



GARDENING TIPS FOR HOMEGROWERS AND URBAN FARMERS

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Starting the adventure of creating your own garden is both a fun and rewarding way to not only make your home more appealing, but it's also an excellent way to spend more relaxing time around green spaces as well as produce your favorite types of fruits, vegetables or herbs. Planting successfully in your backyard, on a roof or balcony could be achieved following simple guidelines. If you're new to gardening, the following tips will help you green your space, and simplify your planting experience.

Space design

The first and most important tip is to think of how you will design your space. If you know what you want to include, managing the space dedicated for planting could be usually done without the need for specialized landscape engineers. Think about accessibility of your planters as well as sufficient pathways around your planted area. If you don't have a lot of planting experiences, it's better to start with a manageable surface area, and expand incrementally as you gain more experience. Don't forget to include seating and shading elements in your space design. Such features will make your planting experience easy and pleasing, and will encourage you directly to spend more time in your garden, and will help in creating a positive and relaxing connotation towards your space.

Planting techniques

There are several planting techniques that you can implement in your garden, roof or balcony. If you have a yard or a garden, the easiest way is to directly plant in the ground. If you want to ensure the quality of your soil you can always send a sample to the lab to test its validity for planting, or if you have the knowledge you can improve its characteristics by adding soil-enriching supplements (and/or natural compost) which are usually available in any plant shop.

If you are planting on your roof or your balcony, your techniques will not go out of the following three techniques: 1- Intensive/extensive garden , 2- Containers Garden, 3- Hydroponics/Aquaponic Garden.

Intensive/extensive Garden requires specialized companies that will analyze your roof conditions, in terms of insulation, roof load bearing capacity, and the water/drainage sources. Intensive/ Extensive gardens are basically systems that fully or partially cover your space with layers of root barrier, insulation, drainage and topped with soil of different depth that allow you to have a similar feeling and experience of a spacious planted area like a yard/garden, directly on your roof.

Containers Garden is a very flexible option for planting on the roof or a balcony. Characterized by the flexibility in materials and techniques, the concept basically consists of raised container(s) of any material type/size that contains soil or growing media (more preferable since its lighter in weight compared to soil). The container is usually raised to allow for proper drainage of water after plants irrigation. We suggest that you promote the Triple R's approach (Reduce, Reuse, Recycle), and utilize local materials for your containers that are eco-friendly and of reasonable prices in your nearby local market (recycled wood/ bottles/ plastics..etc.)

The third technique is hydroponics/aquaponics. These are water-based systems, characterized by their amazing water efficiency and high yielding capabilities. **Hydroponics** are usually technical systems that requires electricity and tubing/fittings/ pumps/etc. There are different techniques of hydroponic growing, the simplest and most popular of which are Deep Water Culture and Nutrient Film Technique. You can easily set a simple hydroponic system at home using pvc pipes, a plastic tank, submersible pump and basic fittings. If you haven't tried it before, it's better to look for home Hydroponics DIY videos on the internet or consult an expert in the field to help you select the most suitable technique for your plants and space.

Aquaponics is the same concept as hydroponics, but with aquaculture added to your system, instead of nutrient solution. The natural concept is based on fish producing waste, which is nutrient rich and very much beneficial for the growth of the plants. The plants after absorbing those nutrients also help to filter the water for the fish in a natural closed loop. In practice, aquaponics on larger scale systems require different filtering techniques and special care for the fish. It is always better if you have enough experience in dealing with operations and running of fish tanks before starting an aquaponic system (especially on bigger scale).

Make sure to wisely choose your planting technique based on your gardening plan, your previous planting experiences , the dedicated space for gardening and the dedicated time you are willing to spend in your garden every day.

Irrigation

A very important aspect to keep in mind is the amount of water/fertilizer you give to your plant. Different plants have different water needs; however, you will be surprised to know that the manual hand irrigation technique usually consumes more than the plants need. If you have the chance to install drippers to your planters, it will help the plant absorb the sufficient amount of water over a longer period of time and will also help in decreasing evaporation of water consumed in manual irrigation, not to mention provide a significant water savings compared to manual irrigation.

To develop the skill of when to add water, dip a long wooden BBQ stick or chopstick on the side of the pot after watering the plant and you will find that the dipped part has peat moss and water round it. Keep repeating this simple test every day until you find that the water and soil appear below half of the dipped area. When that happens, then you can add water.

Fertilization

Plants always needs nutrients to properly grow. The way plants find the nutrient when planted in the ground is through the soil that contains natural nutrients from naturally decomposed materials (fallings/dry leaves/etc), or it could be supplemented to the soil through external compost/nutrient solution. Prepare a periodical fertilization schedule for your plants to allow for a healthy growth and proper production.

Solar exposure

Plant solar exposure is an essential aspect to allow for photosynthesis and the proper growth of your plants. It is preferred to do a solar exposure analysis at your designated gardening space, and it is preferred that your space receive at least 6 hours of direct sunlight if you wish to grow productive crops. Some plants can grow in partial sun, partial shade and full shade. It is recommended to analyze the solar needs of your plant and compare it to the solar exposure of your space before planting. You can always use artificial lighting to compensate the lack of natural light. There are different variety of LED, fluorescent lights specifically dedicated for supporting plant growth.

Plant selection

It is important to consider types of plants before gardening. Succulents, for example, require different planting conditions, operations and care in contrast to what is needed to grow productive leafy crops. Knowing early the types of plants you would like to include in your garden will help you make the right decision for the best soil/media mix and the types of fertilizers needed, as well as the irrigation pattern and solar needs required.

Make sure to respect spacing between plants in the same planters to allow for comfortable growth of every plant until reaching maturity. It is also important to look up the different types of companion plants in the same planter. Companion plants boost growth, repel pests, and improve flavor for each other. Aside from the benefits to your plants, companion planting uses your garden space more efficiently, letting you harvest more. The diversity that companion planting provides is also good for pollinators, wildlife, and soil health.

Pest control

It is very common as part of the natural ecosystem to find pests that are trying to attack and feed on your plants. Healthy plants that are growing in proper environment are less susceptible to get attacked by insects because of the plant's proper immune system.

There is a common, natural and sustainable way to counter back some pests. Certain types of plant have natural ways and/or special scents that can repel predators and protect your plants from attacks. Another way is to use designed traps, but you will need to identify the insect species to properly select the right trap. You could also spray your plants with natural pest repellants, like, citrus oil, hot pepper, or Neem oil.

Examine your plants regularly for any trace of pests, and strictly isolate any infected plants, if possible. Early detection and isolation could save your garden from a possible infestation.

There are now mobile apps that can identify pests and insects by just taking a photo, and the app will compare your photo to their database and identify the species for you as well as recommendation for different control measures. Leave chemical pesticide as the last resort, in case you can't control your pest issue. Always use only certified pesticides brought from reliable suppliers and follow all safety measures when applying them.