CHAPTER 7

METHOD OF PLANTATION
7.1 Internal Landscaping of Hospitals

In the previous chapter, the design proposals with the details of the internal and external landscaping were discussed. This chapter concentrates on “How” to implement the above designed landscaping. This question ‘How to execute the design’ carries to the explanation called “Method of Plantation”. Internal landscaping of hospitals holds some important techniques and procedures. The following are the various levels of the internal landscaping and the techniques of planting in those levels are mentioned below.

7.1.1 Ground Level

When making an herb pot, it is essential to have a good variety of herbs and companion plants that will assist your culinary pursuits. Make sure that your pot has holes in the bottom for good drainage. Take your gravel or grit, and pour this into the container to about a quarter of the pot's depth. This will help water drain out from the bottom of the soil. Once the gravel is in place, start to fill the pot with a multi-purpose, or soil-based compost. This should fill approximately three quarters of the pot's remaining depth.

1. Placing the herb plants into the pot, with about 15cm between each stem. Squeeze each herb gently from its temporary pot, and tease the roots from the root ball; this will encourage them to spread out.

2. Placing the taller plants in the center of the display, and the trailing ones near the edge. This will help to ensure the best growth. The display may look messy at first, but do not worry, as this will start to fill out and look lush within a few weeks. Fill in around the planted herbs. Once you are happy with the positions, start to fill the gaps between the plants with compost.

3. Firmly push the compost into the gaps by pushing your fingers deep into the soil that you have just added, being careful not to damage any roots. Add more if necessary. Leave a couple of centimeters between the pot's rim and the soil, so that the pot does not overflow when watered. Top the herbs.

4. Cutting the tops off the taller plants, roughly halving them in height. This will encourage each herb plant to bush out and provide more leaves to pick at harvest time.

5. Pushing 3 - 5 of these into the soil, depending on your pot size. Simply push the controlled release fertilizer deep in with your finger and then re-cover with soil. These slow-release fertilizers should last a whole season, meaning that you needn't feed the pot again.
6. It’s better to water the plants thoroughly, until the water starts to drain out of the bottom of the pot. The compost needs to absorb a lot on first watering, so expect to apply four liters or so. Continue to water over the coming months, at least every few days, or when the soil seems dry. Herbs like to dry out between water, and some herbs such as Rosemary can easily be over-watered.

Plants take a little while to settle into their containers and begin making root growth. Make allowance for more growth from spring and summer-planted containers compared to autumn or winter plantings. In general;

- Permanent specimens are best planted in early spring as they will establish rapidly. Otherwise, plant between early spring and early autumn
- Plant tender, summer-flowering plants in May (after the threat of frost has passed)
- Containers for winter interest are planted in late summer or early autumn

**The best ways in choosing the containers / pots:**

- For containers that need to be outside all year, choose frost-proof terracotta rather than those labelled frost-resistant which can still crack when temperatures fall for long periods
- Imitation terracotta made from plastic or fiber-glass are very practical, especially for larger specimens that need to be moved into frost-free conditions as it is lightweight
- It’s better to choose containers that are at least large enough to hold the roots of single specimens. Small pots dry out quickly, so plant groups in large containers to help reduce the chore of watering
- It’s better to avoid potting a plant (particularly slow-growing types such as camellia or citrus) with a small root ball into a large container: the excess compost can easily become waterlogged, and that can lead to root rot and death. Instead, increase the pot one size at a time
- It’s better to ensure adequate drainage by selecting only pots with an adequate size and number of holes in the base. Drill extra holes if necessary
- Where potting media might be washed out of the container, place drainage material over the hole(s) in the bottom of the container, using broken up polystyrene, stones or broken terracotta (crots). Use a minimum of material as it is important to have as much rooting area as possible
If possible, it’s better to raise the container on small blocks or bricks to guard against waterlogging.

Composts for containers are not the same as garden compost made in your compost bin, but specially formulated for use in pots and often called potting compost or potting media.

**Short-term plants:** Use a multipurpose compost.

**Permanent plantings:** Use soil-based composts (e.g. John Innes No 3). To save cost, an adequate homemade potting media can be made from a mixture of two-part good garden soil to one-part garden compost. Add a general-purpose fertilizer at the manufacturers' rates.

**Lime-hating plants:** Use ericaceous composts.

- Water-retaining granules can be added to summer plantings using the dose stated in the manufacturers' instructions.
- For permanent plantings or summer color, consider adding slow-release fertilizer to the compost while planting up.

**How to plant up in Containers?**

1. Placing drainage material in the bottom of the container, such as broken up polystyrene, stones or broken terracotta (crots). For a container 45cm (18in) deep, a 9cm (3½in) drainage layer is sufficient.
2. Filling the container with compost, leaving room to arrange the plants on the surface.
3. Carefully removing the plants from their pots, tease out the roots gently and work more compost around the root balls. Ensure that the top of the root ball is level with the surface of the compost.
4. Firming the compost around the plants, water well to settle any air pockets and top up with compost if necessary.
5. Making sure there is a gap of about 2.5cm (1in) between soil level and the top of the container. This will ensure there's room for the water to soak in.

**Maintenance of Ground level potted plants:**

- Checking the compost moisture levels daily from April to September and water if dry. This often means watering once or even twice a day.
- Starting feeding four to six weeks after planting, unless the compost contains a slow-release fertilizer.
• From April to September, It’s better to use a general-purpose liquid feed, unless the compost contains a slow-release fertilizer. Feeding isn't necessary during winter
• Deadheading regularly to encourage more flowers to form
• Re-potting in early spring. For permanent displays, repotting is needed at least every two to four years to prevent problems with drying out and waterlogging. In between, top dressing (scraping off the old compost from the top of the container and replacing with new) is useful
• Reducing watering during winter months
• Ideally, preventing the compost from freezing by moving containers under cover or covering them in bubble-wrap
• In very wet periods, move pots under cover to prevent the compost becoming sodden

7.1.2 Sill Level

Plants in containers at the Sill level are considered as the plants of “Waist level” vegetation. Those plants in sill level containers / planters will dry out much sooner and need watering more often. To determine when the plant needs watering, stick your finger down into the soil and if is dry water the plant thoroughly because frequent watering will wash the plant food out of the soil, and the plant will utilize the limited soil nutrients they will be depleted much more rapidly, so a regular feeding program should be established according to the type of plant. During the growing season, either a slow release type plant food should be used or a soluble complete fertilizer should be used every two weeks.

1. Just about anything that will hold soil may be used as a planter. Ideally, the pot should have a diameter equal to 1/3 to 1/2 the height of the plant.
2. Anything can be used, though should have holes drilled in the bottom to allow the surplus water to drain away from the soil.
3. The biggest cause of death to container grown plants is overwatering and consequent drowning. If it impossible to drill the holes you can add a layer of gravel below the soil, but watering must be monitored more closely.
4. It may be more appropriate to put your plant into a regular pot and then place it inside your decorative planter. If you are building a planter using wood, use rot resistant wood such as redwood or cedar, and coat the inside with waterproof paint.
5. The choice of growing medium is extremely important. It must have the capability of holding water, but it must also be porous and drain easily.
6. The use of garden soil should be totally avoided because of the risk of insect infestations and soil borne diseases and fungi.

7.1.3 Lintel Level

The Lintel level landscape or green wall is a wall partially or completely covered with vegetation that includes a growing medium, such as soil. Most green walls also feature an integrated water delivery system. Green walls are also known as living walls, BIO boards, bio walls, Eco walls, or vertical gardens.

Loose medium walls tend to be "soil-on-a-shelf" or "soil-in-a-bag" type systems. Loose medium systems have their soil packed into a shelf or bag and are then installed onto the wall. These systems require their media to be replaced at least once a year on exteriors and approximately every two years on interiors. Loose soil systems are not well suited for areas with any seismic activity. Repairs can only be made by re-stuffing soil into the holes on the wall, which is both difficult and messy.

1. Loose-soil systems should not be used in areas where there will be a lot of public interaction as they are quite messy and lose their soil little by little over time.

2. Most importantly, because these systems can easily have their medium blown away by wind-driven rain or heavy winds, these should not be used in applications over 8 feet high.

3. There are some systems in Asia that have solved the loose media erosion problem by use of shielding systems to hold the media within the green wall system even when soil liquefaction occurs under seismic load.

4. In these systems, the plants can still up-root themselves in the liquefied soil under seismic load, and therefore it is required that the plants be secured to the system to prevent them from falling from the wall.

5. Loose-soil systems without physical media erosion systems are best suited for the home gardener where occasional replanting is desired from season to season or year to year. Loose-soil systems with physical media erosion systems are well suited for all green wall applications.

6. Structural media are growth medium "blocks" that are not loose, nor mats, but which incorporate the best features of both into a block that can be manufactured into various sizes, shapes and thicknesses.

7. These media have the advantage that they do not break down for 10 to 15 years, can be made to have a higher or lower water holding capacity depending on the plant selection.
for the wall, can have their pH and EC's customized to suit the plants, and are easily handled for maintenance and replacement.

7.1.4 Other Places:

Landscaping in Balconies:

Balconies are usually microclimates, differing significantly from the climate on the ground. There can even be different microclimates even on a tiny balcony. If an area is shaded, that can be one climate, if another area is exposed to the wind that is a different climate. Also, the conditions on balconies can be extreme with huge temperature fluctuations. Also, surface treatments can affect how hot or cool your balcony is and if it retains heat over time.

Plants hate being crowded and will be weak if they haven't got enough space. Choose the deepest pots you can. Containers should be at least 15cm across for basil, while a couple of beans, a handful of carrots or a scattering of salad leaves would each suit a 25cm pot. A corvette plant will need a pot at least 33cm wide.

1. If space is tight, grow some basil indoors on a sunny sill, and a few pots of salad leaves, carrots and beans outside. Basil will appreciate the warmth, while the other veg are a bit tougher.
2. If a little more room is available, it is good to use the growing bag for salad leaves by sowing a thick row at one end. Plant up your largest pots (at least 33cm), one with a corvette, and one with a few beans, and sow a sprinkling of carrot seeds in a 25cm pot.
3. After a couple of weeks, sow another row of salad leaves and another pot of carrots - keep going till you run out of room. Then, when you've harvested one lot you'll have another one just ready.
4. It’s better to use compost specially designed for containers, as it will hold onto water better and have extra nutrients to get your plants off to a good start. Things to look out for on packaging when choosing are: soil or loam-based composts; extra nutrients or plant food; and water-retaining granules.
5. It’s better to put a layer of stones, bits of broken pots or, if you want to save weight, broken polystyrene packaging in the bottom of your pots or boxes to help excess water drain away. Then add the compost and lightly firm it down. Give it enough water to be just moist, and you're ready to start planting.
6. It’s better to water can be a big problem - containers dry out very quickly, and often rain can't reach them because of roof overhangs. Water often, but don't overwater, that’ll
kill plants, too. Test if you've got it right by poking a finger into the compost. If it's slightly moist just below the surface it's perfect.

**Landscaping in Toilets:**

Toilets are often the perfect environment for tropical houseplants. Their typically low light and high humidity are ideal for many interior plants. Toilets with the plants within are called Ecological toilets which are good in protecting and conserving water because no water is needed for their use, except for washing. They are safer for groundwater than other toilets because they sit above ground or use shallow pits.

1. Because bathrooms tend to be small, placing plants on the floor is often not an option. Most bathroom plants will do well on a shelf or hanging from the ceiling. If your bathroom has a window, a window sill is good as well.
2. With plants for the bathroom, we want plants that thrive in a humid and moist environment.
3. While many succulents need low light, high humidity will kill them and, therefore, they would not be happy in a bathroom.
4. The best bathroom plants have low light requirements. Many bathrooms have small or no windows.
5. While low light plants can live on little light, they do need some. Make sure that your bathroom fixtures use fluorescent light bulbs, as fluorescent produce the wavelengths of light that plants need from the sun.
6. Toilet is a humid environment. Having plants will soften up the atmosphere of your toilets. It offer challenges in terms of what houseplants to put in the area.
7. Decorating houseplants for the toilet help generating ventilation and creating desirable atmosphere. Plants bring the freshness of the outdoors into your bathroom.
8. However, toilets also offer great opportunities for houseplants that may not do well in other areas of your home.
9. For example, a toilet usually will have higher humidity levels from waters; therefore a houseplant that requires higher humidity levels will do very well in a toilet without you having to mist it.
10. Light is probably the most essential factor for plant growth. The growth of plants and the length of time they remain active depend on the amount of light they receive.
11. Light is necessary for all plants because they use this energy source to photosynthesize. In order to choose the best plants for your toilet you have to consider the environment your toilet offers.

12. Most importantly is lighting. If your toilet has low light levels, which many do, be sure to choose a plant with low light requirements.

13. Like mentioned above, many houseplants require high humidity levels, therefore do not choose a plant that does not like high humidity levels.

14. Choosing toilet plants can benefit from the extra humidity of the bathroom.

15. Excessive light is as harmful as too little light. When a plant gets too much direct light, the leaves become pale, sometimes sunburn, turn brown, and die.

16. Therefore, during the summer months do protecting plants from too much direct sunlight.

17. Indoor planting often result in drainage problem. The solution is to have the drain system separated from waste water that come from cleansing and waste water that come from gardening activities. This will prevent from clogging up due to pieces of rocks in the soil.

18. Having large toilet is an ideal for your plants. The plants can get enough sun light and air to survive.

19. Some plants are very sensitive to drafts or heat from registers. Forced air dries the plants rapidly, overtaxes their limited root systems, and may cause damage or plant loss.

20. You should have good ventilation plans to provide increased humidity are by attaching a humidifier to the heating or ventilating system in the toilet or placing gravel trays (in which an even moisture level is maintained) under the flower pots or containers.

21. This will increase the relative humidity in the vicinity of the containers. As the moisture around the pebbles evaporates, the relative humidity is raised.

22. It’s better to examine plants thoroughly for insects before purchasing. Avoid buying toilet plants that are not healthy.

23. Some insects can be removed by cleansing the leaves with a mild detergent solution. Care should be taken to avoid wetting the soil.

24. Plants have differences in maintenance processes. Some toilet plants like drier conditions than others.

25. Differences in soil or potting medium and environment influence water needs. Watering as soon as the soil crust dries, results in over-watering.
26. Minimizing the introduction of pathogens from human excreta into the water cycle (groundwater and surface water) - a major consideration in low-lying geographies is pollution of groundwater by pit latrines.

7.2 External Landscaping of Hospitals

7.2.1 Ground Cover

Chemical solution is to use a glyphosate indiscriminate herbicide to kill all signs of living plant life if needed. These poisons may have a lasting effect on your soil. Turning the soil will loosen the weeds and make it possible to easily collect them. If you have the time, it is a good idea to let the cleared area sit for a week and water it. This will allow any dormant weed seeds to germinate allowing you the chance to remove them before your grass goes in. You can still using a tiller, a push plow or your shovel, depending on area size. You may want to amend your soil with compost before you till.

1. It’s better to use a garden rake and level out the area. Make sure there is a slight slope away from the house foundation, at least 1 inch per 10 feet.
2. Prior to seeding, water the area frequently for 1-2 weeks and either reapply an indiscriminate herbicide to kill any weeds that sprout or pull them weeds as they come in.
3. It’s better to apply the starter fertilizer according to the spreading rate on the bag. It is a good idea to use a spreader to ensure accuracy.
4. The lime is needed for acidic soil as most soils in the Northeast are. Especially if your area is anywhere near evergreen trees or shrubs, you can be guaranteed it is acidic. If you want to be exact, you can take a soil sample to your local co-operative extension office to be tested.
5. If the soil is tested and it is healthy, it’s better to not need any foreign chemical fertilizers.
6. Planting grass in soft soil is not a good idea. It’s better to use a hand tamper or rent a gas one depending on area size. If it goes putting down a large amount of soil, it is best to lay it in layers and tamp in between. Tamping more than 5 or 6 inches of soil will not properly compact it.
7. It’s better to take care in this area if you want your lawn to remain level years from now. Using a water roller is usually not good enough to compact your soil as needed a tamper is best. You want to create some areas for the seed to embed itself.

8. It’s better to spread it again using a proper spreader at the rate recommended on the bag. Putting down too much seed is not a good idea. It will not help your lawn grow any faster and there will be more risk of the lawn being too crowded and choking itself to death.

9. At this point it can be used for a water roller over the entire area to push the seeds into the loosened top layer of the area. Alternately, you can use the back of your garden rake to very gently put some of the soil to cover the seeds. Don't worry if most of the seeds are exposed, that is fine.

10. The peat moss or manure will act both as a protective layer for the seeds and as a mulch. Using some sort of container, you want to spread the mulch in a thin layer over the entire seeded area.

11. It is only necessary to cover the soil and seeds so they are not visible. Putting down too much peat moss or manure won't hurt your seeds, but it is a waste. As long as you can't see the soil, that's fine.

12. This part can be very time consuming and labor intensive, but it is the most important part of this process. The mulch is important to help the soil retain its moisture so you don't have to water more than twice a day (maybe once a day if you're lucky). Manure has the added benefit of feeding your soil if you choose to avoid toxic fertilizers.

13. It is important that you thoroughly water your area the first time. Do not put down so much water down as to flood your area, but cover it consistently and go over it many times.

14. The peat moss will turn a dark brown when it is wet. Above all you don't want any standing water, give the peat moss and soil a chance to absorb the water but you need to get a lot of water in there to start.

15. Delaying it will cause more damage to your lawn than if you cut it. You want to cut your new lawn for the first time once it has reached mowing height or a little above it. This is usually 6 to 8 inches. When it is time for your first mowing, the lawn will still seem extremely thin and fragile.

16. Looks are deceiving. It’s better to go ahead and run your lawn mower over the lawn and not need to worry if it looks like you crushed your beautiful new lawn, it is surprisingly resilient.
17. If it is let the new lawn get too long, it will be stressed too much when you cut it for the first time by taking too much of the grass blade off at once. So don't be afraid, as soon as the grass is long enough, take the plunge and mow it.

7.2.2 Shrubs and Hedges

Taking into account budget, site, soil, hardiness zone and light conditions, select the shrubs that will form the hedge. For the best privacy and noise protection, quick-growing plants are best, but these shrubs also must be pruned more often to maintain a consistent shape. Evergreens offer year-round color and privacy, but they are typically slow growers; deciduous shrubs grow more quickly, but be aware that their leaves will drop in the fall.

1. For a formal look, choose all the same variety of shrub, or consider mixing a variety of plants and sizes for a less formal look. Some popular shrub varieties include boxwoods, holly, arborvitae, blue spruce, lilac, forsythia, hydrangeas, azaleas and rhododendrons. Be sure to check with garden professionals to guarantee the right shrub for the site and project. The best time to plant most shrubs is in fall or winter while they're dormant; the worst time is summer because their metabolism is at a season high.

2. Using stakes and string to mark the placement of the shrub hedge. Consider these planting options: staggering the planting holes on either side of the line forms a denser privacy screen more quickly whereas planting the shrubs in a straight line makes pruning, watering and other maintenance easier.

3. To plant a straight hedge, dig a single trench along the length of the entire line. Dig a channel that is just deep enough to accommodate the root balls and roughly twice as wide. When planting a staggered hedge, mark the location of each plant before digging holes that are just deep enough to accommodate the root balls, but twice as wide. It is imperative to consider the future size of the plants and to leave ample room between them -- otherwise, they may need to be transplanted in a few short years.

4. Shrubs are sold in three forms: bare root, balled in burlap, and container grown. Bare-root shrubs can be placed directly in the planting hole with no advance preparation. Spread out the roots of all plants once in the hole. When planting a balled-in-burlap plant, remove the burlap before planting. If the shrub is in a plastic container, remove it before planting.
5. Never lift the plant by its trunk as it could cause the root ball to loosen and fall apart. Always support the roots when moving a plant from one location to another. Backfill the trench or planting holes halfway with soil and compost, and give the plants a good soaking with water. Fill with remaining soil to tops of root balls. After planting and watering, add a layer of mulch around the new shrubs.

7.2.3 Climbers, Creepers and Vines

The secret of success when planting a climber is to make sure that the soil is in good heart and the roots are set away from the dry conditions found at the base of a wall. After planting, I also suggest that you cover the surface of the soil with a mulch to prevent competition from weeds and help retain all available moisture around the roots of the plant.

Container-grown climbers can be planted at any time of the year, except when the soil is frozen or waterlogged but autumn is the ideal time for deciduous climbers because the soil is still warm enough to encourage some root growth before the onset of winter. This helps the climber establish quickly so that it is more able to withstand any hot, dry spells the following summer. Container-grown evergreen climbers can also be planted in autumn, but in exposed gardens they are best planted in April (May in colder areas) so they can become established before the colder weather. I would also wait until spring to plant climbers of borderline hardiness. Protect all vulnerable climbers over winter by covering them in an insulating layer, such as double-thickness garden fleece.

1. First of all make sure there is a suitable support for the climber and that it is in good repair (including the wall or fence used to hold it up). If planting against a wall or fence make the planting hole about 45cm (18in) away to avoid the dry soil found in these areas. You will need to dig a hole at least twice as wide as and slightly deeper than the climber's container. Mix the soil you've removed with well-rotted organic matter, and leave it to one side. If your soil is heavy clay, break up the sides and bottom of the hole by gently pricking the smeared surfaces with a fork - this will allow the roots to grow into the surrounding soil.

2. Nearly all climbers should be planted at the same depth as in the pot. Check the hole is the right depth by laying a cane or piece of straight timber across the hole. If the climber is standing too high you'll need to remove some of the soil in the bottom of the hole, or if it's too low then top it up a bit. The exception is clematis which is worth planting 10cm (4in) deeper than it is growing in its pot. This may seem a bit odd, but deeper
planting means that the base of the stems are underground and protected if the dreaded clematis wilt disease attacks. Although affected clematis will dieback to ground level, there is a good chance that they will re-sprout from underground buds at the base of the stems, effectively saving the plant.

3. It’s better to water the climber thoroughly and allow to drain. Gently tip the plant on its side and, with one hand on top of the compost and around the climber to support it, then ease the climber out of its pot.

4. Carefully teasing out any roots that were circling around the bottom or sides of the pot so they grow away from the root ball and into the surrounding soil. Position the climber in the center of the hole and lean it back towards the bottom of the support at a 45-degree angle. Then, fill in the gaps around the sides of the plant with soil mixture, firming it down gently in layers as you work your way up to the top.

5. Once the hole has been filled, gently firm the soil once more - It’s better to not want to squash it in, just get rid of any air pockets and make sure the plant is secure. Water the climber again using at least one full watering can. Then cover the surface of the soil with a generous layer of mulch, such as chipped bark to help prevent weeds and reduce the amount of water loss from the soil.

6. It’s better to untie the climber from the support cane supplied in the pot and space out and tie in all the stems to the new support system, discarding the old cane.

7. Climbers can also be trained to climb through trees and shrubs and over hedges, much in the same way as they do in the wild. If planting a climber among established plants a slightly different planting technique should be used.

8. Choosing a position that lies at the edge of the supporting plants' canopy. This is where rainwater will drop off and keep the new climbers roots moist - known as the 'drip zone'. Prepare the ground in the normal way, but restrict yourself to the immediate area around the planting position so that you disturb as few roots of the support plant as possible.

9. Digging a hole at least three-times as wide and twice deep as the climber's container and prune off any roots exposed by the excavation.

10. The climber needs to be planted as described above. Hammer in a stake next to the climber and tie a rope from the stake into the canopy of the supporting plant. Then tie
the climber to this rope so that it is guided into the supporting plant but is not uprooted every time the wind blows.

11. Cutting back after planting. It is well worth cutting back newly planted climbers by two thirds. This will encourage lots more side shoots to tie in. The growth hormones in climbers make them shoot straight upwards, creating a tall leggy specimen that's bare at the base. By cutting back that top growth you encourage buds lower down to shoot and grow out sideways, producing a bushier plant. It might seem brutal to cut back something newly planted, but the end result will be a much healthier, fuller plant.

12. The art of getting these plants to scale the side of a house or wall has baffled some of the best gardeners. When done right, climbing plants can be used to cover an ugly fence or wall.

13. The trick is to look at the nature of the plant and understand how they are designed to climb. Then, all you need to do is match up the right support and, in no time at all, you'll have a wall filled with foliage.

14. Plants can climb several different ways; some need vertical support, others require horizontal supports, and some need no support at all. Climbing plants fall into 1 of 5 categories: tendrils, twines, scramblers, stickers, and stem roots.

15. Tendrils get their name from their slender, wiry growths that extend about an inch from the stems and curl when they encounter a support. They need thin horizontal supports, no more than 1/4-inch in diameter that they can grab onto. Two-inch square netting works well for this. However, horizontal strings attached to poles are even more ideal for these plants.

16. Passionflowers or Passion Vines - There are over 500 species of passionflowers. They are easily grown in zones 5 through 9, but can be planted in colder areas as long as they are mulched heavily in the winter. Under proper conditions, passionflowers can grow up to 30 feet in a single season. They need partial to full sun and like lots of water. Keep soil moist, especially during the flowering season.

17. Porcelain Ampelopsis - The porcelain ampelopsis is an attractive vine that will grow about 6 feet tall. It prefers full sun to partial sun conditions and grows best in zones 6 through 9.
18. Deciduous woody perennials of the grape family, each Ampelopsis plant produces berries of a variety of colors: lettuce green, turquoise, steel blue, and aquamarine. In the fall it bears round, blue-violet flowers.

7.2.4 Plants and Trees

Planting a tree isn't as simple as just digging a hole and throwing the tree in it. You can grow a transplant tree or you can grow a tree from a seed, but both ways the tree needs special care. Select the right time of year for planting the tree. If you plant your tree at the wrong time of year it's going to be less likely to survive and grow. Do not plant in late spring or summer because the heat will stress the plant and may cause it to die. Of course, all this depends on the type of plant, because different plants have different needs.

1. In general, April and May are the best times to plant in the Northern hemisphere, because the tree has all summer to grow and get accustomed to its new abode. Otherwise, September and October are your best bet. It tends to be cooler and rainier and the trees are getting ready for hibernation. Certain trees don't do well if planted in the fall, like oaks (nut trees) and birches. Container trees tend to do better if planted in the fall than trees in burlap or trees that are baled, because these tend to go into transplanting shock in the fall.

2. It's better to check to see if there are any local requirements about digging. These types of requirements tend to concern digging deep holes near telephone and other cables (for example, in urban areas). You'll need to make sure that you know where these cables and systems before you dig.

3. It's better to choose a suitable tree for the region, climate, and space. Trees native to your area tend to do well, and you won't be introducing a potential invasive plant species. It will be easier to care for a tree that is already native to the area.

4. It's better to research local cultivars of species native to your area. If you are willing plant a non-native species, consider carefully why and whether it's actually a good idea to do so, since non-native trees can be invasive and damaging to the ecosystem of your area.

5. It's better to prepare the hole, taking a suitable shovel and dig a hole that is 4-5 times the width of the root ball, more than enough so it will fit, and give room for the fresh roots to grow without stress. This lets the roots ease in more easily and begin to grow
outwards into the soil. No need to cut off the wire root basket if there is one, the roots will grow through and it will prevent damage to the root ball during planting.

6. It’s better to try to dig the hole with a small "pedestal" of dirt in the center of the hole where the tree will rest. The hole should be a little deeper around the edges but there should be a pedestal of dirt in the center where the root ball sits. This pedestal prevents the root ball from sitting continuously in water. Any excess water will naturally flow to the deeper areas of the hole around the edges where the roots can drink from if needed.

7. Having a pedestal in the center of the hole is very important since one of the major reasons why trees die is "drowning," meaning the tree is getting too much water and the root ball is sitting in a pool of water. The point where the tree comes out of the ground should be slightly higher than the ground around it. Slightly higher means 1/4 to 1/2 inch. This prevents water from collecting next to the base of the trunk which causes the tree to rot. Use the garden cultivator to loosen the dirt all around the hole to make it easier for the roots to spread.

8. It’s better to prepare the tree for planting. You need to do this to make sure that you're planting your tree properly and so that it will survive. The process is slightly different for a small tree and a large tree.

9. If it is a small tree, then turning it upside down gently to get it out of the pot could also cut some plastic containers to remove them.

10. If the tree is larger and has a net or a hessian or rope bag, it might be needed to use large scissors or a sharp knife to cut through the packaging. Avoid handling the tree with the burlap off. Put it in the hole, then cut the burlap and rope from around the trunk of the tree, leaving the wire basket. The goal is to keep as much dirt around the roots as possible; moving the tree more than absolutely necessary can easily cause air to get to the roots and dry them out, even inside the root ball.

11. It’s better to not leave a tree's roots out of its container or burlap for too long. Especially in sun and wind, it could dry out and damage the roots.

12. It’s better to use a seed for planting. Follow this step only if you're going to be growing a tree from a seed. Growing a tree from a seed means germinating the seed, planting it at the appropriate time and taking close care of it. This way takes a bit longer than planting by transplanting a tree from a container.

13. To germinate a seed you may have to use scarification, which means that you break the seed coat and allow moisture to penetrate so that the plant embryo can begin
germinating. You can also use the cold stratification process which means that you mimic the over-wintering process and expose the seed to cool, moist conditions.

14. Once the seeds have germinated in a normal fashion, plant them in an individual container or a seed tray. The seeds for the different trees will be different, so follow the instructions accordingly for each. When they've germinated, move them to a brighter location and make sure that they are well ventilated.

15. It’s better to remember, different tree seeds will grow differently so you'll need to make sure that you follow the instructions for each individual tree. An apple tree will grow differently than a cherry tree or a pine tree.

16. Placing the tree into the hole gently, being sure the hole isn't too deep or too shallow. The ground level of the plant in the pot should match up with the ground level after you fill the hole in. It’s better to not bury over the crown (where the stem changes to root) or leave any roots exposed.

17. It’s better to place the handle of your shovel flat across the hole from one side to the other to measure whether the crown is level with the surrounding soil before filling in the hole. Use some compost or composted manure if needed.

18. Backfilling three quarters of the hole with existing dirt, one quarter with compost or composted manure.

19. It’s better to resist the temptation to use a commercial fertilizer; it tends to over-boost the tree and make it "burn out", which means it is less likely to do well over the long term. A great benefit to new trees, however, is an organic mixture that includes mycorrhiza, beneficial fungi that enhance a tree’s uptake of soil nutrients. It may also include rock phosphate, a natural root-growth enhancer.

20. It’s better to give fruit and nut trees extra attention. Adding manure or compost is essential if you are planting a fruit or nut tree. Backfill two thirds of the hole with existing dirt and one third with compost or composted manure for each fruit or nut tree.

21. It’s better to water the newly planted tree. Allow settling, backfill the remaining soil, and water again. This will eliminate air pockets. Water one gallon (3.7 liters) for every six inches (15 cm) of tree height.

22. Keeping watering your tree for the first few years as it gets established. Depending on the climate and your area, it will need weekly watering until the roots are established. To form deep roots, water deeply. A long, slow trickle of water will water more deeply than a quick sprinkling. Remember, deep roots help your tree to resist droughts and winds. Let the ground dry out, at least somewhat, between watering.