diameter
- Edible

Landscape uses

- Isolated tall shrub
- Alignment tree

VARIOUS

- The raw fruit is sweet and succulent; the unripe fruits and young shoots can be cooked and eaten as a vegetable
- The milky latex of stems is used in folk medicine of Saudi Arabia, in particular in Albaha Region
- This species is used in agriculture as a rootstock for the common fig crops
- Its wood is flexible and it can be used for making hoops, garlands, ornaments...
- Fruits are attractive to birds and small fauna

WILLOW LEAF FIG

Ficus salicifolia Vahl

Moraceae

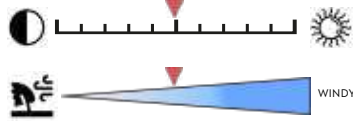
الأثب

Willow leaf fig is a tree able to grow up to 12m under favourable conditions. The dark green leaves form a very dense foliage that persists all year round. Its distribution area extends throughout West Africa, South Africa, Egypt, and Saudi Arabia. This tree is frequently used as an ornamental plant.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or basic soils
- Loamy soils
- Irrigation is necessary until well established
- Non-saline or slightly saline soils

LANDSCAPING

Nursery crop



Vegetative reproduction is the best option. Readily propagates from stem cuttings

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery requires 3 years

Planting



Pricking out



Depth of plantation pit: at least 40cm



Organic matter and biological solutions

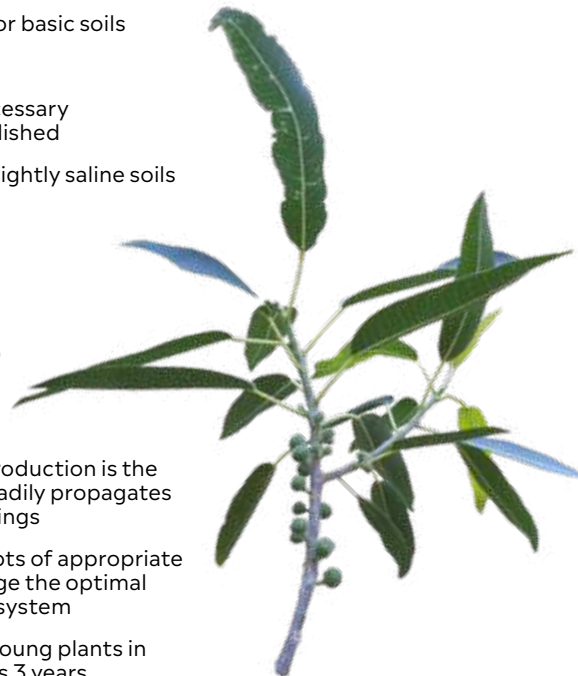


Mulching

Maintenance



A moderate pruning allows to develop a strong structure



AESTHETIC VALUE

Appearance



Up to 8-12m high

TYPE Shade tree

SHAPE Spreading and irregular

Foliage



Permanent foliage



Very dense foliage

Flowering



Flowers locked in the young fruit



March - April

Fruits



Small fruit less than 15mm of diameter



Not edible

Landscape uses

Shade tree

Alignment tree

Wind break

Shelter belt

VARIOUS



Its leaves are known to be toxic



The willow leaf fig is frequently used as bonzai or indoor plant

TOOTHBRUSH TREE

Salvadora persica L.

Salvadoraceae

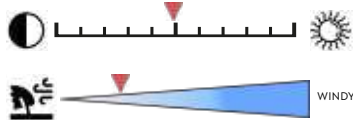
شجرة الأراك

Toothbrush tree is a medium size tree with a crooked short trunk and a white bark. The green foliage is very dense and persistent. It is well adapted to arid conditions. Its distribution area extends throughout the African continent, the Middle East, the Arabian Peninsula, and western Asia. The branches of the plant are used as a natural toothbrush.

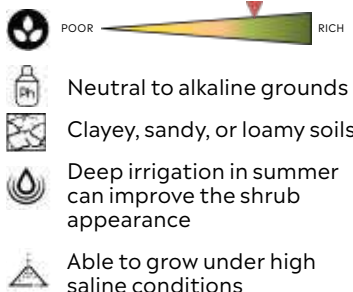


GROWING CONDITIONS

Micro-climate

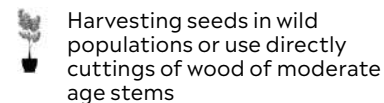


Soil



LANDSCAPING

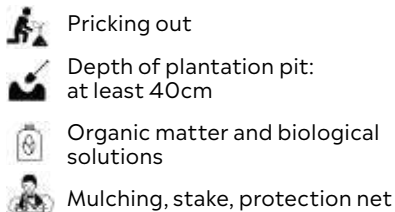
Nursery crop



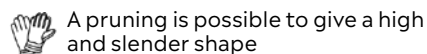
Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting

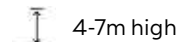


Maintenance



AESTHETIC VALUE

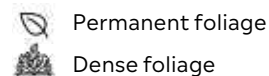
Appearance



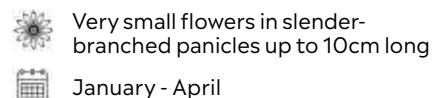
TYPE Moderate size trees

SHAPE Ovoid shape, very branched from the base

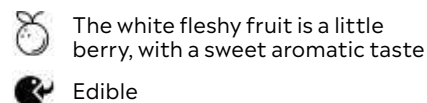
Foliage



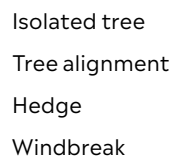
Flowering



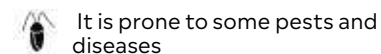
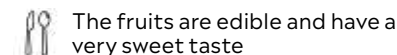
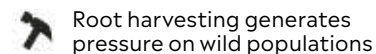
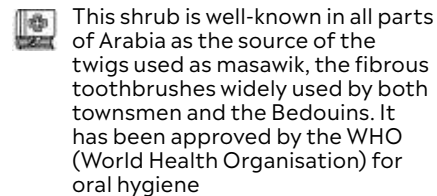
Fruits



Landscape uses



VARIOUS



ATIL

Maerua crassifolia Forssk.

Capparaceae

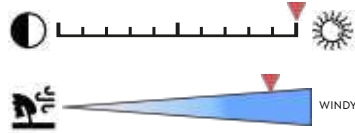
السرّح

Atil is an evergreen small tree, highly drought tolerant. It shows a singular shape, highly branched, bole often stunted and twisted. Its foliage is dense and persistent, composed of stout leaves of dark green color. Its distribution area extends throughout Northern Africa, Sahel to Pakistan. In some countries, species is utilized as a source of food, medicine and material for handicraft.




GROWING CONDITIONS


Micro-climate




Soil



 Sandy or rocky soils (dry and draining conditions)

 A little irrigation is necessary until well established

 Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Transplant in pots of adapted size to encourage the optimal growth of root system

Production of young seedling in nursery during 2 years

Planting



Plant in October - November



Depth of plantation pit: at least 60cm



Organic matter and biological solutions



Mulching

Maintenance



Low maintenance.
By pruning some parts, it can be trained as column, espalier, block, sphere, or even original shapes



AESTHETIC VALUE

Appearance



4-8m high

TYPE Moderate size tree

SHAPE Rounded small tree, with bole twisted and highly-branched crown

Foliage



Persistent foliage



Dense foliage

Flowering



Small flowers



February to April

Fruits



5-10cm of length, brown oblong pod, constricted between the seeds.



Edible

Landscape uses

Single small tree

Vegetation screens / hedges

Ornamental beds of shrubs

VARIOUS



Leaves and bark are endowed with several medicinal properties



The leaves can be cooked. The fruit is also edible



The wood is very hard and can be used for handicrafts

MORINGA

Moringa peregrina (Forssk.) Fiori.

Moringaceae

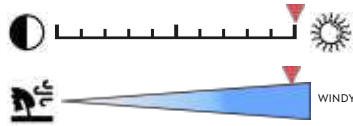
البان

Moringa is a medium size tree with an ovoid crown. The leaves are transient, the persisting rachis giving it a tamarisk-like habit. Its distribution area extends throughout Northeast Africa to the Arabian Peninsula. All plant parts such as leaves, rachis, flowers, fruits, and immature pods can be used for various purposes, food, medicinal, fodder... It is cultivated in some areas of ALULA from seeds collected in the wild, for producing an edible oil, which is sold in some farms and for windscreens.



GROWING CONDITIONS

Micro-climate



Soil



- Prefers neutral to slightly acidic soil
- Well-drained loams to loamy clays
- Irrigation is necessary until well established. Deep watering during the summer will enhance growth
- Highly sensitive to salinity

LANDSCAPING

Nursery crop

- Harvesting seeds in chosen populations and controlled germination
- Other option: by planting limb cuttings 1-2m long, from June to August
- Transplant in pots of appropriate size to encourage the optimal growth of root system
- Production of young plants in nursery for at least 3 years

Planting

- Pricking out
- Depth of plantation pit: at least 30cm
- Biological solutions
- Mulching, stake, protection net

Maintenance

- Pollarding or pruning allows to promote branching



AESTHETIC VALUE

Appearance

- 6-10m high
- TYPE** Moderate size trees
- SHAPE** Ovoid shape, highly branched from the base

Foliage

- Permanent for the rachis
- Low leaf density

Flowering

- Medium sized showy fragrant flowers with beautiful petals
- March - May

Fruits

- Fruits form long pods
- Immature pods are edible

Landscape uses

- Hedge
- Isolated ornamental tree
- Tree alignment
- Windbreak / Shelter belt

VARIOUS

- The use of the oil goes back to Antiquity and is referred to in old Egyptian texts, the Bible and ancient Greek and Roman texts
- This oil, known as 'ben oil', is obtained from the seeds. The oil is used for cooking and in cosmetic. The seeds are used in the Middle East in water purification process and as medicine
- In Saudi Arabia, this tree is used for its ornamental qualities, often in alignment plantations to make hedges on field border
- This tree attracts bees

NILE TAMARISK

Tamarix nilotica (Ehrenb.) Bunge
Tamaricaceae

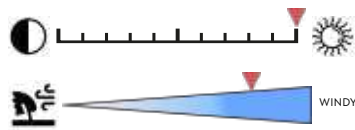
الطرفة

Nile tamarisk is a shrub or small tree able to grow from the Mediterranean shrublands up to extreme deserts. It shows various shapes as a wide shrub or a slender erect tree. Its distribution area extends throughout the Eastern Mediterranean region, North-East Africa, the Arabian Peninsula and some countries of Central Asia. This Tamarisk can be used in environmental projects for reforestation and as a ground stabiliser.



GROWING CONDITIONS

Micro-climate



Soil



Neutral to alkaline grounds

Sandy-clay loams

Irrigation is necessary until well established; deep watering during the summer will enhance growth

Tolerates saline soils

LANDSCAPING

Nursery crop

Harvesting seeds in wild populations or use directly cuttings of half-ripe wood

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting

Pricking out

Depth of plantation pit: at least 40cm

Organic matter and biological solutions

Mulching, stake, protection net

Maintenance

Requires no maintenance. Pruning allows the plant to form a branching, rounded shrub, or also a single tree trunk



AESTHETIC VALUE

Appearance

5-8m high

TYPE Moderate size trees

SHAPE Erect and branching shrub, often bushy

Foliage

Permanent foliage

Dense foliage

Flowering

Inflorescence of tiny flowers clustered in panicles of 20cm long

April - December

Landscape uses

Groups of trees

Isolated tree

Alignment tree

Tall rounded shrub massifs

VARIOUS

This plant is a host of insects that suck the tree sap. These insects are aphids which a sweet, honeydew like fluid substance

This tree is also called «Manna», as the honeydew-like substance is sometimes used for food by Bedouins

A leaf extract is used in traditional medicine



SHRUBS AND BUSHES





CALLIGONUM

Calligonum comosum L'Hér.

Polygonaceae

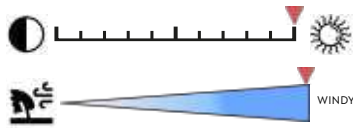
الأرطى

The currently scientific valid name of this species is *Calligonum polygonoides* L. This is an evergreen shrub, growing to 3m tall. Its shape can be bushy and very spreading, branching from the base. The linear leaves look like needles of a pure green color. This hardy bush is drought tolerant and able to grow in sandy deserts. The plant has been traditionally harvested as a source of food, medicine and for handcraft. The plant is over-cut for its wood, used for heating purposes, which increases the degradation of its natural ecosystem.

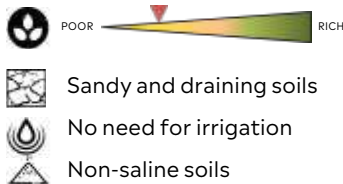


GROWING CONDITIONS

Micro-climate

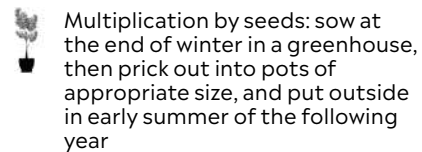


Soil



LANDSCAPING

Nursery crop



Multiplication by seeds: sow at the end of winter in a greenhouse, then prick out into pots of appropriate size, and put outside in early summer of the following year

Vegetative multiplication: the plant produces root suckers and is easily propagated by cutting and layering

Production of young seedling in nursery for 1-2 years

Planting



Plant between October and December



Depth of plantation pit: at least 40cm



Organic matter and biological solutions



Mulching

Maintenance

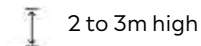


Requires no maintenance



AESTHETIC VALUE

Appearance



2 to 3m high

TYPE Shrubs and bushes

SHAPE Rounded bush, highly branching

Foliage



Persistent foliage



Moderately dense

Flowering



Elongated cluster of small white flowers



February to April

Fruits



The fruits are attractive tassels of 1-2cm wide, yellow or red (dimorphic)

Landscape uses

Single rounded bush

Ornamental bushy massifs

Hedge

Slope stabilizer

VARIOUS



Leaves and young shoots have medicinal properties



Provides good fodder for livestock



Tannins can be extracted and added after the branches. It is used for wood locally



It is planted to stabilize the shifting sands, due to its extensive root system

WHITE SASKAUL

Haloxylon persicum Bunge

Amaranthaceae

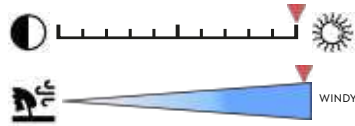
الغضبي

White Saskaul is a an evergreen desert shrub, growing to 4m tall, able to form pure stands in arid areas. Very tolerant to drought and salt, this plant represents the first pillar of the native ecosystems. The species is used for many rehabilitation projects due to its extensive root system, allowing sandy soils to stabilise.



GROWING CONDITIONS

Micro-climate



Soil



- Tolerant to alkaline conditions
- Sandy and draining soils
- No need of irrigation
- Tolerates saline conditions



LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Controlled germination

Transplant in pots of adapted size to promote the optimal growth of root system

Production of young plants in nursery during at least 3 years

Planting



Plant between October and December



Depth of plantation pit: at least 50cm



Biological solutions and slight supply of organic matter



Mulching

Maintenance



Requires no maintenance. It is possible to prune the plant to achieve a specific shape

AESTHETIC VALUE

Appearance



Up to 4,5m high

TYPE Shrubs and bushes

SHAPE Wide shrubs branching from the base



Foliage



Persistent foliage



Moderately dense



Flowering



Small unattractive flowers



Fruits



The fruits are small, rounded and of dark color

Landscape uses

Tall and rounded shrub

Hedges

Slope stabilizer

VARIOUS



The White Saskaul can be planted for stabilization of shifting sands, and also for revegetation of very arid and degraded environments

BOXTHORN

Lycium shawii Roem. & Schult.

Solanaceae

العوسج

Boxthorn is a thorny shrub with a branching habit in its upper part. This species is more often round-shaped in the wild, under grazing pressure. However, it can be pruned to form many different shapes. Its distribution area extends throughout the Arabian Peninsula, South-West Africa and the Mediterranean basin. The stem leaves and berries are used in traditional medicine.



GROWING CONDITIONS

Micro-climate



Soil



Alkaline to acidic



Desertic clayey soils



No need of irrigation



High resistance to salinity

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Controlled germination

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery for at least 3 years

Planting



Pricking out



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching, stake, protection net

Maintenance



Several pruning systems possible: hedge-shape, round-shape, large solitary shrubs, column, espalier, block, spherical, or even original shapes



AESTHETIC VALUE

Appearance



1,5-3m

TYPE Shrubs and bushes

SHAPE Bushy-shaped



Foliage



Persistent foliage



Dense foliage



Flowering



Numerous, small tubular flowers



March-May



Fruits



Berries of pea-size



Edible

Landscape uses

Hedge

Windbreak

Grouped ornamental massif

Isolated rounded bush

VARIOUS



The plant attracts birds and bees



The stem leaves and berries are used in traditional medicine. There has been recent research interest into this plant possible medical uses



This plant provides fodder for livestock

TAILY WEED

Ochradenus baccatus Delile.

Resedaceae

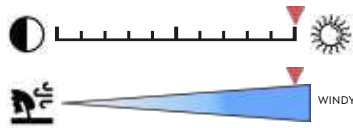
القرضي

Taily weed is a desert shrub with pretty greenish-yellow flowers, able to grow in very arid conditions. It is spread over sandy and stony places. Its distribution area extends throughout coastal countries of North-East Africa, Libya, Egypt, the Sinai Peninsula, the Arabian peninsula, South Iraq and Pakistan. The plant is often grazed by livestock. It is a valuable medicinal plant.

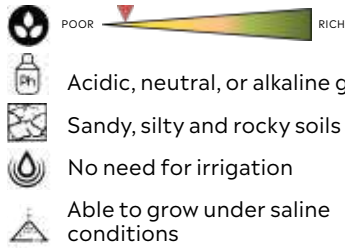


GROWING CONDITIONS

Micro-climate

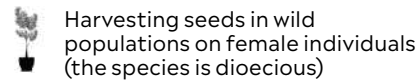


Soil



LANDSCAPING

Nursery crop



One year of storage for breaking the dormancy of seeds.

Transplant in pots of appropriate size to encourage the optimal growth of root system.

Production of young plants in nursery for at least 2 years

Planting



Pricking out



Depth of plantation pit: at least 30cm



Biological solutions



Mulching, protection net

Maintenance



Various pruning systems possible: hedge shape, round shape, large solitary shrubs

AESTHETIC VALUE

Appearance



Up to 3m high

TYPE Shrubs and bushes

SHAPE Bushy, ovoid shape, highly branched from the bottom, straggling

Foliage



Permanent foliage



Medium dense foliage

Flowering



Long cluster of small flowers, in dense terminal rigid racemes



January - May

Fruits



Little pearlescent fleshy berries



Edible

Landscape uses

Hedge

Windbreak

Slope stabiliser

Ornamental bush

VARIOUS



The plant can be used as fodder for camels



Fruits and leaves are eaten or pounded with water to relieve stomach pains



WHITE BROOM

الرتم

Retama raetam (Forssk.) Webb & Berthel.

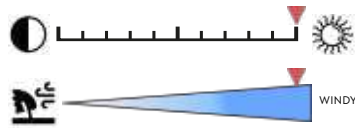
Fabaceae

White broom is a graceful shrub, looking like the broom plant. The branches are thin and flexible, silvery green when young and dark green when mature. It is highly attractive due to its abundant sweet smelling abundant blooms, that make it a lovely amazing sight. Its native distribution area extends throughout Sicilia to the North of the Arabian Peninsula. This species is harvested from the wild for local uses as a medicine and also as a source of fuel. It has been introduced as an ornamental plant in many countries, especially in Mediterranean regions.

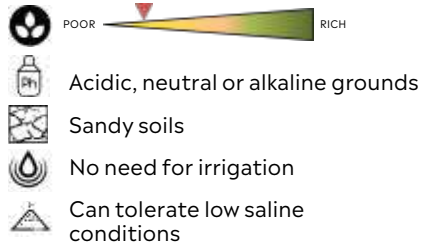


GROWING CONDITIONS

Micro-climate




Soil







LANDSCAPING


Nursery crop

-  Harvesting seeds in wild populations
- Chemical scarification for breaking the dormancy of seeds
- Transplant in pots of appropriate size to encourage the optimal growth of root system
- Production of young plants in nursery for at least 2 years

Planting


-  Pricking out
-  Depth of plantation pit: at least 30cm
-  Biological solutions
-  Mulching, protection net

Maintenance



-  Requires no maintenance
- Hedge shape, round shape, large solitary shrubs

AESTHETIC VALUE



Appearance

-  Up to 3m high and 6m wide
- TYPE** Shrubs and bushes
- SHAPE** Shrub with slender, drooping green branches



Foliage

-  Permanent foliage
-  Sparse

Flowering

-  Attractive and fragrant white flowers, medium size
-  February - April



Fruits

-  Little ovoid pods
-  Not edible

Landscape uses

- Hedge
- Windbreak
- Slope stabiliser

VARIOUS

-  The plant has a symbiotic relationship with certain soil bacteria, forming nodules on the roots and fixing atmospheric nitrogen
-  The flowers are an important source of fodder for camels



SUMAC

Searsia tripartita (Ucria) Moffett
Anacardiaceae

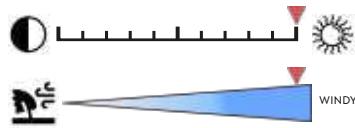
العرن

Formerly known as *Rhus tripartita* (Ucria) Grande, Sumac is a thorny shrub, highly branching, showing twisted spiny stems, with dense and persistent foliage. Its native distribution is Saharo-Arabian. It is uncommon in AlUla region and in Saudi Arabia. It is credited with many properties in traditional medicine, and the wood is used in craftsmanship.

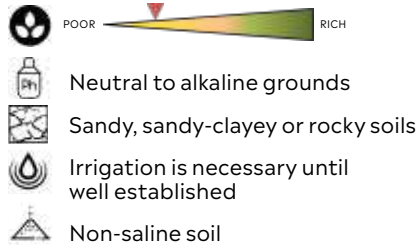


GROWING CONDITIONS

Micro-climate

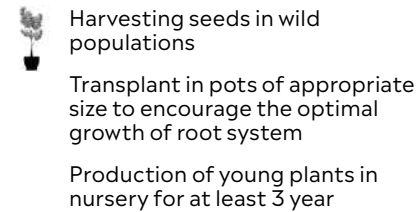


Soil

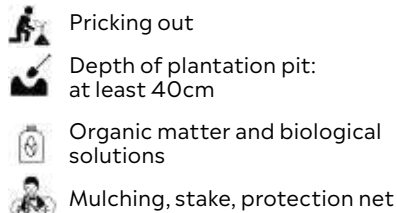


LANDSCAPING

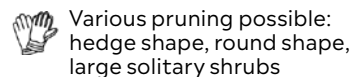
Nursery crop



Planting

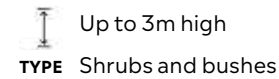


Maintenance



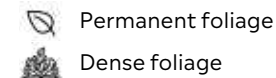
AESTHETIC VALUE

Appearance

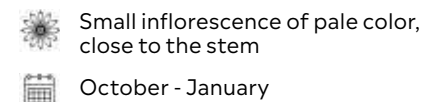


SHAPE Rounded shape, bushy, branching from the base

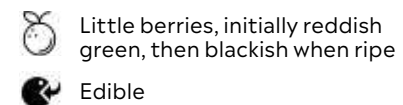
Foliage



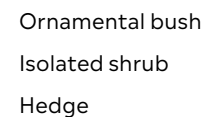
Flowering



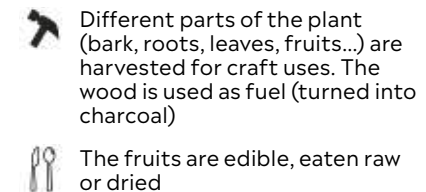
Fruits



Landscape uses



VARIOUS



WINTER CHERRY

Withania somnifera (L.) Dunal

Solanaceae

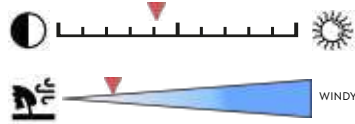
العيب

Winter Cherry is a moderately tall perennial bush. The plant shows a persistent foliage, composed of large leaves of pure green color. The flowering can last all year round. Its distribution is widespread and the plant can grow in many different climatic and environmental conditions. It is, for example, cultivated in India for its medicinal properties. The plant is sensitive to frost.

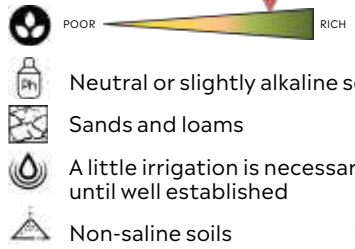


GROWING CONDITIONS

Micro-climate



Soil



LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Sow in early spring in greenhouse, then transplant in pots of appropriate size, and put outside in early autumn
- Production of young seedlings in nursery for 1-2 years

Planting

- Plant in October-November
- Depth of plantation pit: at least 30cm
- Organic matter and biological solutions
- Mulching

Maintenance

- Low maintenance



AESTHETIC VALUE

Appearance

- 50 to 100cm high
- TYPE** Shrubs and bushes
- SHAPE** Medium tall bush, rounded and very branching

Foliage

- Persistent foliage of pure green color
- Dense foliage

Flowering

- Cluster of 3-6 small light flowers, calyx enlarging after flowering to 2cm long

Fruits

- Berry globose and bright red 5mm diameter at first, then becoming wider upon ripening

Landscape uses

- Single small bush
- Bushy alignment
- Intermediate layer between bush and low stratum

VARIOUS

- Several parts of the plant are known for their various medicinal properties. This species is traditionally used to treat intestinal parasitic infections, but also snake or scorpion stings
- The fruit can be used as a soap substitute

WILD JUJUBE

Ziziphus nummularia (Burm. f.) Wight & Arn.

Rhamnaceae

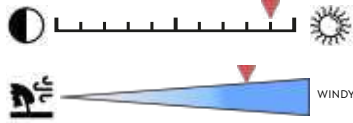
السدر البري

This wild species of Jujube is a thorny big shrub or moderate size tree, up to 3m tall. Its airy foliage is deciduous, composed of rounded tomentose small leaves. Well adapted to arid environments, this shrub is highly branching and shows a massive shape with twisted stems. Its distribution extends throughout the Arabian Peninsula and Asia. The wild Jujube is a species valued for its medicinal properties.

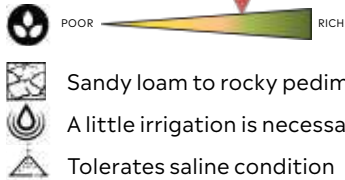


GROWING CONDITIONS

Micro-climate



Soil



Sandy loam to rocky pediments

A little irrigation is necessary

Tolerates saline condition

LANDSCAPING

Nursery crop



Multiplication by seeds:
harvest fruits in wild populations.
Sow in a greenhouse; prick out
into pots of appropriate size.
Production of young seedling
outside during 1 year

Vegetative multiplication:
collect cuttings of half-ripe wood.
The plant can be propagated by
cutting and layering

Production of young seedlings
in nursery for 1-2 years

Planting



Plant in October-November



Depth of plantation pit:
at least 50cm



Biological solutions and slight
supply of organic matter

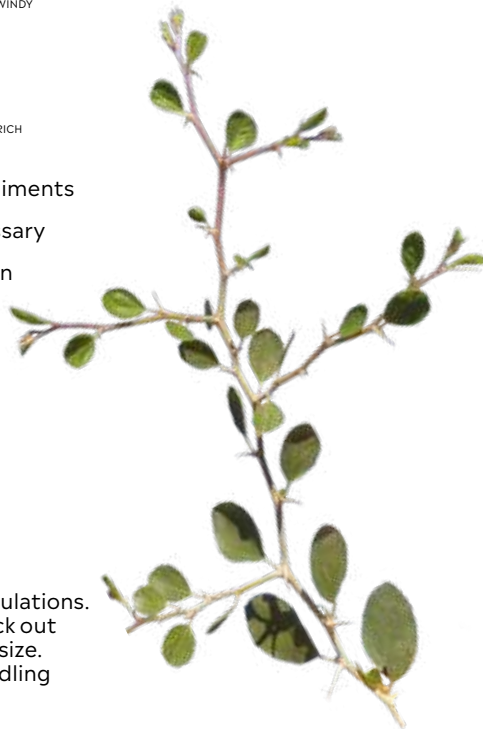


Mulching

Maintenance



Requires no maintenance.
It is possible to prune the plant to
achieve a specific shape



AESTHETIC VALUE

Appearance



1,5 to 3m high

TYPE Big shrub or moderate size tree

SHAPE Medium tall bush, highly
branching from the base,
rounded, massive



Foliage



Foliage of light green color



Dense foliage



Flowering



Solitary flowers well colored



June - July



Fruits



Globose fruit of 1cm wide,
bright yellow



Edible

Landscape uses

Single rounded bush

Ornamental bushy massifs

Hedge

VARIOUS



The plant provides protein-rich
fodder for livestock



It is harvested and used in folk
medicine of India. Some scientific
works highlighted potential
properties to treat digestive
diseases



CLIMBING OR
HANGING PLANTS



CARTILAGE CAPER

الصف

Capparis cartilaginea Decaisne.

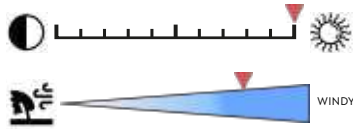
Capparaceae

This is a perennial creeper bush. This plant can be decumbent, pendulous or ascending. The white or rose flowers are attractive with purple showy stamens. Its distribution area extends throughout East Africa, the Sinai Peninsula and the Arabian Peninsula. This Caper plant has been used for a long time for food and it is known for its medicinal properties.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral, or alkaline soils
- Adapted to many kind of well-drained soils
- No need for irrigation
- Able to grow under high saline conditions

LANDSCAPING

Nursery crop



Harvesting fruits in wild populations

Immediately sow the seeds in a greenhouse

Transplant in individual pots of appropriate size and into well-drained soil to encourage optimal growth of root system

Propagation is possible by stem cuttings

Production of young plants in nursery during 1 or 2 years

Planting



Pricking out



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



1-3m high

TYPE Climbing or hanging plants

SHAPE Covering or drooping

Foliage



Permanent foliage



Dense foliage

Flowering



Beautiful medium sized flowers, with many long filaments



March - May

Fruits



Fruit ovoid, 3-6cm long, fleshy with pips



Edible

Landscape uses

Plant cascades

Erosion control

Bushy ground cover

VARIOUS



The flower buds, young fruits, and tender branch tips can be pickled and used as a condiment. In Africa the fruit is reported as edible and the dried leaves are directly chewed as a medicine to treat cough



The flower smell is slightly aromatic



Leaves and stems are used for bruises, childbirth, earache, headache, paralysis, snakebite and swellings

COMMON CAPER

Capparis spinosa L.

Capparaceae

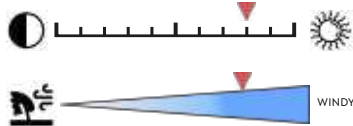
الشفلح – الكبر

This species grows spontaneously in the Kingdom of Saudi Arabia. Cultivated in many places, this plant is sometimes gathered in the wild. This sprawling bush can be decumbent, pendulous, or ascending. The white flowers are numerous and attractive. It is a very polymorphic species (thorny to unarmed). The plant has long been used for food and medicine in Mediterranean regions, Arabia and Asia.



GROWING CONDITIONS

Micro-climate



Soil



- Rocky and draining soils
- A little irrigation is necessary
- Unsalted lands

LANDSCAPING

Nursery crop



Multiplication by seeds: this is possible but not easy due to dormancy of seeds, which does not allow an easy germination

Vegetative multiplication: a better option is to take cuttings of half-ripe wood, collect stems of basal portion of branches (1cm diameter with at least 6 buds)

Production of young seedlings in nursery for 1-2 years

Planting



Plant in October-November



Depth of plantation pit: at least 40cm



Biological solutions and organic matter



Mulching

Maintenance



Requires no maintenance. It is possible to train the plant to form an ascending or decumbent screen



AESTHETIC VALUE

Appearance

2-4m high

TYPE Climbing or hanging plants

SHAPE Spreading bush, creeper

Foliage

Persistent foliage

Dense

Flowering

Attractive white flowers

Fruits

Fleshy fruit, egg-shaped and elongated

Edible

Landscape uses

Ascending climbing plant

Decumbent screen plant

Sprawling massive bush

VARIOUS



Different parts of the plant are endowed with various medicinal properties



The flower buds provide the famous «caper» condiment. The immature young fruits are also edible



This plant has an extensive root system that is useful to stabilize soils and prevent erosion in arid regions

WILD GOURD شري الذئب - مشط الذئب

Cucumis prophetarum Meter.

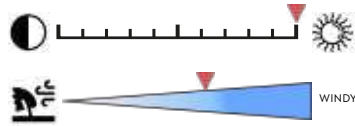
Cucurbitaceae

This is a perennial herb with elongated stems. Often prostrate on the ground, this plant hangs or climbs on various supports, in particular rocks. The plant produces annual stems up to 2,5m long. The fruits are typically intense yellow, prickly and rough. Its native range extends throughout North and Central Africa, the Arabian Peninsula and South-West Asia. The plant is sometimes gathered from the wild for local medicinal or food uses.

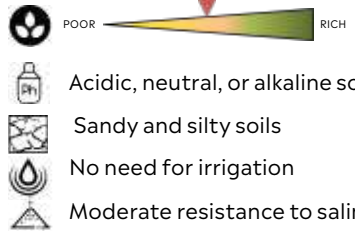


GROWING CONDITIONS

Micro-climate



Soil



LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations.
- Seed production on a dedicated field based on an initial seed harvesting in wild populations.
- Annual harvesting.
- Seed conservation in adapted conditions until sowing.

Planting

- Ground preparation just before hand sowing
- No specific needs
- No specific needs

Maintenance

- Requires no maintenance



AESTHETIC VALUE

Appearance

Up to 20cm high without stake

TYPE Climbing or hanging plants

SHAPE Creeper; stems crawl on the ground

Foliage

Leafless in winter

Medium dense foliage

Flowering

Solitary flowers with yellow corolla

March - May

Fruits

Intense yellow, fleshy and spiny rough spheric fruits

Edible

Landscape uses

- Ground cover
- Slope stabiliser
- Climbing or drooping

VARIOUS

Mature fruits can be cut into small slices, dried and then cooked as a vegetable after adding a paste of pounded groundnuts. The plant can occasionally be cultivated and is also sold in local markets.

PERGULARIA

Pergularia tomentosa L.

Apocynaceae

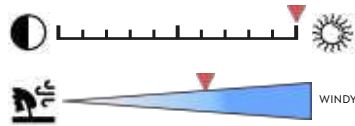
الغلة - ام اللبن

This is a scrambling and climbing perennial under-shrub, with twinning stems growing up to 3m long. Its distribution area extends in North Africa throughout the Sahara desert, the Arabian Peninsula and Western Asia. Its grey-green heart-shaped foliage and lovely delicate flowers can make it an attractive, unusual feature in landscaping. Its young stems contain a white latex. Several uses have been recorded in traditional medicine.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral, or alkaline grounds
- Sandy, silty and rocky soils
- No need for irrigation
- Able to grow under saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting (manual)

Seed conservation in adapted conditions until sowing

Planting



Ground preparation just before hand sowing



No specific needs

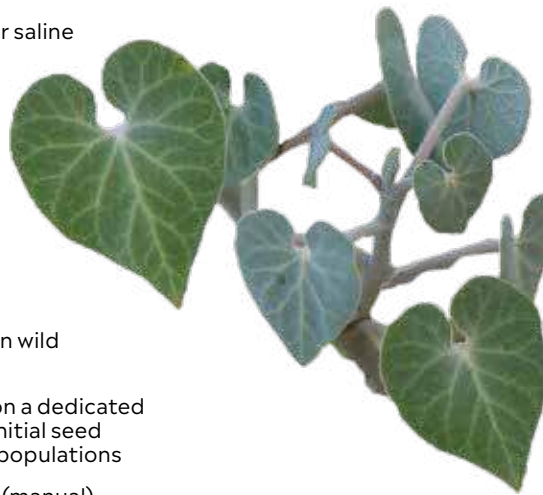


No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



Up to 3m high with support

TYPE Climbing or hanging plants

SHAPE Round shape, bushy or dense climber

Foliage



Permanent foliage



Medium dense foliage

Flowering



Very small flowers



February - April

Fruits



Long capsule with tubers



Not edible

Landscape uses

Climbing plant

Plant cascades

VARIOUS



Formerly used to remove the hair from hides before tanning



The latex of Pergularia is corrosive and can seriously damage the skin



Many different medicinal uses are reported in Africa and the Middle-East



LOW STRATUM & TUSSOCKS





INDIAN MALLOW

Abutilon fruticosum Guill. & Perr.

Malvaceae

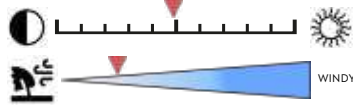
الرين - الحوص

Indian mallow is a perennial herb with several stems, woody at the base and highly branched above, growing to 1,2m. The foliage is semi-persistent, composed of large leaves, ovate-cordate, velutinous with a light green color. The yellow or orange flowers are attractive. Spread throughout the southern hemisphere, it is present in North and South-western Saudi Arabia. This species is drought tolerant and suitable for arid area landscaping.



GROWING CONDITIONS

Micro-climate



Soil



Grows on various kinds of soil



A little irrigation is necessary



Non-saline soils



LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in adapted conditions until sowing

Planting



Plant in October-November



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance

AESTHETIC VALUE

Appearance



0,8-1,2m high

TYPE Low stratum, perennial herb

SHAPE Undershrub, branching, rounded and massive

Foliage



Persistent foliage of light green color



Dense foliage

Flowering



Solitary yellow or orange flowers.



January to April

Fruits



Capsule separated by many partitions, fruit up to 1cm wide

Landscape uses

Herbaceous ornamental beds of intermediate size

Base of trees or hedges

VARIOUS



Fiber from the stems can be used to make ropes or in weaving



Attractive for fauna, among which many insects. It is a host plant of some butterflies. The seeds are readily eaten by birds



The plant is eaten by livestock

PEARLY BUSH

Aerva javanica (Burm.f.) Schult.

Amaranthaceae

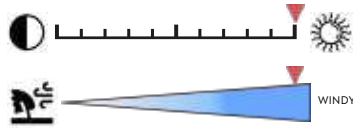
الراء- التويم - الربل

This is a perennial plant, which often presents a woody base. This species forms herbaceous massifs with a dense, grey non-deciduous foliage and amazing long white woolly flowering spikes. It has a native distribution including much of Africa, south of Asia and the Arabian Peninsula. The plant is harvested from the wild for local uses.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral, or alkaline soils
- Sandy, clayey, loamy soils
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



Biological solutions



No specific needs

Maintenance



Requires no maintenance

AESTHETIC VALUE

Appearance



0,3-1m high

TYPE Low stratum

SHAPE Multi-stemmed, wide, erect, small dense bush



Foliage



Permanent foliage



Dense foliage



Flowering



White spikes up to 5cm long



January - May

Landscape uses

Low stratum

Bush alignment



VARIOUS



The densely woolly parts of the inflorescence were used by the Bedouins for stuffing saddle pads and cushions



It is traditionally harvested to be used as a tooth cleaner.



This plant provides fodder for livestock

ASPHODEL

Asphodelus fistulosus L.

Asphodelaceae

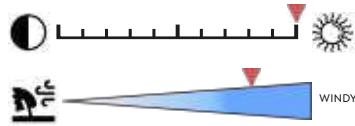
البروق

The currently valid name of this species is *Asphodelus tenuifolius* Cav. It is a perennial plant, leafy at the base with a panicle of attractive white flowers. It is a native plant of the Arabian Peninsula, Northern Africa and the Mediterranean area. This plant is a common weed of fields, particularly of wheat and chickpea fields. The plant is used in the Middle-East indigenous medicine. The roots are fibrous and can be cooked, even if it is uncommon.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral, or alkaline grounds
- Sandy or loamy soils
- No need for irrigation, or low irrigation for driest conditions
- Moderate resistance to salinity

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations.

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



Biological solution



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0.3-0.4m high

TYPE Low stratum

SHAPE Vertical herb with flower spikes

Foliage



Permanent foliage



Dense basis

Flowering



White star-shaped flowers with a thin red line in the middle of each petal



February - April

Fruits



Tiny capsule



Not edible

Landscape uses

Ornamental grass

Low stratum

VARIOUS



This plant is used as a medicinal plant. The crushed leaves can be applied to ulcers or boiled in water and drunk as a diuretic or laxative. It is traditionally used by the Bedouins

FRAGRANT OXEYE

Asteriscus graveolens Less.

Asteraceae

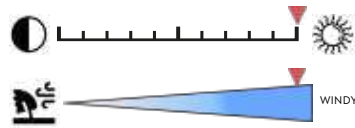
ربلة الحمار -
النقد - البهرمان

This is a common desert perennial sub-shrub. The leaves have a deep green color; the foliage is persistent and can provide a permanent dense cover. The flowers are very attractive heads of intense yellow. Its distribution area extends throughout Northern Africa, and in the North of the Arabian Peninsula. It is a highly aromatic plant, with peach-scented leaves used for tea. The plant is also used in traditional medicine.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to high alkaline ground
- Sandy-gravelly soils and sand-clayey soils
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Scarification and controlled germination

Transplant in pots of adapted size for the optimal growth of root system

Production of young plants in nursery during at least 1 or 2 years

Planting



Pricking out



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0.3-0.5m

TYPE Low stratum

SHAPE Little round-bushy shaped



Foliage



Permanent foliage



Dense foliage



Flowering



Many florets forming large flower heads of 1-2cm



March - April



Fruits



Hirsute achenes



Not edible

Landscape uses

Ornamental herbaceous massifs

Herbaceous alignments

Garden of aromatic plants

VARIOUS



Its leaves are collected in the spring and are used in infusions and decoctions by the Bedouins



The flowers of fragrant oxeye are attractive to wildlife, especially to many different insects

BUFFEL GRASS

Cenchrus ciliaris L.

Poaceae

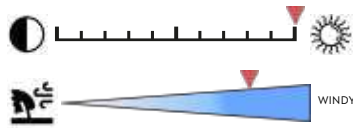
التموم – الغرزة –
الخضر – الأبيد

This is a perennial herb native from tropical and sub-tropical arid regions of Africa and Western Asia. This tufted grass grows up to 1m tall under favourable conditions. It is stout, erect, and shows a herbaceous massif shape. More common on disturbed grounds than in natural habitats, this species tolerates drought and various kinds of soils. Used in the past as an occasional fodder, it is a high quality forage.

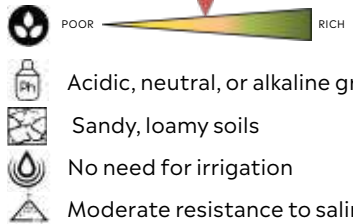


GROWING CONDITIONS

Micro-climate




Soil






LANDSCAPING


Nursery crop

-  Harvesting seeds in wild populations
- Seed production on a dedicated field based on an initial seed harvesting in wild populations
- Annual harvesting
- Seed conservation in appropriate conditions until sowing

Planting


-  Ground preparation and hand sowing (watering required for germination)
-  No specific needs
-  No specific needs

Maintenance



-  Requires no maintenance

AESTHETIC VALUE



Appearance

-  0,3-0,8m high
- TYPE** Low stratum, perennial herb
- SHAPE** Undershrub, branching, rounded and massive

Foliage

-  Persistent foliage of grey-green color
-  Foliage dense on the top, well clear off the ground


Flowering

-  small, numerous, inconspicuous flowers
-  May to September

Landscape uses

- Ground cover
- Erosion control
- Herbaceous massifs

VARIOUS

-  This plant provides a high nutritional value as fodder grass for sheep and cattle and is able to resist to heavy grazing



DYER'S LITMUS

Chrozophora tinctoria (L.) A.Juss.

Euphorbiaceae

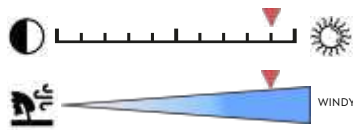
التنوم

It is a tall herb, growing late in the summer. It is annual or perennial depending on the local conditions. The plant presents a singular stellate-hairy foliage. The leaves are wide, grey-green and covered with starry bristles. Its distribution is very extensive (Mediterranean area, Arabian Peninsula and Asia). The plant is able to grow under many different soil conditions and climates. Extracts of this plant provide natural dyes.



GROWING CONDITIONS

Micro-climate



Soil



- Grows on various kinds of soil
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations.

Sowing on a damp mix of soil and compost with a little supply of vermiculite.

Transplant in pots of appropriate size. Put in greenhouse for 2 months.

Planting



Plant in October-November



Preparatory works on the soil



Does not need fertilizer

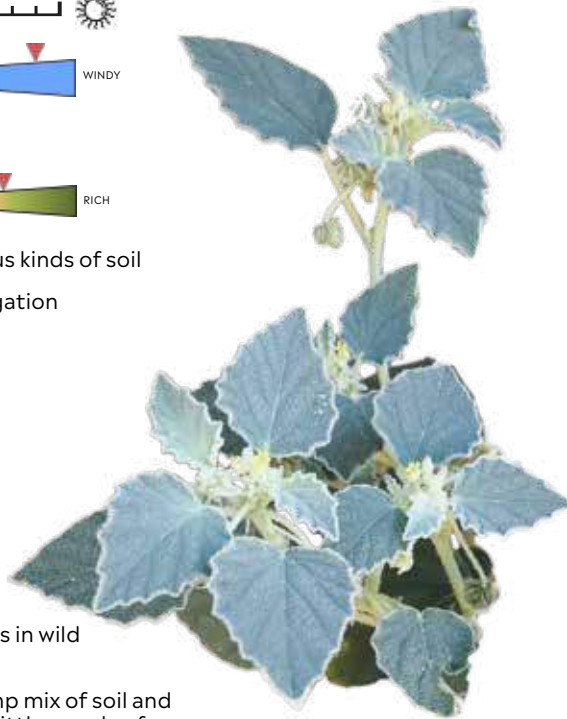


Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



Up to 1.5m high

TYPE Tussock

SHAPE Erect or ascending tufted grass

Foliage



Permanent foliage



Dense foliage

Flowering



Spike-like inflorescence



December - May

Fruits



Capsules of oval shape, textured (warty)



Not edible

Landscape uses

Single herbaceous ornamental of small size

Base of trees or hedges

Around shrub massifs

VARIOUS



Red and blue dyes are obtained from extracts of flowers, leaves and sap



Often used to dye textiles, the pigments obtained are edible and can also color food



Some studies have highlighted potential medicinal properties of this species

FERULA

Ferula sinaica Boiss.

Apiaceae

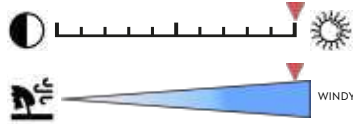
المحروث - كلخال - كلخ

This is a perennial herb with a thick blue-green stem. Its inflorescence is deciduous, whereas the basal foliage is persistent and provides a highly aesthetic herbaceous massif with light green foliage. Its distribution area is centered on the Sinai Peninsula, Negev desert, Jordan and the Northwest of the Arabian Peninsula. It is found in rocky areas in shrub steppes. This plant may have been occasionally used for its medicinal properties. The plant produces a white resin when wounded.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral, or alkaline grounds
- Sand or sandy-rocky soil
- No need for irrigation
- Adapted to saline-free soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations.

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery requires 1 or 2 years.

Planting



Pricking out



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance

Ephemeral inflorescence up to 2m

TYPE Low stratum

SHAPE Round shaped with erect inflorescence

Foliage

Permanent foliage

Dense foliage

Flowering

Umbels of little yellow flowers

March - May

Fruits

Broad, flat, unwinged, composed of multiple carpels

Not edible

Landscape uses

Ornamental

Herbaceous massifs

VARIOUS



Several phytochemical studies have evidenced compounds in the species that could have medicinal properties

MILKWEED

الحريمة - حوب

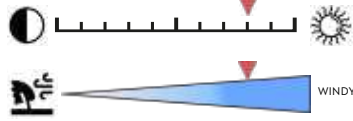
Gomphocarpus sinaicus Boiss
Apocynaceae

Milkweed is a perennial herb, highly branching from the base, forming numerous stems, growing to 1m tall. The foliage is persistent, composed of dark green linear leaves, 4-8cm long. The flowers are attractive, clustered in heads at the top of stems. The fruit is a singular spiny capsule, very elongated. Spread in Egypt and the Arabian Peninsula, this species is well-adapted to arid conditions.

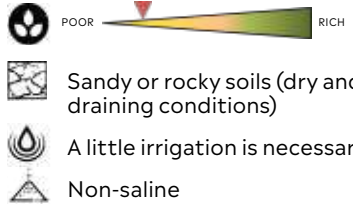


GROWING CONDITIONS

Micro-climate

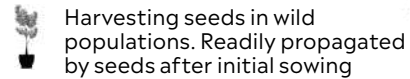


Soil



LANDSCAPING

Nursery crop



Harvesting seeds in wild populations. Readily propagated by seeds after initial sowing

Transplant in pots of appropriate size to encourage optimal growth of root system

Production of young seedlings in nursery after 1 year

Planting



Plant between October and December



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0,8-1,2m high

TYPE Low stratum, perennial herb

SHAPE Undershrub, stems many from the base, spreading and very leafy

Foliage



Persistent foliage



Dense foliage

Flowering



Small flowers clustered in pedunculate umbels



January to March

Fruits



Unusual fruit of 5-6cm long, tapering to a beak, with longitudinal stripes of color and long hairs



Not edible

Landscape uses

Herbaceous ornamental beds of intermediate size

Base of trees or hedges

VARIOUS



The plant has been used for several medicinal purposes. Another species of the genus well known in Africa is harvested from the wild and used as a fiber plant

THATCHING GRASS

Hyparrhenia hirta (L.) Stapf

Poaceae

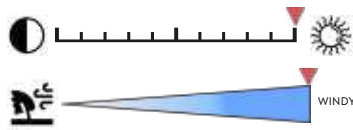
الإسنوم

This is a perennial grass, forming dense tussocks of up to 1m. The inflorescence forms typical airy panicles of 30cm, composed of pairs of villous spikelets. Its distribution area is very wide throughout the Mediterranean basin and from Africa eastwards up to Eastern Asia. The plant can grow on various kinds of soil and climate, particularly in arid lands.



GROWING CONDITIONS

Micro-climate



Soil



- Grows on various kinds of soil
- Irrigation is not necessary
- Moderately tolerant to saline conditions

LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Propagates readily from seed after initial sowing
- Production of young seedling directly outside in nursery, between 6 and 12 months

Planting

- Plant between October and December
- Depth of plantation pit: at least 30cm
- Organic matter and biological solutions
- Mulching

Maintenance

- Requires no maintenance

AESTHETIC VALUE

Appearance

- 0,4-1m high
- TYPE** Low stratum, perennial herb
- SHAPE** Tussock, tufted grass

Foliage

- Persistent foliage
- Moderately dense

Flowering

- Elongated panicle composed of pairs of spikelets
- January to May

Landscape uses

- Herbaceous ornamental tufted grass
- Base of trees or hedges

VARIOUS

- This plant provides good fodder for livestock
- This thatching grass can be useful to protect land against erosion (wind or water). This plant can stabilize hard or gravelly soils



TOADFLAX

الصفيرا

Kickxia pseudoscoparia K. aegyptiaca V.W.Sm. & D.A.Sutton

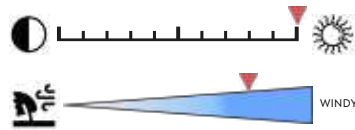
Plantaginaceae

This species is a perennial herb, with persistent dense foliage of dark green color. The leaves are numerous, small and linear. Highly branching, the plant presents abundant erect stems, forming a rounded and massive shape up to 50cm high. This plant is highly drought tolerant and able to grow on rocky slopes. Its distribution area includes some parts of Egypt, Sudan and the Northwest of the Arabian Peninsula.



GROWING CONDITIONS

Micro-climate



Soil



- Stony soils and rocky outcrops
- Irrigation is not necessary
- Saline-free soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations, before the dehiscence of capsules

Propagate by seeds, sowing in the autumn

Production of young seedlings directly outside in nursery, after 1 year.

Planting



Plant between October and December



Depth of plantation pit: at least 40cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0,25-0,5m high

TYPE Low stratum, perennial herb

SHAPE Ornamental herbaceous, massive and rounded

Foliage



Persistent foliage of dark green color



Dense foliage

Flowering



Many yellow flowers along the stems



February to April

Fruits



Numerous small dehiscent capsules

Landscape uses

Ornamental low plant, distributed sparsely

Herbaceous patches or alignments

Base of trees or hedges

VARIOUS



Attractive for fauna: flowering persists for long periods of time, thus attracting many insects

STAGSHORN LAVENDER الشَّيْبَعَة - كِتَاعَة

Lavandula coronopifolia Poir.

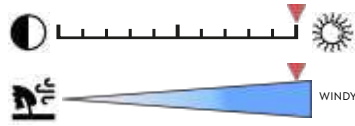
Lamiaceae

This perennial herb forms a little, rounded bush, branching from the base, with dense light green foliage. It belongs to the aromatic plant group of arid areas. The leaves are cut into narrow lobes. The purple flowers form thin spikes. Its distribution area extends from Cape Verde to Central Asia and throughout the Arabian Peninsula. Its leaves have several medicinal properties and are used in different countries.







GROWING CONDITIONS

Micro-climate



Soil



-  Non acidic soils
-  Desertic rocky soils
-  Irrigation necessary until well established
-  Adapted to non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Sowing on damp compost with a sprinkling of vermiculite

Transplant in pots of appropriate size to encourage the optimal growth of root system

Production of young plants in nursery requires 2 years

Planting



Pricking out



Depth of plantation pit: at least 30cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance

AESTHETIC VALUE

Appearance



0,5-1m

TYPE Perennial herb

SHAPE Round-shaped

Foliage



Persistent foliage



Dense foliage

Flowering



Spikes up to 15cm high



January-April

Landscape uses

Garden of aromatic plants

Ornamental strip



VARIOUS



The plant attracts honey bees



Recent research has shown that its essential oil has antibacterial properties



The Stagshorn lavender is aromatic. The plant has an attractive flower and an extended flowering period

DOWNY LAVENDER

Lavandula pubescens Decne.

Lamiaceae

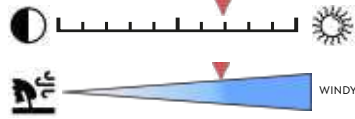
الشَّيْبَة - عتَان
ذفيرة

Downy lavender is a perennial herb, forming a little bush, much-branched and erect. The foliage, which persists almost all year, is dense with a light green colour. The leaves present wide lobes. The plant is attractive, strongly aromatic and has a long flowering period. Its distribution area includes Eritrea, Egypt, the Sinai peninsula and Northern and Central Saudi Arabia.

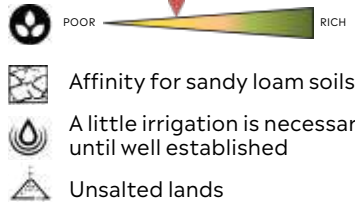


GROWING CONDITIONS

Micro-climate



Soil



Affinity for sandy loam soils

A little irrigation is necessary until well established

Unsalted lands

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Sowing on damp compost with a sprinkling of vermiculite

Transplant in pots of appropriate size to encourage optimal growth of root system

Production of young plants in nursery requires 2 years

Planting



Plant in October-November



Depth of plantation pit: at least 40cm



Organic matter and biological solutions



Mulching

Maintenance



Requires no maintenance

AESTHETIC VALUE

Appearance



0.5-0.8m high

TYPE Low stratum, perennial herb

SHAPE Undershrub, branching from the base, rounded and massive



Foliage



Persistent foliage of light green color



Dense foliage



Flowering



Dense spikes up to 5cm



January to May

Landscape uses

Garden of aromatic plants

Ornamental strip



VARIOUS



The plant attracts honey bees



The chemical composition of the essential oil has been studied and is credited with antibacterial activity



The Downy Lavendar is very aromatic providing a strong and pleasant scent

BRISTEL GRASS

Pennisetum divisum (J.F.Gmel.) Henrard
Poaceae

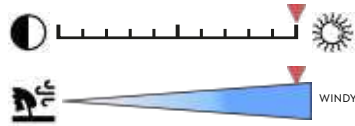
الصبغاء - الثيموم

Bristel grass is a perennial herb. This tufted grass grows up to 1,5m tall under favourable conditions. It is erect or ascending from a very stout woody rootstock, and shows a herbaceous massif shape. Its inflorescences are white plumose spikes up to 10cm long. The plant is used as fodder. It is native from the tropical and sub-tropical arid regions of Africa, the Arabian Peninsula and western Asia.

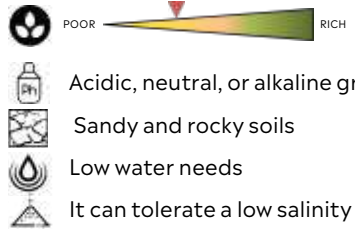


GROWING CONDITIONS

Micro-climate



Soil



LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Controlled germination
- Vegetative multiplication by cutting the woody rootstock
- Multiplication and cultivation during 2 years in nursery

Planting

- Ground preparation before sowing (watering required for germination)
- Biological solutions
- No specific needs

Maintenance

- Requires no maintenance

AESTHETIC VALUE

Appearance

Up to 1,5m high

TYPE Tussock

SHAPE Tall tufted grass with long stiff

Foliage

Permanent foliage

Dense foliage

Flowering

Inflorescences: 10cm.
Plumose and hairy spikes

February-April

Landscape uses

Ground cover

Tussock

Herbaceous massifs

Stabiliser of sandy soils



VARIOUS

The ability of this plant to grow on sand makes it a potentially interesting resource for revegetation projects, such as dune fixation

This plant is grazed by camels and provides biomass in rangelands

PLEABANE

Pulicaria incisa (Lam.) DC.

Asteraceae

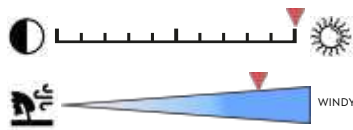
العرار - خاع

Pleabane is a perennial herb, which is strongly aromatic. It has a rounded shape and a persistent light green foliage. During the flowering, the plant shows numerous, attractive yellow heads. Its distribution area extends throughout Northern Africa, the Sahara desert, the Sinai Peninsula and the Arabian Peninsula. The plant has been used in various areas for its medicinal properties.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral, or alkaline grounds
- Sandy, silty and rocky soils
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting (manual)

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



No specific needs



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0.2-0.4m

TYPE Low stratum

SHAPE Round shape, bullet shape

Foliage



Permanent foliage



Dense foliage

Flowering



Attractive small yellow flowers



January-May

Fruits



Beakless achenes

Landscape uses

Ornamental herbaceous

Ground cover

Garden of aromatic plants

VARIOUS



Pleabane is highly aromatic. It bears a sweet minty fragrance



This plant has been studied by scientists who have evidenced a potential antioxidant activity

BLADDER DOCK

الحميض - الحميضا

Rumex vesicarius L.

Polygonaceae

The Bladder dock is an annual herb of medium size, producing typically showy attractive red flowers. It is able to grow on many kinds of soil and under various climates. In some countries, the plant is harvested for food, or as a source of medicine. Its distribution is extensive in Africa and in the Arabian Peninsula.



GROWING CONDITIONS

Micro-climate



Soil



Grows on various kinds of soils



A little irrigation is necessary



Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Readily propagates by seed production

Produces an adequate amount of seeds in an annual crop cycle

Planting



Preparatory works on the soil



Does not need fertilizer



Sow in October-November

Maintenance



Mechanical selective weeding could be required in some cases (weed proliferation risk)



AESTHETIC VALUE

Appearance



0.2-0.4m

TYPE Low stratum, annual herb

SHAPE Herbaceous erect massive

Foliage



Persistent foliage of light green color



Dense foliage

Panicle of fruits



Erect wide clustered pink or reddish inflated fruits at the top of the stem.



February to May



Not edible

Landscape uses

Herbaceous ornamental strip

Base of trees or hedges

VARIOUS



This edible plant is a kind of sorrel. The leaves can be eaten raw or cooked as a vegetable



The species is credited with several medicinal uses



The root extracts can provide dyes of dark green to brown and dark grey colours

DOG SENNA

Senna italica Mill.

Fabaceae

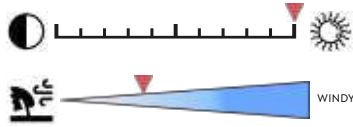
العشرق

Dog senna is a perennial subshrub. Its foliage is dense and persists all year round. Flowers are intense yellow and very attractive. The blue-green leaves smell like tea. Its distribution area mainly extends from North-East Africa to the Arabian Peninsula. It has been credited with medicinal properties. The plant is harvested from the wild or cultivated in many countries in dry tropical regions. The dried powdered leaves are traded for their cosmetic qualities.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral or alkaline grounds
- Deep, well-drained, sandy-loams
- No need for irrigation
- Can tolerate low saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations.

Annual harvesting

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



Biological solutions



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



Up to 0.6m high

TYPE Low stratum

SHAPE Prostrate to semi-erect

Foliage



Permanent foliage



Medium dense foliage

Flowering



Beautiful attractive medium size flowers, grouped in long clusters



September - April

Fruits



Arched pods of 5cm



Edible

Landscape uses

Ornamental herbaceous massifs

Herbaceous alignment

VARIOUS



The plant has a long tradition of being used as a purgative and a stimulant in various countries. The leaves have been imported to Europe from Egypt as the drug 'dog senna'



This species has a symbiotic relationship with specific soil bacteria, forming nodules on plant roots that fix atmospheric nitrogen



Young seeds are eaten as a snack or as a vegetable in the Sahel region

ARGEL

Solenostemma argel (Delile) Hayne.

Apocynaceae

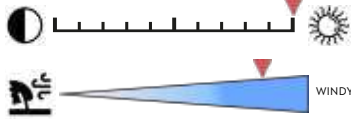
الحرجل

Argel is a perennial herb with an iconic, white, globular, attractive inflorescence. Branching from the base, the plant presents numerous erect stems, and shows a persistent dense foliage, composed of lanceolate blue-green leaves. Its distribution area extends throughout Northern Africa and the Arabian Peninsula. The plant is sometimes gathered from the wild for local medicinal uses.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to alkaline grounds
- Sandy-clay loams, or rocky soils
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Irrigation is required to allow germination
- Production of plants directly by sowing or multiplication in containers

Planting

- Option 1: Pricking out young plants
- Option 2: Ground preparation, sowing, followed by an initial irrigation
- For the plantation option, the pit should be at least 40cm
- Biological solutions
- No specific needs

Maintenance

- Requires no maintenance



AESTHETIC VALUE

Appearance

Up to 0.6m high

TYPE Low stratum

SHAPE Numerous erect stems from a woody rootstock

Foliage

- Permanent foliage
- Very dense foliage

Flowering

- Fragrant flowers grouped on the stem
- December - April

Fruits

- Green purple marbled pear-shaped
- Not edible

Landscape uses

Ornamental herbaceous massifs

VARIOUS

- Recent research seems to confirm that the the plant has a medicinal potential
- Fragrant flowers. Pounded plants are used as a soap and to wash clothes
- Some studies in Saudi Arabia have shown that the application of Argel dry leaves on soil increases the flowering and yield of date-palms

LARGE BUSHMAN GRASS

Stipagrostis ciliata (Desf.) De Winter
Poaceae

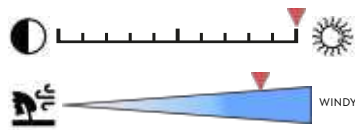
الصليان
السبط - النصي

This is a perennial grass, typically forming tufts. The inflorescences are tall, not condensed, open, aerated, specifically bright and plumose. Its distribution area is separated into disjointed areas: North-West Africa, South Africa, Egypt, the Arabian Peninsula and Central Asia. The plant is grazed by various livestock.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to alkaline soils
- Sandy, gravelly or rocky soils
- No need for irrigation
- Able to grow under saline conditions

LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Seed production on a dedicated field based on an initial seed harvesting in wild populations
- Annual harvesting
- Seed conservation in appropriate conditions until sowing

Planting

- Ground preparation and sowing (the seeds are broadcasted)
- Biological solution
- No specific needs

Maintenance

- Requires no maintenance

AESTHETIC VALUE

Appearance

Up to 0,8m high

TYPE Tussocks

SHAPE Tufty, dense, erect grass; the spikes are slightly curved

Foliage

Permanent foliage

Dense foliage

Flowering

Upright inflorescence spikes about 10cm, feathery and curved

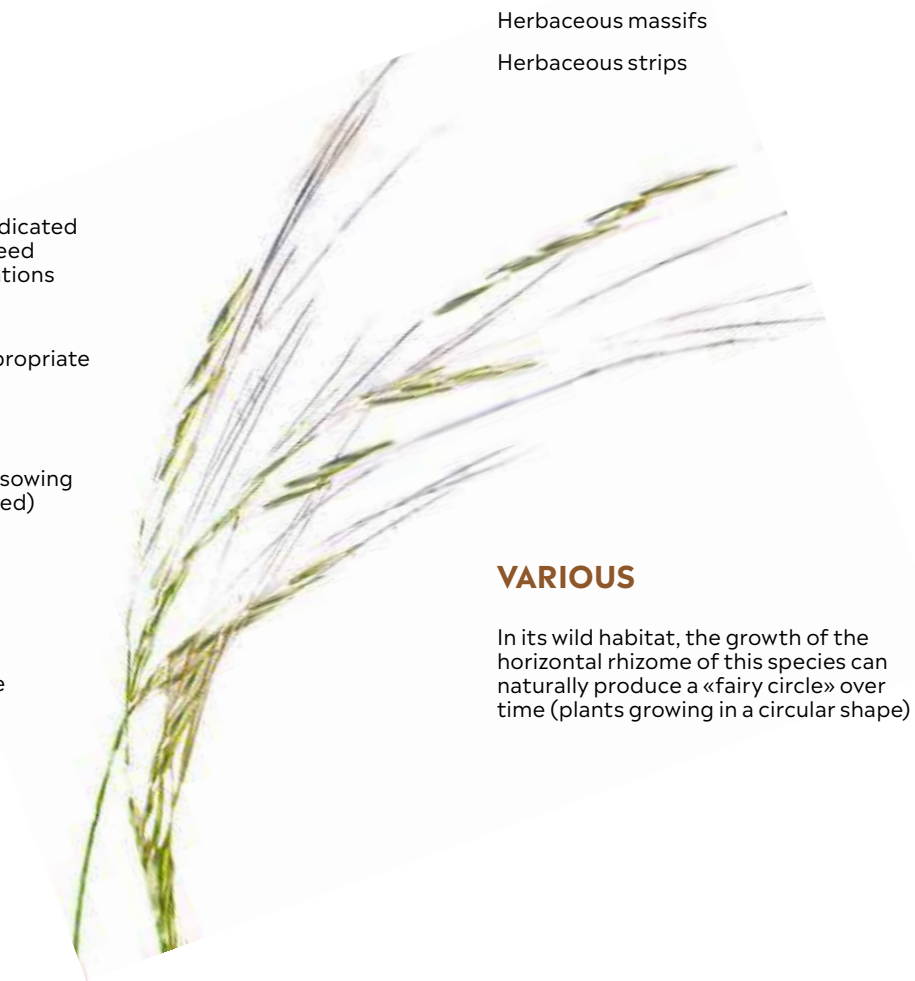
February - May

Landscape uses

Ornamental tufty grass

Herbaceous massifs

Herbaceous strips



VARIOUS

In its wild habitat, the growth of the horizontal rhizome of this species can naturally produce a «fairy circle» over time (plants growing in a circular shape)

SAKHAL

Tephrosia apollinea (Delile) DC.

Fabaceae

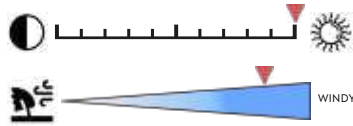
الظبية - الحويرة

The current valid scientific name of the species is *Tephrosia purpurea* subsp. *apollinea* (Delile) Hosni & El Karemy. It is a perennial herb, woody at the base, showing an annual vegetative development. It has small purple flowers; the fruits can appear all year round. The foliage can be dense and shows a rounded form. The gravelly wadi beds are a well adapted habitat for the species. The plant grows in Eastern Africa, the Arabian Peninsula and Western Asia. It has medicinal properties and is occasionally cultivated.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline soils
- Any kind of well-drained soils
- No need for irrigation
- Low resistance to salinity

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in adapted conditions until sowing

Planting



Ground preparation just before hand sowing



Biological solutions



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



Up to 0.8m high

TYPE Low stratum

SHAPE Erect bushy herb, rounded shape

Foliage



Annual cycle



Dense foliage

Flowering



Sparse clusters of small flowers



January - May

Fruits



Green flattened pods



Not edible

Landscape uses

Ornamental herbaceous massifs

Flowers strips or alignment

VARIOUS



The plant has a symbiotic relationship with some soil bacteria, forming nodules on the roots and fixing atmospheric nitrogen



In Saudi Arabia, it was used traditionally to treat jaundice, liver and biliary diseases and inflammatory disorders



In the Sinai, the leaves are gathered and boiled to make hot drinks by the Bedouins



The plant can be toxic for the goats



GROUND COVERS



PATILLA

Aizoon canariense L.

Aizoaceae

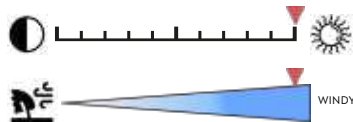
الهداك – الحدق – الدعاع

Patilla is a succulent annual to short-lived perennial plant. It is fairly stout, spreading, semi-prostrate, leafy, with small fleshy pale yellow flowers. This species is found in drier areas of Northern and Southern Africa throughout to the Arabian Peninsula, in the Eastern Mediterranean and in Central Asia throughout to Pakistan.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline soils
- Suitable for various soils
- No need for irrigation
- Able to grow on salty soil

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Grown in open fields for seed production

Produces an adequate amount of seeds in an annual crop cycle

Manual harvesting

Sort the seeds and store them until the landscaping project

Planting



Ground preparation and sowing



No specific needs



No specific needs

Maintenance



Requires no maintenance

AESTHETIC VALUE

Appearance



Up to 15cm high

TYPE Ground cover

SHAPE Flat habit crawling on the ground

Foliage



Permanent foliage



Dense foliage

Flowering



Star-shaped tiny yellow flowers



January - April

Fruits



Star-shaped



Not edible

Landscape uses

Ground cover



VARIOUS



The ficoïd leaves are edible. It is harvested by the local populations and used for as salads or vegetables

NEGEV CHAMOMILE

الأقحوان/قحويان

Anthemis deserti Boiss

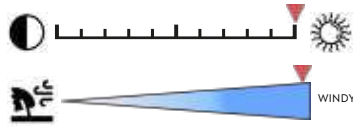
Asteraceae

The current valid name of the species is *Anthemis melampodina subsp. deserti* (Boiss.) Eig. This is the most common annual herb found on the dunes and deep sands of open and desert environments, in Egypt and the Arabian Peninsula. The species is drought tolerant and presents a very extensive, deep root system. Its small size provides resistance to wind. This attractive species shows an abundant white flowering for a long time throughout the spring.

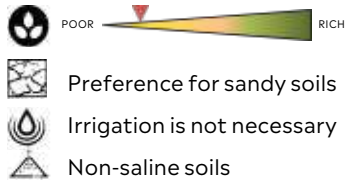


GROWING CONDITIONS

Micro-climate






Soil






LANDSCAPING


Nursery crop

-  Harvesting seeds in wild populations
-  Readily propagates by seed
-  Produces an adequate amount of seeds in an annual crop cycle

Planting


-  Preparatory works on the soil.
-  Fertilizer is not necessary
-  Sow in October-November

Maintenance



-  Requires no maintenance

AESTHETIC VALUE



Appearance

-  15-30cm high
- TYPE** Ground cover, annual herb
- SHAPE** High lawn, branched plant

Foliage

-  Deciduous foliage of dark green color
-  Sparse foliage

Flowering

-  Numerous attractive flowers: white capitules with yellow central disc
-  Long duration: from February to May

Landscape uses

- Ornamental lawn
- Base of trees
- Base of hedges
- Around ornamental beds (herbaceous or shrubs)



ARABIAN PRIMROSE

الكحيل – الفنون

Arnebia hispidissima (Sieber ex Lehm.) A.DC.

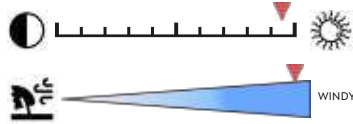
Boraginaceae

This annual erect herb is found in the wild and in anthropogenic environments, such as disturbed soils in old fields. This attractive species displays an abundant yellow flowering for a long time throughout the spring. Its distribution area extends in Central Africa, the Arabian Peninsula and Asia. The plant is sometimes harvested for its roots, used as dye and as a medicine.




GROWING CONDITIONS


Micro-climate




Soil



 Grows on various kinds of well drained soil

 Irrigation is not necessary

 Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Propagates by seed

Produces an adequate amount of seeds in an annual crop cycle

Planting



Preparatory works on the soil



Fertilizer is not needed



Sow in October-November

Maintenance



Overseeding can be done once, 2 to 5 years after set-up, in order to strengthen the density of the plant cover.
Weeding could be required



AESTHETIC VALUE

Appearance



0,15-0,4m high

TYPE Ground cover, annual grass

SHAPE Branched herb

Foliage



Deciduous foliage of dark green color



Dense foliage

Flowering



Numerous yellow flowers on elongated erect clusters



March and April

Landscape uses

Ornamental lawn

Base of trees

Ornamental low plant, to be distributed intermittently

VARIOUS



Attractive for pollinator insects



The root provides a red pigment, used to colour food



The root extract is credited with antibacterial properties

SAND WORMWOOD

الألاء - عاذر

Artemisia monosperma Delile.

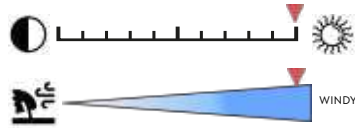
Asteraceae

Sand wormwood is a perennial erect ligneous plant; it displays a small bushy shape, densely branching from the base. The finely and deeply indented leaves are very aromatic and provide green cover for much of the year. Its native distribution area extends in Eastern Mediterranean and the Arabian Peninsula. This plant is able to grow on unstable sandy grounds. The Sand Wormwood is a safe condiment for human food, and a high quality fodder for livestock.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline soils
- Any type of well-drained soils
- No need for irrigation
- Able to grow under high saline conditions

LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Seed production on a dedicated field based on an initial seed harvesting in wild populations
- Annual harvesting
- Seed conservation in appropriate conditions until sowing

Planting

- Ground preparation just before hand sowing
- No specific needs
- No specific needs

Maintenance

- Requires no maintenance



AESTHETIC VALUE

Appearance

0.5-0.7m high

TYPE Low stratum

SHAPE Small, bushy, branching from the base, dense green cover

Foliage

Annual cycle

Very dense foliage

Flowering

Panicles of little heads

September - December

Landscape uses

High herb cover

Herbaceous massifs

Garden of aromatic plants

VARIOUS

Leaves and flowering tops are edible and gathered by local populations as a condiment or for tea.

This plant provides fodder for livestock

VIRGATE WORMWOOD

الساوية – السالماس

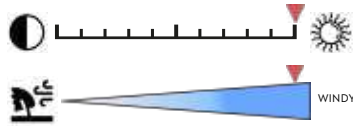
Artemisia scoparia Waldst. & Kit.
Asteraceae

Virgate wormwood is an annual herb, bright, green, erect, branching, spire-shaped that grows often up to 35cm tall and may attain a height of 80cm on good soils. This *Artemisia* species is an aromatic plant; the leaves have an intense smell when the plant grows under dry conditions. The flowers form tiny heads on a spreading panicle. It is widespread across much of Eurasia. The plant has medicinal properties and is occasionally cultivated.



GROWING CONDITIONS

Micro-climate



Soil



- Acidic, neutral or alkaline soils
- Any type of well-drained soils
- No need for irrigation
- Non-saline soils

LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Seed production on a dedicated field based on an initial seed harvesting in wild populations
- Annual harvesting
- Seed conservation in appropriate conditions until sowing

Planting

- Ground preparation just before hand sowing
- No specific needs
- No specific needs

Maintenance

- Requires no maintenance

AESTHETIC VALUE

Appearance

- 35-80cm high
- TYPE** Low stratum
- SHAPE** Highly branched stems

Foliage

- Annual cycle
- Very dense foliage

Flowering

- Panicle of little heads
- March - May

Landscape uses

- High herb cover
- Garden of aromatic plants



VARIOUS

- Leaves and flowering tops are edible and gathered by local populations as a condiment or for tea
- This plant is credited with various medicinal properties

WOOLLY SALTWORT

Bassia eriophora (Schrad.) Asch.
Amaranthaceae

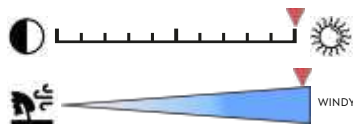
القضقاض - السداة -
الصوفانة - القطين

Woolly saltwort is an annual herb with an attractive hairy foliage, showing a typically cottony appearance. Well-adapted to drought, this species can grow in different arid environments, saline or otherwise. Its distribution includes two separate areas, from Eastern Mediterranean to the Arabian Peninsula and Central Asia. The plant is used in folk medicine of Saudi Arabia.



GROWING CONDITIONS

Micro-climate



Soil



Grows on various kinds of soils



Irrigation is not necessary



Tolerates saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations.

Sowing on a damp mix of soil and compost with a little supply of vermiculite.

Transplant in pots of appropriate size to encourage optimal growth of root system.

Put in greenhouse for 1-2 months.

Planting



Pricking-out during winter



Preparatory works on the soil



Fertilizer is not necessary



Mulching

Maintenance



Anticipate new plantation every 3 years to increase the plant cover.



AESTHETIC VALUE

Appearance



10-30cm high

TYPE Ground cover, annual grass

SHAPE High lawn, branched plant

Foliage



Deciduous foliage. The leaves are fleshy. The appearance depending on the maturity, from pubescent green to cottony white.



Very dense foliage

Fruits



White glomerules like cotton balls



March-June

Landscape uses

Ornamental lawn

Base of trees

Base of hedges

Ornamental low plant, to be distributed intermittently

VARIOUS



The plant is used in folk medicine of Saudi Arabia as anti-rheumatoid, anthelmintic and for snake bite.



The seeds are a source of edible oil.



The flowers provide food for livestock.

ZAMLUQ

Cakile arabica Velen.

Brassicaceae

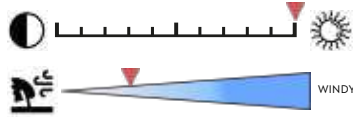
زملوك - الإسليح

Zamluq is an annual herb, growing up to 40cm tall. The leaves are succulent, with a light green color, and can provide ground covering most of the year. The little flowers are purple and numerous. This species is able to grow in very arid conditions, especially in sandy deserts. Its distribution area extends from the Arabian Peninsula to Central Asia.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral, or alkaline soils
- Stable sandy soils
- No need for irrigation
- Able to grow under high saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



No specific needs



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance

0.2-0.4m high during flowering

TYPE Ground cover

SHAPE Ascending and branched, with many leaves borne at base of stem

Foliage

Annual cycle

Medium dense foliage

Flowering

Small flowers with 4 purple petals

December - February

Landscape uses

Flowered fallows

Flowered lawns

VARIOUS



Zamluq was used in folk medicine to treat gastric disorders



The leaves are edible. It is gathered by local populations and used for food as salads or vegetables

MARIGOLD

Calendula tripterocarpa Rupr.

Asteraceae

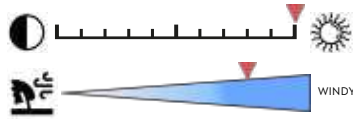
الحنوة

This Marigold is a wild annual herb, able to grow in old fields as much as in natural areas. The plant can form a dense, light green cover, due to its abundant foliage. The species is very resistant to cutting, and can be trained as a short lawn. The flowers are very attractive with an intense yellow color. This plant is well-known by the local populations, and is used for its medicinal properties.






GROWING CONDITIONS

Micro-climate






Soil






-  Grows on various kinds of soils
-  Irrigation is not necessary
-  Non-saline soils

LANDSCAPING


Nursery crop

-  Harvesting seeds in wild populations
-  Readily propagates by seed
-  Produces an adequate amount of seeds in an annual crop cycle

Planting

-  Preparatory works on the soil, removing weeds
-  Sow in October-November
-  Fertilizer is not necessary


Maintenance

-  To increase the density of cover of this plant, a light sowing can be done 2 to 5 years after set-up





AESTHETIC VALUE



Appearance

-  0,1-0,15m high
- TYPE** Ground cover, annual grass
- SHAPE** Short lawn


Foliage

-  Persistent foliage of light green color
-  Dense foliage

Flowering

-  Several flowers on the top of stems
-  February to April




Fruits

-  Heteromorphous achenes, with three wings, striated backwards and laterally

Landscape uses

- Ornamental lawn
- Mowed short lawn

VARIOUS

-  The plant is used in Saudi Arabia in folk medicine for the treatment of minor cuts, burns and skin irritation
-  This species has glandular leaves, slightly fragrant, pleasantly scented
-  Attractive for insects

BINDWEED

Convolvulus spicatus Peter ex Hallier f.

Convolvulaceae

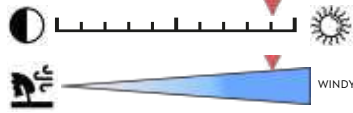
الرخامى

Bindweed is a perennial herb, ascending to erect, woody at the base. The plant is densely tomentose, with silvery foliage, composed of villous long entire leaves. The inflorescence shows axillary cymes. The numerous flowers are very attractive, often pure white and sometimes pink. This species grows in sandy deserts in North Western Arabian Peninsula.



GROWING CONDITIONS

Micro-climate



Soil



Sandy soils



A little irrigation is necessary



Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Sowing on a damp mix of soil and compost with a little supply of vermiculite

Transplant in pots of appropriate size to encourage optimal growth of root system.
Put in greenhouse for 2-3 months

Planting



Pricking-out during winter



Preparatory works on the soil



Fertilizer not necessary



Mulching

Maintenance



Monitor the plant cover; may require replacement 3-5 years after set-up



AESTHETIC VALUE

Appearance



0,2-0,6m high

TYPE Ground cover, perennial herb

SHAPE Dense and woody at the base, with elongated and creeping herbaceous stems



Foliage



Foliage persistent at the base, silvery grey color



Dense foliage at the base



Flowering



Numerous flowers clustered in axillary heads along the erect stems



March to May

Landscape uses

Single herbaceous ornamental of small size

Base of trees

Base of hedges

Ornamental low plant, to be distributed intermittently

VARIOUS



Ecological functions for wildlife: the long bloom is very attractive for insects. Heterogeneous foliage generates shadow and shelter for reptiles

SLEISLA

Eremobium aegyptiacum (Spreng.) Asch.

Brassicaceae

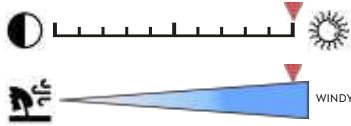
الغرياء - تربة

Sleisla is a perennial herb, very common in Saudi Arabia in several habitats such as gravel plains, hillsides, wadis, fields... It is a small plant with many pink flowers. The leaves are thin but dense populations can give a rather intense green cover. Its distribution area extends in Northern Africa, the Middle East and the Arabian Peninsula. The plant provides a fodder that is relished by livestock.



GROWING CONDITIONS

Micro-climate



Soil



Neutral, or alkaline grounds



Sandy soils



No need for irrigation



Low resistance to salinity

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in appropriate conditions until sowing

Planting



Ground preparation just before hand sowing



No specific needs



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



15-35cm high

TYPE

Ground cover

SHAPE

Several thin slender stems branching, prostrate or ascending from the base



Foliage



Should be in brown
Permanent foliage



Low leaf density



Flowering



Creamy white or very light mauve in terminal clusters on long lateral twigs.



February - April



Fruits



Small cylindrical pods



Not edible

Landscape uses

Flowered fallows

Flowered lawns

Ornamental grass

Ground cover

VARIOUS



The leaves are used to treat jaundice in folk medicine in Saudi Arabia



This plant is cultivated in nurseries in the western region of Abu Dhabi as a sand stabiliser

FARSETIA

Farsetia burtonae Oliv.

Brassicaceae

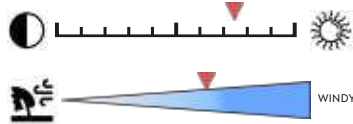
العلك – نفوذ مطي –
الجفري - الحثرة

Farsetia is a perennial herb with a woody rootstock. This plant is erect, branched from the base. The foliage is very dense, with linear leaves of pure green color. Flowering persists for a long time, with many small whitish flowers. It is an endemic species of the Arabian Peninsula and Iraq.



GROWING CONDITIONS

Micro-climate



Soil



- Sandy and gravel soils
- A little irrigation is necessary
- Non-saline soils

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Sowing on a damp mix of soil and compost with a little supply of vermiculite

Transplant in pots of appropriate size to encourage optimal growth of root system

Put in greenhouse for 1-2 months

Planting



Pricking-out during winter



Preparatory works on the soil



Fertilizer not necessary

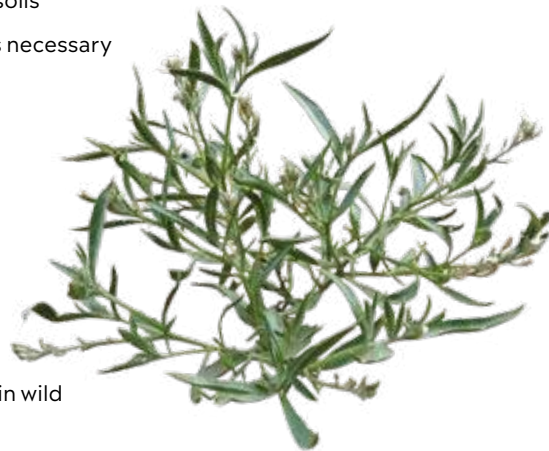


Mulching

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance

10-30cm high

TYPE Ground cover, perennial herb

SHAPE Branched from the base, erect

Foliage

Persistent foliage of pure green color

Dense foliage

Flowering

Dense cluster of flowers on the top of stems

February to April

Fruits

Flattened wide silicles, elongated to 2cm long

Landscape uses

Single herbaceous ornamental of small size

Base of trees

Base of hedges

Ornamental low plant, to be distributed intermittently

VARIOUS



Blooms for a long time: flowers are very attractive for insects



The plant is eaten by livestock

CALLOUS-LEAVED GROMWELL

الحماط - الحلم

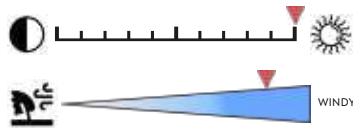
Moltkiopsis ciliata (Forssk.) I.M.Johnst
Boraginaceae

Callous-leaved gromwell is a perennial plant, covered with stiff white hairs, woody at the base. The foliage is dense, of dark green color. The leaves are entire and bristly along margins. The inflorescence is airy, curved in leafy terminal branchlets, composed of flowers of various colors. This plant is very drought tolerant, able to grow in desertic environments. It is found in Northern Africa, the Arabian Peninsula and Western Asia.

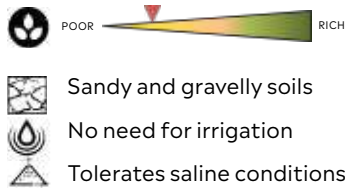


GROWING CONDITIONS

Micro-climate



Soil



LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Sowing on a damp mix of soil and compost with a little supply of vermiculite

Transplant in pots of appropriate size to encourage optimal growth of root system

Put in greenhouse for 1-2 months

Planting



Pricking-out during winter



Preparatory works on the soil



Fertilizer is not necessary



Mulching

Maintenance



Monitor the plant cover and if required, plan replacement 3-5 years after set-up

AESTHETIC VALUE

Appearance



10-30cm high

TYPE Ground cover, perennial herb

SHAPE Branched from the base, erect

Foliage



Persistent foliage of dark green color



Dense foliage

Flowering



Various colors:
yellow - pink - blue - purple



February - April



Landscape uses

Single herbaceous ornamental of small size

Base of trees

Base of hedges

Ornamental low plant, to be distributed intermitently

VARIOUS



The plant is eaten by livestock

CALTROP

Tribulus terrestris L.

Zygophyllaceae

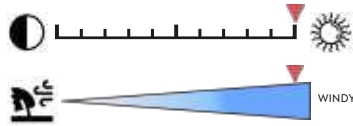
الدريسة – الشرشير – القطب

Caltrop is a leafy prostrate branching, trailing, annual herb spreading on the ground. Highly polymorphic, the plant can grow stems in a zig-zag formation, with sparse to dense foliage. The fruit typically carries strong quills. It can grow under various climatic and soil conditions. It is widespread all around the Mediterranean area and the Arabian Peninsula where the species occurs in wastelands and agricultural fields. This species is used in folk medicine for various purposes, especially in the Arabian Peninsula.

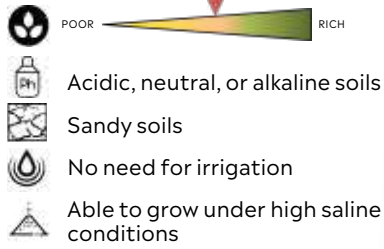


GROWING CONDITIONS

Micro-climate



Soil



LANDSCAPING

Nursery crop

- Harvesting seeds in wild populations
- Seed production on a dedicated field based on an initial seed harvesting in wild populations
- Annual harvesting
- Seed conservation in appropriate conditions until sowing

Planting

- Ground preparation just before hand sowing
- Biological solutions
- No specific needs

Maintenance

- Requires no maintenance



AESTHETIC VALUE

Appearance

- 0.6m high
- TYPE** Ground cover

SHAPE On the ground, creeping, dense grass

Foliage

- Annual cycle
- Medium dense foliage

Flowering

- Small flowers of a yellow-whitish color
- December - August

Fruits

- Capsules with verrucous carpels, ripe fruits are spine armed
- Not edible

Landscape uses

- Ornamental grass
- Ground cover
- Flowered fallows
- Flowered lawns

VARIOUS

- Caltrop is credited with many medicinal properties in diverse traditional medicines. It is currently traded worldwide for increasing muscle volume and performance

STAR FENUGREEK

Trigonella stellata Forssk

Fabaceae

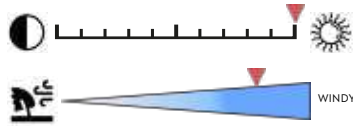
الخادم - الشطن -
الجرجس - النفل

Star fenugreek is an annual herb, often spreading on the ground; some stems can be erect. This species can provide dense ground cover, even on very poor and dry soils. Its distribution area extends throughout Northern Africa to the Arabian Peninsula. The plant is used in traditional medicine, and has cosmetic properties, in particular to make henna for hair care in Central and Eastern Saudi Arabia.



GROWING CONDITIONS

Micro-climate



Soil



- Neutral to alkaline soils
- Sandy-clays
- No need for irrigation
- Able to grow under high saline conditions

LANDSCAPING

Nursery crop



Harvesting seeds in wild populations

Seed production on a dedicated field based on an initial seed harvesting in wild populations

Annual harvesting

Seed conservation in appropriate conditions

Planting



Ground preparation just before hand sowing



Biological solutions



No specific needs

Maintenance



Requires no maintenance



AESTHETIC VALUE

Appearance



0.2m high

TYPE Ground cover

SHAPE Densely branched from the base with stems that can grow up to 35cm

Foliage



Annual cycle



Medium dense foliage

Flowering



Tiny yellow clustered flowers



February - April

Fruits



Tiny pods



Edible

Landscape uses

Ornamental grass

Ground cover

Flowered lawns

Flowered fallows

VARIOUS



The Bedouins use the plant to prepare a sweet-scented hairdressing. The leaves were used in the composition of a cure against hair lice



The plant has a symbiotic relationship with certain soil bacteria, forming nodules on the roots and fixing atmospheric nitrogen



LANDSCAPING SCENARIOS USING NATIVE PLANTS



In order to illustrate the potential uses of the plants in this catalog, we provide for illustrative purposes some scenarios of landscaping using plants of AlUla area, made by AREP (www.arepgroup.com). Plants from several landscape function classes were set up. These scenarios aim to show several case studies of landscaping for AlUla using the species provided in the present catalog. Case studies include: parks, street side layout, residential areas, promenades ...

Background pictures were taken in AlUla area and plants were added graphically. Several of the plants inserted came from pictures taken during the field missions.

STREET SIDE



Hyphaene thebaica
Phoenix dactylifera
Acacia tortilis
Tamarix nilotica
Lavandula coronopifolia
Stipagrostis ciliata
Pennisetum divinum
Senna italica



Hyphaene thebaica
Phoenix dactylifera
Ficus salicifolia
Stipagrostis ciliata
Pennisetum divisum
Aizoon canariense
Tribulus terrestris







Hyphaene thebaica
Phoenix dactylifera
Acacia pachyceras
Lycium shawii
Cenchrus ciliaris



Hyphaene thebaica
Phoenix dactylifera
Acacia tortilis
Ficus palmata
Ziziphus nummularia
Lycium shawii
Lavandula coronopifolia
Ferula sinaica



Phoenix dactylifera
Cucumis prophetarum
Stipagrostis ciliata
Lavandula coronopifolia
Fagonia bruguieri
Trigonella stellata
Senna italica



رَوْضٌ إِذَا زُرْتَهُ كَنِيْبَا
 يُعِيدُ قَلْبَ الْخَلِيِّ مُغْرَاً
 إِذَا بَكَاهُ الْغَمَامُ شَقَّتْ
 تَلْقَى لَدِيهِ الصَّفَا ضُرُوبَاً
 وَشَاهَ قَطْرُ النَّدَى فَاَضْحَى
 فَمِنْ غُصُونٍ تَمِيْسُ تِيْهَاً
 وَمِنْ طُيُورٍ إِذَا تَغَنَّتْ
 وَنَرَجِسٍ كَالرَّقِيْبِ يَرْنُو
 وَأَقْحُوَانٍ يُرِيْكُ دُرَاً
 وَجَدُوْلٍ لَا يَزَالُ يَجْرِي
 تَسْمَعُ طَوْرًا لَهُ خَرِيْرًا
 إِذَا تَرَامَى عَلَى جَدِيْبٍ
 أَوْ يَتَجَنَّى عَلَى خَصِيْبٍ
 صَحَّ قَلْوُ جَائِهِ عَلِيْلٌ
 وَكُلُّ مَعْنَى بِهِ جَمِيْلٌ
 أَرْضٌ إِذَا زَارَهَا غَرِيْبٌ

نَفْسَ عَن قَلْبِكَ الْكُرُوبَا
 وَيُنْسِي الْعَاشِقُ الْحَبِيْبَا
 مِنَ الْأَسَى زَهْرُهُ الْجُيُوبَا
 وَلَسْتَ تَلْقَى لَهُ ضَرِيْبَا
 رِدَائُهُ مَعْلَمًا قَشِيْبَا
 وَمِنْ زُهُورٍ تَضَوُّعُ طِيْبَا
 عَادَ الْمُعْنَى بِهَا طُرُوبَا
 وَلَيْسَ مَا يَقْتَضِي رَقِيْبَا
 وَجُنَّارٍ حَكَى اللَّهِيْبَا
 كَأَنَّهُ يَقْتَفِي مُرِيْبَا
 وَتَارَةً فِي الزَّرَى دَيْبَا
 أَمْسَى بِهِ مَرْبَعًا خَصِيْبَا
 أَعَادَهُ قَاحِلًا جَدِيْبَا
 لَمْ يَأْتِ مِنْ بَعْدِهِ طِيْبَا
 يُعَلِّمُ الشَّاعِرَ النَّسِيْبَا
 أَصْبَحَ عَن أَرْضِهِ غَرِيْبَا

«إيليا أبو ماضي»

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