



Home garden: Layout, Establishment and Maintenance

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The rise in environmental consciousness among the people has forced them to create healthy and better surroundings, which in turn lead to establishment of home gardens. The establishment of home gardens has now become an important component in home constructions. Home gardens should always be on the south side of building to make it more cheerful and utilitarian type. All the components of the garden should be proper proportion, well demarcated or screened by hedges, to create a systemic outlook. The land should be properly leveled with suitable gradient, weeds need to be eradicated completely and soil should be brought to fine tilth. A healthy, attractive, long-lived lawn can be established by selecting high quality seed or planting material and turfgrasses that are well adapted to the soil and climate. Lawns can be planted by using seeds or vegetative techniques like sodding, sprigging and plugging. The post planting operations like irrigation, fertigation and mowing should be judiciously followed at regular basis to keep the lawn in a healthy and beautiful condition. Irrigation must be applied correctly, especially following fertilization, to minimize potential nutrient losses. Proper mowing height increases turfgrass density and promotes deep root growth, both of which lead to a stronger lawn that is more competitive against weeds and better able to persist under environmental stresses such as drought. Proper mowing practices, along with fertilization and irrigation, can largely determine the success or failure of a lawn.

The imaginary Garden of Eden is believed to mark the genesis of gardens and gardening where Adam was the gardener and Eve was the informer of a tree and its fruits. The establishment of gardens is as old as human civilization dating back to Neolithic times when man began to build shelter and started cultivation, during which he conceived the idea of garden with a utilitarian purpose to grow useful plants sufficing his domestic need. However, the gardens for pleasure and recreation came into existence much later in the Middle East first where people were very rich. In India floriculture and gardening is considered very important as it finds its place in several epics like Ramayana and Mahabharata wherein some gardens, trees and flowers have been mentioned. This indicates the importance of gardens and landscape plants in Indian culture.

During the recent times, there has been a constant increase in the annual income of people which has lead to more expenditure on luxury life. People now think of

creating healthy environmental surroundings and this change in the taste of people has boosted the establishment of home gardens. Now-a-days more emphasis is given on establishment of home gardens before construction of new home. However, a garden is not a painting, not just something to be looked at from the sitting room window. It is an extension and an integral part of home, meant for everyday living, enjoyment, exercise, games and relaxation. Most of the people do all their gardening themselves, so it is important that the garden should be planned in a meticulous way.



Components of home garden : A home garden has various components and important considerations should be followed to make these components look more beautiful and pleasant

Patio: The larger part of the garden along with patio should be on the south side of house. If there is tree already standing on the land, be sure to include it in the garden plan, unless they stand close together. This tree might form

a strikingly attractive corner feature of the patio.

Path and Terrace: If there is to be a path leading from garden gate to the front or back door, it should be at least 1 - 1.5 m or 4 feet wide. This is wide enough to allow two persons to walk side by side in a comfortable manner. If the drive runs directly alongside this foot path, then a border of plants 60 cm or 2 feet wide should be made between them. Paths leading from front or back door across the patio to kitchen garden need not to be more than 1 m or 3 feet and in smaller garden, 75 cm or 2 feet is sufficient. Paths should never be built right against the house. Always make a flower bed at least 60 cm or 2 feet wide between the ally path and house.

Kitchen garden: If you have room for a kitchen garden, do have one. Shrubs, roses, bushes or a hedge can be used to screen the vegetables from rest of the garden, although there is no need to hide vegetables, fruit trees and bushes as they have their own beauty.

Service area: It is the portion of ground meant for practical working of establishment. This includes kitchen garden, cut flower garden, compost bin, nursery tool shed, animal and poultry shed, badminton etc. the view of these areas can be obstructed by planting thick hedges or a row of shrubs.

Living or private garden area: It is considered as an outdoor living room of the house. It should have direct access to the house. This area should be screened by plants to provide privacy.

Establishment and maintenance of turf :

Basic soil cultivation: Before starting any soil cultivation, paths and patio areas already marked on the garden plan should be marked out. The path and patio sites should be dug out to a depth of 45 cm or 18 inches and the excavated soils should be distributed in the remaining garden area. The first step in the soil preparation is to slice off the soil with the turfing spade. The entire garden area is dug over one spade deep and clods are broken. Bring the soil in good tilth by turning it 2-3 times. Use a fork to dig the deep rooted weeds and repeat this practice until all the garden area becomes free from weeds or spray some non-selective herbicide like paraquat @ 1.0-1.5 lit. per hectare. Once you got rid of all weeds, leave the ground as such for few weeks. During this time period some surviving weeds may sprout and again uproot them with a fork. The area intended for shrubs, roses and perennials should be dug two spades *i.e.* 45 cm. A few days after killing the surface weeds, rake the ground level and remove any stones and other debris material.

Grading and draining of lawn : Proper drainage permits

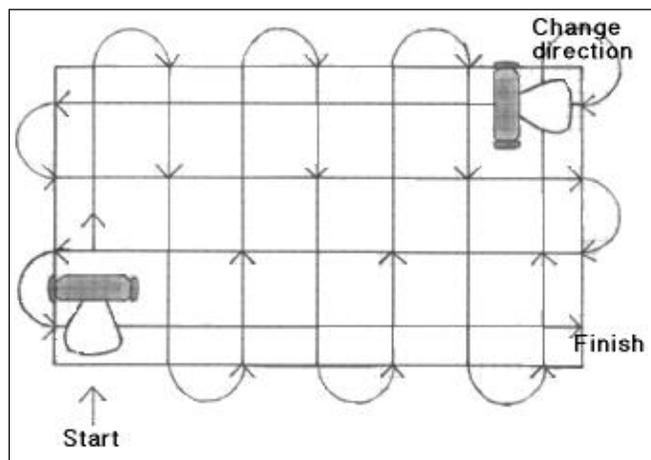
the water to move slowly into the soil to the turf's root system where it can be absorbed, yet pass beyond the root zone before it can cause harm to plants. If slight slope does not exist naturally, it should be necessarily constructed. A decline of between 6 inches to 1 foot per 100 feet is required for flat land to drain properly. Failure to grade lawn away from buildings can result in flooded cellar and basement.

Turfing : Turf grasses are monocotyledonous plants whose growing point is at the crown near the soil and most of these grasses are perennial. Grasses are often grouped into two categories based on temperature.

- Cool season grasses are favoured by day time temperature of 60 to 75°F
- Warm season grasses are favoured by day temperature of 80 to 95°F

Planting lawn : A healthy, attractive, long-lived lawn can be established only if you select high quality seed or planting material and select turf grasses that are well adapted to the soil and climate. The two primary methods of establishing turf grass are seed and vegetative propagation. Vegetative propagation includes sodding, sprigging, and plugging. Seeding is usually the easiest and most economical method of planting grasses, but not all warm-season grasses can establish from seed.

Seed: Try to purchase seed that has a purity of 90 per cent or higher and a germination of 85 per cent or higher, otherwise it may result in poor establishment and subsequent weed invasion. Seed rate may vary from 4 ounces per 1000 square feet for centipedegrass, which has a very small seed, to 10 pounds per 1000 square feet for bahiagrass, which has a large seed. Seeding rates can be reduced, but the open turf area is subjected to more weed invasion and erosion. Many seeding methods are used, but each method should distribute seeds evenly to



keep the lawn uniform. The seedbed should be moist, well prepared, and leveled before sowing. For best distribution of seed, apply one-half the total required seed in back and forth passes in two directions and apply the remainder at right angles to the first direction. When sowing very small seed like centipedegrass and bermudagrass, the seed will be more easily and uniformly applied if you mix it with dry sand, top soil, or another convenient carrier that adds bulk to the spreader. After sowing, cover the seed lightly by working it into the soil with a rake. The soil must be kept continuously moist but not excessively wet until seeds have germinated. Supplying water two or three times a day in small quantities for approximately 2 weeks will ensure adequate moisture for germination.

Vegetative planting: Vegetative planting is simply transplanting large or small pieces of grass. Sodding is more expensive than sprigging or plugging but it produces a so-called “instant lawn”.

Sodding: Sod must be installed immediately after it has been cut, otherwise grass will get damaged due to build of excessive heat within the folded or rolled strips of sod. The soil should be moist before installing a sod. Solid sodding covers the entire seedbed with vegetation.



Plugging: Plugs are small squares, rectangles or circles of sod, cut about 2 feet thick. These are set into the conditioned soil at regular intervals (12 to 18 inches) and in staggered rows to maximize coverage.

Sprigging: Sprig is a piece of grass shoot, stolon or rhizome or even one of the lateral shoots. These are planted 2-3 inches deep in rows 8 to 12 inches apart. This planting is done by hand.



Post-planting care :

Fertilizing Turf : Newly planted grass, whether it has been established by seed, sprigs, or plugs, has less ability to take up nutrients due to lack of a deep root system. So wait until there is a fairly uniform cover (the length of time to achieve this will vary based on time of year, environmental conditions and

location in state) and then start fertilizing. For sodded grass, application of fertilizer should be given at least 30 days after planting to allow roots to establish to a point where they are able to take up the fertilizer. As general practice, apply 3-5q of well rotten FYM, 10-20 kg lime and 10-20 kg SSP per 30 m² area at the time of soil preparation. Apply mixture of CAN : SSP : K₂SO₄ (2:1:1) @ 50-60 g/m² in February-March and August-September.

Mowing : Begin mowing as soon as the grass roots have pegged down and the grass will no longer “lift” when pulled on at the edges.

First mowing: The objective of 1st mowing is to encourage the horizontal branching of new grass plant as quickly as possible to create a thick (dense) lawn. It should be done when new grass has reached a height of 2 ½ inches to 3 inches and grass should be cut back to a height of ½ inch.

Good mowing practices: Follow these procedures and precautions for safe, good mowing

- Pick up all stones, sticks and other debris before mowing to avoid damage to mower or injuring someone with flying objects.
- Never mow wet turf with a rotary mower because

Table 1 : Suggested mowing heights and mower types for home lawns. Frequency of cut will vary based on species and time of year

Turfgrass species	Optimal mowing height (inches)	Preferred mower type
Bahiagrass	3.0-4.0	Rotary
Bermudagrass	0.5-1.5	Reel/Rotary
Centipedegrass	1.5-2.0	Rotary
Augustinegrass	2.5-4.0	Rotary
Zoysiagrass	2.0-2.5	Rotary
(Coarse types)		



clippings can clog the machine. Mow only when the turf is dry.

- Sharpen the mower blade frequently enough to prevent tearing of leaf blades.
- Mow in a different direction every time the lawn is cut. This helps prevent wear patterns, reduces the grain (grass lying over in the same direction), and reduces the possibility of scalping.
- Check your mower every time it is used. Raise your mowing deck to the highest recommended setting for your grass type to promote a healthy root system, which makes your grass more stress tolerant.

Irrigation :

Proper irrigation management is critical to conserve and protect water resources and to properly manage nutrients in the home landscape.

- Do not flood the seedbed or apply water in a hard stream, as this can cause seed movement and soil erosion.

- A well-designed and well-managed irrigation system properly applies only the amount of water required for healthy plants. When feasible, irrigation systems should be designed to separately serve turf and non-turf areas.

- After applying fertilizer, be sure to irrigate it in with enough water so that it moves the granules from the leaf blades or soil surface to just below the soil line. This usually requires about ¼ inch of water. Irrigating in excess of this amount can increase nutrient leaching or runoff.

- Do not water your landscape if it rained in the past 24 hours or if rain is forecast in the next 24 hours.

- Typically no more than ½-¾ inch of water should be applied for a single irrigation event. These practices increase rooting depth and increase tolerance to drought and other stresses.

- Applying water where it is needed, result in minimal water loss due to evaporation or wind drift.

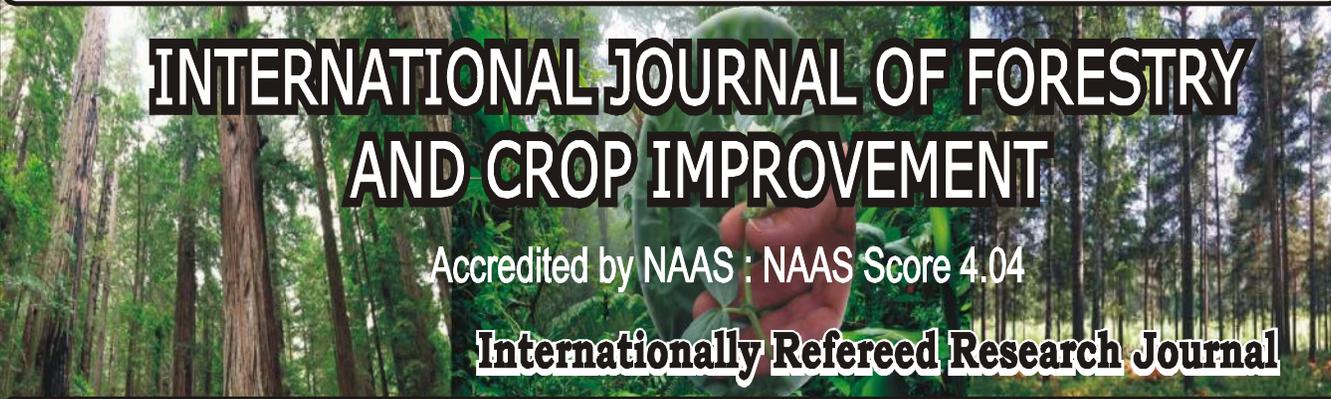
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