



# IN GARDENS

Conserve Electricity & Water For A Better Tomorrow

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## INTRODUCTION

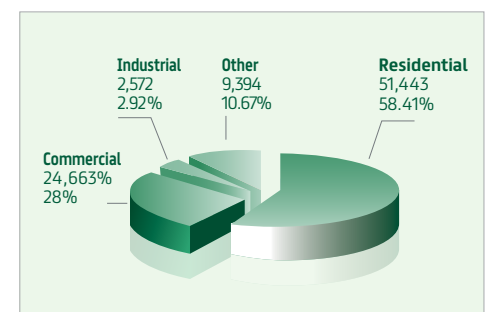
Being water-smart in the garden doesn't mean you have to compromise on having a beautiful garden. In fact, if you follow the tips in this book, your garden will look more beautiful than before.

### STATISTICS

The table below shows the percentage of the amount of water used for irrigation by different segments.

Segments	Irrigation Water usage (%)
• Commercial	• 4%
• National Villas	• 15%
• Expatriate Villas	• 7%
• Government Buildings	• 4%
• Educational Facilities	• 1%

### WATER CONSUMPTION STATISTICS-2013



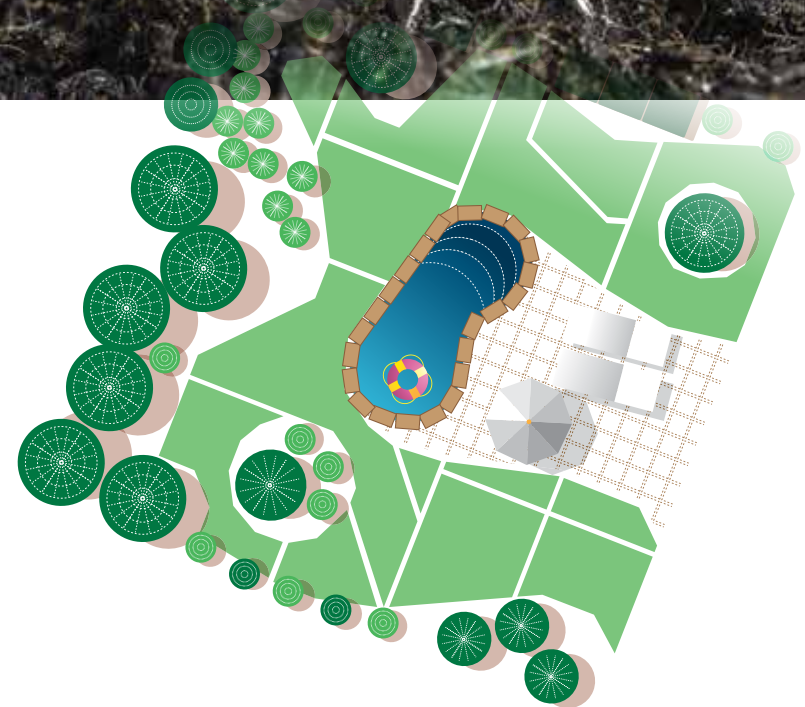
# THINK RIGHT, GET IT RIGHT

## Plan before you plant

To get started with your garden, it is recommended to know the initial steps in order to have a well-maintained and flowering garden. By planning your garden carefully, you can make it look beautiful, reduce water wastage and reduce your water bills.

### Before you plant anything, it is recommended that you:

- Consider the conditions in different parts of your garden. Some areas may receive more sun or shade, some may be exposed to wind, wet or dry conditions
- Ensure the soil in your home garden is well suited for plants to grow; it is one of the most important factors in the health and growth rates of plants
- Choose plants suitable for the conditions in which they will be placed
- Choose succulent plants - plants that consume little amounts of water or retain water reserves internally
- Group plants that have similar watering requirements. If they're together, it will be easier to water them more efficiently and encourage stronger plants
- Think about growing suitable trees that will provide shade for your lawn. The lawn uses a lot of water and shade will help reduce its water needs, as well as cool down your house
- Draw a map for your irrigation lines to make maintenance easier





# MULCH, SOIL

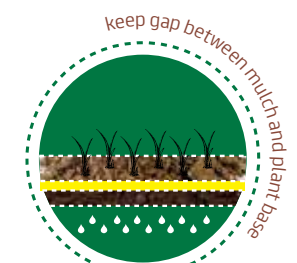


## MULCH

- Mulch is any material placed around plants usually a few inches deep to reduce weeds, increase or decrease soil temperature, retain soil moisture and reduce soil compaction. The type of mulch you use will depend on the function and the aesthetic value of the landscape
- There are two types of mulches, organic and inorganic. Organic mulch consists of dead organic material such as chopped leaves, straw, grass clippings, compost, wood chips, shredded bark, sawdust, pine needles, and even paper. Inorganic mulches include gravel, stones, black plastic and geo textiles
- Lay 150 mm of mulch around your plant and water it well to initiate water movement through the mulch layer
- Some of the best forms of mulch available are Wood Chip and Pine Bark, both of which are very moist in characteristics and keep fertilisers and soil moist, which then in turn doesn't require as much watering.

## SOIL

- Soil is made up of three main components, minerals from rocks below or nearby, organic matter (remains of plants and animals that use the soil), and living organisms that reside in the soil.
- There are three basic soil types that you may use: **clay, sandy and loam**. Opt for a more clay based loam if your area experiences extended dry seasons or if the plants you are growing require large amounts of water. Sandy loams are best for plants that require less water.





# FERTILISER

Fertilisers, organic or inorganic materials, are nutrients for plants; when added to the soil they help enhance the characteristics of the soil and promote the growth of plants.

## FERTILISER TYPES

There are two types of fertilisers:

1. Organic
2. Inorganic or chemical

## ORGANIC FERTILISERS

- These fertilisers are derived from animal or vegetable matter such as compost or manure.



ORGANIC FERTILISERS

## INORGANIC FERTILISERS

Are chemical compounds prepared industrially and contain the essential nutrients that promote plant growth.



INORGANIC FERTILISERS



# TYPES OF PLANTS

The following are trees and plants that are highly recommended due to their ability to survive UAE's environmental conditions:

- Ghaf
- Markh
- Henna
- Al sadar
- Hambo Abu Rawan & Hambo Abu Hassa Trees
- Tecomella Undulata
- Portulaca Oleracea
- Al Sharish
- Kaff Maryam
- Al Yaas
- Al Shooa
- Leptadenia Pyrotechina
- Salvadora Persica

## TIPS ON HOW TO MANAGE DIFFERENT KINDS OF GARDENS

The most suitable irrigation system for these types of plants is the drip irrigation system and it would be more efficient by applying the automatic timer.

### TROPICAL GARDENS

Tropical gardens compose of a number of plants that consume substantial amounts of water. There are several tactical and resourceful methods that can be used to reduce the amount of water required, without diminishing the splendor of the gardens' beauty.

- Replace plants with more water-efficient species
- Make sure garden beds are properly mulched
- Reduce the size of your lawn and replace it with mulched areas
- Use drippers rather than sprayers

### CONTEMPORARY GARDENS

In recent years houses have a new style of garden that is typically in a smaller block and incorporates a mixture of potted and garden bed plants. This can include lawns, ground covers, paving stones and water features. These gardens are designed to be low-maintenance and simple in style. They have the potential to be highly water-efficient if planned correctly.



Here are some suggestions as to how to make them water-smart:

- Reduce the lawn area and add more paving stones or ground covers
- Plant water-smart flora in your garden and use pots where possible
- Mulch all your plants, even the ones in pots
- If you're designing your garden afresh, install an efficient automatic watering system suitable to your garden's size and ensure that it is well-maintained. This can save you time and money

### BUSH GARDENS

- The bush garden is a mix of native, tropical and potted exotic plants. Generally, the areas around the house will be well manicured and structured, and the remainder of the block will grow freely, usually being low maintenance if it consists of native trees and shrubs.

Some Water-Smart tips for the bush garden are:

- Use a timer on sprinklers so you don't forget to turn them off
- Only water the plants when needed
- Retain as much native vegetation as possible
- Think about replacing thirsty plants with suitable natives near your home, they need less water and will attract more wildlife

### POTTED GARDENS

As the apartment development boom continues in Dubai, potted gardens are becoming the new rage, considering they're practical, transportable, easy to maintain, and they look great.

These tips will help you stay Water-Smart with your pot garden:

- Choose deeper pots - shallow pots will be prone to greater moisture loss from breeze and evaporation
- Water the plants by hand, using a trigger nozzle on a hose or a watering can
- Mulch around the base of the plants to retain moisture for them
- Select water-efficient plants - they don't have to be native to the region
- Use a saucer on the base of each pot. This keeps your floor or paving stones clean, as well as holding extra moisture for the plant to absorb
- Be careful not to have any water lie permanently in the saucers as this can cause many plants to rot
- Remember to fertilise your potted plants regularly with a suitable slow-releasing plant food
- Avoid using black on plant pots as they absorb heat and leads to plants drying up



# TYPES OF IRRIGATION

There are various types of irrigation systems, all having different characteristics. These characteristics decide which type of irrigation system is most suitable for what type of field or land. It's advisable to research the irrigation systems before you purchase and start making use of them. Will it be sufficient enough for the targeted land that is required to be covered by water? Will the irrigation lines fall in appropriate places and lastly and most importantly, are there risks of water wastage? You need to answer these questions to help you choose the right irrigation system.



## **SURFACE IRRIGATION SYSTEMS**

Surface irrigation is arguably the least complex form of irrigation. At its simplest, no attempt is made to stop fields from naturally flooding. In general, this is only suitable in situations where the crop is of little value, or where the field will be used only for grazing or even recreation.

## **TRICKLE OR DRIP IRRIGATION SYSTEM**

Water is slowly provided to a very specific area, close to the roots of the plant, by a network of drip emitters that are linked to an appropriate water source by a main feeder hose. They provide a slow and steady flow of water. This is ideal, as it almost eliminates the threat of wastage caused by run-off water.

## **SUB-SURFACE IRRIGATION**

Initially expensive, it's not suitable for many areas. However, the economic advantages of drip irrigation can be further enhanced by placing irrigation tubing about 5 inches (about 12.7 centimeters) below the surface. Down there, the water really does get straight to where it's needed - the roots of the plant. Evaporation is greatly reduced, and there is no opportunity for surface run-off.

## **SPRINKLERS**

Sprinklers, available in a large variety that you can easily attach to your hose, are usually cheap and allow you to move to all the spots in your garden easily. To make this method even more efficient, use a tap timer so you don't waste water by forgetting to turn them off. Avoid watering in the heat of the day and when it is windy.

## **TIMERS**

Customize watering schedules tailored to your unique landscape needs, while dramatically conserving water & improving lawn and plant health. The Simple to Set the Timer offers maximum versatility & efficient watering with water-conscious features like Automatic Rain Shut-off to stop operation during rain.





## SMART TIPS

understand that simply investing in a water-efficient system will not guarantee maximum efficiency unless continuous measures are being taken alongside. Such maintenance can include either upgrading the actual systems or adding to the current set-up. Along with maintaining the systems, one might also need to consider taking a few extra steps in maintaining the greenery too.

Here are a few aspects you might want to consider:

- Don't mow your lawn too short. Longer blades of grass shade the roots and reduce evaporation
- Try to stick to using fertilisers that will blend with the type of soils you use for the plants. This controls excessive growth of plants that might otherwise be damaging
- Water your garden or lawn at appropriate times. Either before sunrise or after sunset
- Use grey water or sewage-treated water if possible, to water your lawn or garden. While not drinkable, such water holds minerals that may be good for plant soil
- Be specific about your irrigation systems when watering your garden. For example, using drip irrigation systems would be more suitable to water plant roots but would be inappropriate for watering grass
- Use different products that help to keep the soil and mulch moist, so that they don't have to be watered too often
- Research different technologies and products that are available that help maintain your garden as efficiently and cost-effectively as possible. Planting appropriately and undertaking water-

efficient practices outside means less water usage

- Consult your local municipality to get information about the most suitable plants and trees depending on the climatic conditions of your area. They would recommend you the best possible plants and complimentary products to be used, to aid the growth of trees and plants, without compromising water wastage

### LEAKS

Every house can accumulate hidden costs, both financially and aquatic, because of leaks. Whatever the problem, all leakages must be fixed or replaced to cut down on both money and water losses. A tap that drips once a second wastes 30 litres of water a day. A cracked or broken pipe can waste thousands of litres of water a day.

Below are lists of things you may do to find hidden leaks:

- Be alert to any water hissing, dripping or running when appliances are off
- Check your kitchen, bathroom and laundry for dripping taps, as well as washing machine and dishwasher connections. Don't forget water systems and air conditioning units too.
- Unstable paving or concrete and damp patches on walls can also be a sign that you have a leak.

A quick guide to checking for leaks:

- Turn off all taps and water-using devices at the property.
- Write down numbers on the meters if you suspect a leak. Wait for an hour or so and write down the numbers again.
- If the numbers have changed after all measures have been taken, it's time to call in the professionals.





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