

Lawn: Importance, Types, Methods of Establishment and Maintenance

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SUMMARY

Lawn is the most important feature of garden and landscape design without which any garden cannot be completed. It is a peace or area of land that is covered with soft green grass. Lawn is also called as the heart of garden because it enhances the beauty, attractiveness and usefulness of the garden, landscape design and home ground. The basic aim is to establish and maintain the lawn properly with good attractive quality by selecting proper grass species according to location and environmental conditions, site, preparation of land, intercultural practices and preventing the problems of severe pest and diseases related to the lawn. It is very necessary to select the proper grass suitable to the location, environment, soil and need. Doob/hariyali grass (*Cynodon dactylon*) is generally selected for the open sunny location because it is hardy species of grass, establish easily and well known to everyone. Lawn provides beauty to the garden, landscape design, improves the beauty of back yard of home and increases the economic value of the land.

INTRODUCTION

Lawn is the basic feature of any type of garden. In the absence of lawn any garden design is not completed. Lawn provides beauty to the garden, landscape design, home and increases the economic value of property or land. It is also very useful from the environmental point of view. It prevents the erosion of soil, absorb dust from the atmosphere and check the environmental pollution. Lawn is most important part of the playground of cricket, hockey, golf, football etc. It provides cushion to the ground which protect the players from the injury during playing. Lawn also provides the natural and comfortable place for the daily exercise, yoga and also man find the place for rest after day's hard work. In any of the garden design 60 to 75% area should be given to the lawn. Well established lawn in the metro cities and cities are the good source of income. In the cities and also in urban areas the well-established lawn are used for celebrating the marriage ceremonies, receptions, birthday parties and some cultural and traditional programmes.

Site selection

- Lawn is a hardy perennial grass or herb, it is not very difficult to maintain but it requires open sunny situation for proper growth and quality. So, open sunny area or location should be selected.
- Water should be available easily on the site of lawn because, lawn require frequent watering.
- Site of lawn should not near or under the large, shade trees because the litter of trees deteriorate the quality of lawn.
- Land for the lawn should be levelled. Water logging condition affect the growth of lawn.
- Soil should be heavy, well drained, free from stubbles, stones, insect pest and diseases.
- The pH of the soil should be in between the range of 5.5 to 6.5. Location of the land should be away from the grazing land.

Types of lawn grasses

Types of lawn grasses on the basis of season

Common name	Scientific name
Warm season grasses	
Bahia grass	<i>Paspalum notatum</i>
Bermuda grass	<i>Cynodon dactylon</i>
Buffalo grass	<i>Buchloe dactyloides</i>
Centipede grass	<i>Eremochloa ophiurooides</i>
Kikuyu grass	<i>Pennisetum clandestinum</i>

St. Augustine grass	<i>Stenotaphrum secundatum</i>
Japanese grass	<i>Zoysia japonica</i>
Cool season grasses	
Annual blue grass	<i>Poa annua</i>
Annual rye grass	<i>Lolium Multiflorum</i>
Colonial bent grass	<i>Agrostis tenuis</i>
Creeping bent grass	<i>Agrostis palustris</i>
Kentucky blue grass	<i>Poa pratensis</i>
Perennial rye grass	<i>Lolium perenne</i>
Rough blue grass	<i>Poa trivialis</i>
Tall fescue	<i>Festuca arundinacea</i>
Velvet bent grass	<i>Agrostis canina</i>

Methods of lawn establishment

From Seed

This is the oldest and the easiest method of establishing lawn. The seed of grasses is generally very fine and light in weight so proper care should be taken during the sowing for proper establishment of lawn. Seeds of the grasses for establishment of lawn are generally used when the roots of the grasses are not available easily. After leveling of land the area of the lawn to be prepared are divided into the plot size of 200 to 300 m². The 500 g seeds used for every 200 m² area. Seed of the grass is mixed with the double quantity of well sieved FYM or sand and spread evenly. After spreading the seed on the ground, the rake is drawn on both the direction for covering the seed. The ground should be rolled with the light roller. Then plot should be watered immediately after sowing and at two days interval with fine water can. Seeds for germination take about 3 to 5 weeks. Seed rate required for establishment of lawn is 10-12 kg ha⁻¹ or 25 to 30 kg ha⁻¹ or 2.5 gm m⁻².

Dibbling

Dibbling of grass roots to establish lawn is the most important and widely used method of lawn establishment. This method is easy but time consuming. The unrooted or rooted cuttings of the grass are used to establish the lawn. On the wet ground, the roots of the grass dibbled (planted) at a distance of 7-10 cm apart. After dibbling the grass roots, frequent light watering is given up to the grass sprouts. It takes about 4-6 months for developing the lawn.

Turfing

This is the fastest method of lawn establishment but, it is very expensive. Turf is a piece of earth about 5 cm in thickness cover with the grass grown over it. The piece of turf are available in the square, rectangular or in rolls of small width (45 x 30 cm) sizes. The turf should be free from the weed, insects, pest and diseases. The pieces of the turf should be placed closely on the prepared ground side by side like an arrangement of tiles and beaten by the turf beater or wooden beater for the attachment to the ground. The middle area or cavity between the two turf sheets should be filled with fine clay containing well FYM or soil. After laying the turf on the ground light rolling should be given for touching the nodes of grass to the ground and water immediately. By this method the lawn gets ready for the use in a short period of time.

Turf plastering

This method of lawn establishment is not used commonly for the establishment of lawn. In this method, a thick paste or slurry is prepared by mixing the fresh cow dung, soil and water. The chopped pieces of fresh roots

of the grass or rhizomes of doob grass are mixed with this paste and spread on the surface of the ground after giving light irrigation. This evenly spreaded paste on the ground is covered with the dry fine sieved soil and water regularly.

Maintenance of lawn

Weeding

Weeding is the most important aspect of lawn maintenance. The moth (Cyperus rotundus) is the common weed in the lawn and it is very difficult to eradicate because its root system is deep. Weeds deteriorate the growth, beauty and quality of lawn and also the incidence of pest and diseases occur, if the weeds are not control within time. Remove the weeds or unwanted plant from the lawn with the help of khurpa and uprooted the weeds from roots, if possible.

Irrigation

Irrigation is the most important operation in the lawn from the maintenance and growth of the lawn point of view. The lawn grass has a shallow root system so, it requires frequent watering but the over watering or the waterlogging condition hamper the growth and quality of grass. Irrigation frequency is also depend upon the type of lawn and location of site. Warm season grasses required frequent watering as compare to the cool season grasses. The best time of watering the lawn is early in the morning. Irrigating the lawn early in the morning allows water to reach the roots without evaporation. Irrigating the lawn at night increases the possibility of occurrence of pest and diseases because water remains on the lawn whole night and in a day it evaporates. Generally, pop up sprinkler irrigation system is used in the lawn for watering.

Manures, Fertilizers and Liming

The lawn should be fertilized three times in a year to maintain the rich greenery. The urea or ammonium sulphate at the rate of 1 kg/50 sq. m. during the month of February-March, June-July and October-November should be given. Liming is very necessary every after 2-3 years in acidic soil. Liming should be done before the rains.

Rolling

The main aim of rolling is to level the land and help the grass anchor itself or to touch the nodes to the ground. Rolling is done with the help of light roller. Rolling should be avoided when the soil is wet. Excessive rolling should be avoided because it leads to caking or hardening the surface of soil.

Mowing

Mowing is the cutting over the grass for maintaining the grass height and improving the attractiveness for maximum utility. Mowing in the lawn is generally done with the help of mower machine. In one mowing one third of the lawn should be cut and maintain the height of the grass up to 5-6 cm.

Sweeping

Sweeping is the cleaning of cut grasses after the mowing operation and other litter and debris on the lawn. Sweeping is generally done in every morning for cleaning the lawn by collecting trees litter, debris and cut grasses.

Scraping and Raking

Rolling and mowing may result in the formation of hard soil and the lower part of the lawn may get hard, woody or matty. For such lawn the grass is scraped at the ground with the help of khurpi and by raker to break

the crust. Scraping and raking improves the aeration in the soil and ultimately results the proper growth and improves the quality of lawn.

Insect Pest Management in Lawn

Sr. No.	Insect pest	Control Measures
1.	Root grub	Quinalphos (0.05%) or Carbofuran (0.05%) or Phorate 10 G @ 10 kg ha ⁻¹ followed by irrigation to allow the percolation of insecticides to grub feeding zone
2.	Mole cricket	Malathion 5% @ 10 kg acre ⁻¹ or Phorate 10 G @ 10 kg ha ⁻¹
3.	Termite	Drenching the soil with Chloropyriphos or Malathion (0.1%) before planting the lawn Imidacloprid 30.5 SC (0.075%) on affected area
4.	Armyworm and cutworm	Acephate (0.05%) or Carbaryl (0.1%) or Indoxacarb (0.1%) or Spinosad (0.05%)

CONCLUSION

Lawn improves the beauty of garden, home, landscape design, it increases the economic value of the property, land and it reduces the soil erosion, dust and pollution from the environment. Lawn is a place for rest after the day's hard work. Sitting on the lawn reduces the stress on mind and makes the people happy. Proper selection of lawn grass according to the need, location and regular maintenance of lawn is very important for the successful establishment of lawn.

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