Lawn Establishment and Maintenance

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Keywords
Lawn, Mowing, Turfing, Dibbling, Varieties

How to cite this article:

ABSTRACT
The perception of lawn was formerly from England gained popularity in northern Europe from the middle Ages. After contemporary influence it became element of the garden and cultures of the world which afterwards known as ‘Heart of garden’. The lawn improves the attractiveness of the garden and also acts as cushion in playgrounds. The primary provision is to maintain the lawn properly with good care by selecting site, land preparation, intercultural operations, preventing/managing diseases & pests and problems associated with lawns. It is mandatory to select the appropriate lawn variety for planting in your field according to variable soil properties and climatic conditions. Hariyali/Doob grass botanically known as Cynodon dactylon is very common lawn grass chosen for plantation which is drought resistant and suitable for open sunny location also. Growing lawn in the backyard garden of the house is also in trend which improves beauty and also provides peace to mind which helps to stress relief in current era.

INTRODUCTION
A lawn is a piece of land that is covered with green soft grass and is used for aesthetic and recreational purposes. The lawn is known as the heart of the garden because the primary influence of the garden depends on it. The concept of loan is originally from England. Lawns became popular in northern Europe from the middle Ages. The humid climate of maritime Western Europe in the north has made it possible to cultivate and
manage the lawn. Until contemporary influence they were not part of the garden of other regions and cultures of the world.

The lawn serves to enhance the beauty of the garden. Maintaining the right loan plays a crucial role in any landscape design. A beautiful, well-groomed lawn can make the whole landscape look beautiful but when the lawn is not maintained the beauty of the landscape inevitably deteriorates. 60-75% of any garden should be dedicated to loan. The lawn is also useful as a playing surface as it reduces ground erosion and dust generated due to the foot pressure of many players. The lawn also serves as a cushion for players in sports such as football, soccer, cricket, baseball, golf, tennis and hockey.

Land and site preparations:

- Establishment and care of seasonal loans varies depending on the climate zone and the type of loan grown.
- Land should be selected for lawn cultivation which is rich in organic matter and also add organic matter as required.
- If the soil is very heavy, coarse sand can be added by removing the subsoil to a depth of 20 cm. The ideal soil pH should be 5.5-6.5. If it is very acidic then lime of 500g/m² should be added and the same amount of gypsum should be added to the alkaline soil.
- Sewerage should be provided for more rain water if the land is not sloping. The soil should have a moderate slope and full sunlight.

Site preparation involves excavating, leveling and enriching the soil with organic manure. Sludge should be well equipped with rinse, gravel and weeds. The roller should also rotate over the ground. The soil should be irrigated to allow the soil particles to settle.

The grass commonly used for lawn all over India is *Cynodon dactylon*, which is very hard and can be grown in any type of soil. This grass is also known by other names like hariyali, doob grass, Bermuda grass, Indian doob.

**Description of lawn varieties:**

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Botanical name</th>
<th>Common name</th>
<th>Texture</th>
<th>Suitable location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Cynodon dactylon</em></td>
<td>Hariyali/Arugu/Doob grass</td>
<td>Medium fine</td>
<td>Suitable for open sunny location; drought resistant</td>
</tr>
<tr>
<td>2</td>
<td><em>Stenotaphrum secundatum</em></td>
<td>St. Augustine grass or Buffalo grass</td>
<td>Coarse texture</td>
<td>Suitable for shady situation; requires frequent watering</td>
</tr>
<tr>
<td>3</td>
<td><em>Sporobolus tremulus</em></td>
<td>Chain grass/Upparugu</td>
<td>Fine</td>
<td>Suitable for saline soils and open sunny locations</td>
</tr>
<tr>
<td>4</td>
<td><em>Poa annua</em></td>
<td>Annual blue grass</td>
<td>Medium fine</td>
<td>Suitable for acid soils and suitable for higher elevations</td>
</tr>
<tr>
<td>5</td>
<td><em>Pennisetum clandestinum</em></td>
<td>Kikuyu grass</td>
<td>Rough</td>
<td>Grow well in acids soils, suitable for higher elevations.</td>
</tr>
<tr>
<td>6</td>
<td><em>Zoisa japonica</em></td>
<td>Japan grass</td>
<td>Coarse</td>
<td>Suitable for poor sandy soil; open sunny situation, slow in growth</td>
</tr>
<tr>
<td>7</td>
<td><em>Z. matrella</em></td>
<td>Manila grass</td>
<td>Medium</td>
<td>Suitable for open sunny situation</td>
</tr>
<tr>
<td>8</td>
<td><em>Z. tenuifolia</em></td>
<td>Korean grass/velvet grass/carpet grass</td>
<td>Fine</td>
<td>Suitable for open sunny situation</td>
</tr>
<tr>
<td>10</td>
<td><em>Festuca sp.</em></td>
<td>Fescue grass</td>
<td>Coarse</td>
<td>Shade tolerant, survive on inferior soils</td>
</tr>
<tr>
<td>11</td>
<td><em>Paspalum vaginatum</em></td>
<td>Paspalum grass</td>
<td>Medium</td>
<td>Suitable for open sunny situation</td>
</tr>
</tbody>
</table>

**Planting of lawn:**

The lawn should be planted during the early rains or spring.
Planting methods of lawn:

1. **By seeds:**

   This method is the oldest and best known. This method is adopted abroad or in large areas. Lawn from seed should be grown only when grass roots are not available. Seed germination takes about 3 to 5 weeks. About 25-30 kg of seeds is required for sowing in one hectare.

2. **Turfing:**

   This is the fastest and most expensive way to grow a loan. Turfs should be cut evenly into squares where the grass is short, compact and free from weeds. This turf should be placed on the prepared ground site and beaten side-by-side with a turf beater. The middle cavity should be filled with fine clay. The entire turf area should be rolled and irrigated.

3. **Dibbling of roots:**

   This method is cheap but time consuming. When it gets wet after rains, small pieces of grass roots should be planted at 10-15 cm in flat land. The soil should be compacted after sowing. The roots spread over a period of about six months and grow underground. Frequent moving, rolling and irrigating are a fairly compact lawn.

4. **Turf plastering:**

   This method is not very useful in dry and arid areas. In this way a large quantity of submerged grass can be obtained freely and 5-7 cm can be properly cut into long as well as short bits. A basket of fresh garden soil, a basket of fresh cow dung, a shovel of wood ash and the required amount of water should be properly mixed with two baskets of cut grass. The mixture is then spread evenly over the previously wetted fully layered surface to a thickness of at least 2.5 cm and watered from a can. The next day, the soil should be rolled up and the grass should be allowed to spread. This way the grass grows in about a fortnight.

5. **Astro Turf:**

   This is an artificial lawn, which is popularly used in developed countries in rooftops as well as in playgrounds. Continuous spraying of water is a very important step, which binds the synthetic fibers so that the lawn gets a uniform surface.

Maintenance of lawn:

1. **Weeds:**

   The weeds should be removed as soon as it appears otherwise it will spread. Unwanted plants should be removed with the help of a hoe with care. It should be removed from the roots if possible. The gaps should be filled with fine soil. In the absence of rain, water regularly at weekly intervals.

2. **Irrigation:**

   The best time to water the lawn is during the early hours of the morning. Giving water during
this time allows water to reach the roots without evaporation. Water can evaporate quickly after noon and irrigating at night creates the possibility of diseases. It is better to irrigate frequently than to give uniform water. The sprinkler method of irrigation should be used to save water and labour. Water stagnation in particular should be avoided.

3. Manures and Fertilizers:
Fertilizing the lawn three times a year is enough to maintain rich greenery. It is very beneficial to apply urea or ammonium sulphate at the rate of 100 kg FYM/100 sq.m. and 1 kg/50 sq m during February-March, June-July and October-November.

4. Mowing:
Mowing should be done at short intervals and seed stalks should not be produced. Cutting grass too short should be avoided as it damages the grass, prevents the formation of deep roots and promotes weeding. Different grasses have different heights where they can grow best, so make sure you inquire about this from the seller or your landscaping company. It is not recommended to remove more than one third of the grass leaves in the harvest. Grass should not be harvested when the grass is wet. Make sure your mower’s blade is new and sharp.

Other terms related to lawn maintenance:
1. Bricking: To replace unhealthy lawn pieces.
2. Sweeping: Cleaning and removing grass, debris, sticks etc. in the lawn.
3. Scraping: Do not let the loan harden/ Prevent toughness.
4. Mowing: To prevent excess growth of grass in the lawn.
5. Rolling: To increase anchorage in the lawn.
6. Racking: To provide aeration.

Problems with lawns:

<table>
<thead>
<tr>
<th>Problem</th>
<th>Symptoms</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorosis</td>
<td>Grass turns yellow with the deficiency of magnesium and iron.</td>
<td>Iron: Spray Ferrous sulphate 25 g dissolved in 10 litres of water per 100 sq. metre. Magnesium: Spray Magnesium sulphate 100 g in 10 litres of water per 100 sq. metre.</td>
</tr>
<tr>
<td>Fertilizer burn</td>
<td>Grass browns especially in hot weather.</td>
<td>Drench the lawn in injured areas to leach excess fertilizers deep into the soil.</td>
</tr>
<tr>
<td>Improper mowing</td>
<td>Lawns cut too closely turn yellowish and often look diseased or dried.</td>
<td>Mow enough to remove not more than 1/3rd height of the grass at a time. Keep mower blades sharp.</td>
</tr>
<tr>
<td>Improper watering</td>
<td>Light sprinkling encourages shallow roots. Over watering causes diseases.</td>
<td>Water the lawn to wet the soil about 10 to 15 cm depth.</td>
</tr>
</tbody>
</table>

Pests in lawns:

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</tr>
</thead>
<tbody>
<tr>
<td>Leaffoppers</td>
<td>Suck the juice from grass blades causing stripped white, then yellow and finally brown leaves.</td>
<td>Spray Dimethoate 2 ml/l.</td>
</tr>
<tr>
<td>Nematodes</td>
<td>Affect the roots, lawn takes a bleached out appearance.</td>
<td>Apply Furadan 40 g/sq.m.</td>
</tr>
</tbody>
</table>

Prevention of diseases in lawn:
1. Maintain soil pH based on lawn requirement.
3. Providing water for the health, strength and resilience of the loan.
4. Follow good mowing methods.
5. Keep removing old/dead lawn and aerate the soil regularly.
6. Use of pesticides for severe infestation.

CONCLUSION:
In today’s busy and stressful times everyone must spend some time of the day in peace. Sitting in the lawn makes the mind happy and forgets the worries of the day. Nowadays it’s a status symbol too to grow lawn in house garden.
which is actually easy and interesting. It's up to you: Whether you want to get oxygen complimentary with peace from your home itself or not?

**REFERENCES:**


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