

Chapter 4 - Lawn establishment



Careful preparation of any site is required when a lawn is to be laid by turf or by seed. Although final seedbed preparation for sowing grass with seed is more critical than when laying with turf. A fine crumb type soil structure must be achieved on the surface as without this the seed themselves will

struggle to grow after germination and the final matured turf levels can be uneven. Lawns can be made at anytime of the year but the two favoured seasons for sowing grass seed are spring and autumn. This timing is suggested as the soil is relatively warm and contains adequate amounts of moisture that ensure quick germination and establishment. If irrigation is applied then even summer planting can be desirable as the germination and establishment of the sward will be quick and effective.

Turf can be laid at almost anytime of the year, even during colder periods the turf will develop a root system even when the leaf is dormant. As with sowing seed summer planting of turf can be carried out so long as irrigation is applied.

Soil preparation should be completed as long as possible in advance of the sowing or turfing date. Ideally at least a month should be left between preparing the soil and planting the turf to allow for any final settling of the soil once the initial 'heeling in' has been carried out. Two days before the seed is sown or turf is laid the final preparations to the soil should be made. In the case of seeding a fine soil crumb should be sort by raking.

Establishing a turf from turf

Advantages of turf

- a) gives an immediate sward cover
- b) can lay turf at almost any time of year
- c) less preparation needed
- d) many types available

Disadvantages of turf

- a) Cost – much more expensive than seed
- b) Can contain weeds and undesirable grasses
- c) Can be diseased
- d) Imports different soil type to bed. Causes root break, can effect infiltration rates

Features to look for in selecting turf

- a) Soil type grown on– sand/silt/clay content/does it match your own?
- b) Grass species present
- c) Sward density – thin, weak sward/ thick, healthy sward
- d) Presence of weeds, pests and diseases

Types of turf

1. Meadow Turf
 - Grazed agricultural grassland
 - Usually coarse agricultural species
 - Cheap
 - Low quality
2. Sea washed turf
 - Fine grass species (fescue/bent)
 - Usually high percent of silt in soil
 - Considered high quality
 - Medium – High cost
3. Commercially produced turf
 - a) Mature turf
 - Specified quality
 - Specified species
 - Treated for weeds, pests and diseases
 - Medium cost
 - b) Custom grown turf
 - Species specified by client
 - Soil may be sterilised or specified by client
 - Treated for weed, P & D
 - High cost
 - c) Seedling turf
 - Grown on a artificial medium
 - Grown to clients specifications
 - Usually has to be ordered
 - Not as tough as mature turf
 - Treated for weeds, P & D
 - High cost

Turf lifting and laying

Turf lifting can be carried out by hand, using pedestrian driven turf lifting machinery or through using tractor-mounted machinery. The latter is usually only used by professional turf growers.

Stacking and storing the turf

Stacking and storage of turf should be carried out if it is not to be used immediately. This can be done by stacking turf to turf, soil to soil or by rolling cut strips. Never over stack or those on the bottom will be damaged. If the turf is not to be layed within 48 hours, lie out (green side up) and water regularly.

Turf Laying

- 1) Site preparation
 - Install drainage (if necessary) and obtain levels
 - Spray off weeds with herbicide (ensure this is carried out *at least* two weeks prior to laying turf)
- 2) Apply a base dressing of fertiliser that contains nitrogen, phosphorus and potassium.
- 3) Work in fertiliser and obtain a level surface with fine soil crumbs
- 4) Lay turf alternate bond style (Brickwork fashion), butt all turf edges together.
 - Use a plank to walk on newly laid turf, never your feet only
 - Ensure at least half a turf is inserted to any edge and ensure that edges are butted together
- 5) After laying turf top-dress with a sand/soil mix to fill gaps in turf
- 6) Give the area a light roll to firm sward (a pedestrian cylinder mower with the blades raised would suffice)
- 7) Water the sward if no rain is forecast within 48 hrs

Establishing a turf from seed



Advantages

- Cheaper than turf (approx. 1/10th)
- Desired species can be chosen
- Does not import weeds and disease

Disadvantages

- Can take up to 6 months to establish
- Subject to 'wash out' during heavy rain
- Birds can eat the seed

Sowing Rate

Determined by:

- Species sown - Bents (large number of seeds) 10 – 15 k gram (lower rate)
Ryegrass (small number of seeds) 500 gram (higher rate)
- Quality of site - Preparation (seed beds = high preparation and accurate rates)
Final use (The higher quality of site required, the more accurate the seeding rate will need to be to ensure the final quality desired is achieved)
- Field Factor - Loss in the field can be as high as 20% through loss to wind, rain or birds. Should be considered if a high quality site is required)

Some suggested sowing rates

- Ryegrass (*Lolium perenne*) mixtures - 50 – 70g m²
- Fescue/bent mixtures (*Festuca/Agrostis* sp.) - 35g m²
- Bents only (*Agrostis* sp.) - 10 – 15g m²

Note

Sowing rates are an approximation and should be adjusted by circumstance. Guidance can be gained from the manufacturers or suppliers recommendations.

Site Preparation

1. Clear site of weeds
 - Glyphosate / systemic (use during the growing season)
 - Paraquat / contact (use during colder more dormant times of the year)
2. Prepare seed bed
 - Cultivate
 - Level
 - Consolidate
 - Pick stones
 - Obtain fine soil crumb on the surface
3. Apply a base dressing of fertiliser that contains phosphorus and potassium
4. Sowing times
 - Best late summer, early autumn
 - Less competition from weeds
 - High soil temperature
 - Moist conditions
 - Seedlings less likely to be killed from summer drought conditions
 - Can use 'stale seed bed' technique (Leave the soil exposed for one growing season. This allows all the dormant weed seeds to germinate which can then be sprayed off)

with herbicide at the end of the growing cycle. This technique is time consuming but can eliminate future infestations of weeds in the newly developing turf)

5. Sow seeds as evenly as possible
 - Small areas; divide into smaller units and hand sow in two directions to ensure an even spread
 - Large areas, decide on the sowing rate then spread via 'spinning disc or drop spreader'.
6. On small areas lightly rake over the site by hand to ensure good soil contact with seeds. Be sure not to bury the seeds too deep.
 - If the surface is large and the seed has been applied via a machine it is advisable to harrow lightly or rake over the surface.
7. Deter birds

Post Germination practices

1. Roll to consolidate the surface after germination and prior to the initial cut. This will push any small stones into the surface and induce tillering of the plants. Can be done with a cylinder mower with the height of cut disengaged or raised. Large stones will need to be hand picked firstly.
2. First cut – Give the first cut once the sward is at a height of 25 mm (fine grasses), 50 mm (coarser grasses). Use a rotary mower and remove debris
3. After establishment – ensure removal of all broad-leaved weeds by hand. It will be possible to spray using a selective herbicide.
4. Commence a top-dressing programme to bring levels into line with the end use of the established area.
5. Feed the sward in spring with a fertiliser high in Nitrogen and Potassium but low in Phosphorus.

Areas for consideration when establishing lawns

From seed

1. Thorough cultivation of seed bed
2. Application of fertiliser
3. Clean site
4. Care in selection (Use of lawn)
5. Purchase of seed (viability, purity, germination)
6. Care in sowing (Timing)
7. Avoidance of burying seeds with cultivations
8. After care (Light rolling, mowing and feeding)

Advantages

Low cost
Clean results
Ease of subsequent management
Selection of required species
Quality of results

Disadvantages

Slow establishment
Time required with seedbed preparation

From turf

1. Care with surface levels
2. Application of fertiliser
3. Care in selection of turf
4. Care in selection (Use and source)
5. Grasses present in purchased turf
6. Uniformity of sods
7. Method of laying
8. After care (Light rolling, watering)

Advantages

Instant lawn
Quick establishment

Disadvantages

Higher cost
Difficulty in obtaining high quality turf
Usually high clover content
Presence of perennial weeds
Deterioration when stacked