GRASSFORM GROUP

Football Pitch Maintenance Guide

SOUTHEND UNITED

CHARLTON ATHLETIC

WEST HAM UNITED

QUEENS PARK RANGERS

Mowing

The grass shall be maintained so that the length never exceeds 60 mm.

Plan for a minimum of 20 cuts per year but remember that this is only a guide, if the weather is ideal for growing, the grass will grow!

The grass should be maintained at between 25 & 30 mm in the playing season.

Fertiliser

Grass requires enough nutrients to maintain it in a healthy state. Too much fertiliser (especially Nitrogen) can lead to turf that damages easily and has poor wear tolerance, equally, too little can lead to weak turf that recovers slowly from wear. Ideally, the nutrient status of the soil should be checked on an annual basis if it is a free-draining site.

Tests for Nitrogen content in soil are not recommended however, as Nitrogen levels can change rapidly depending on how the soil is handled following sampling and results from such analysis can be highly misleading.

A general fertiliser programme for a natural soil pitch is outlined below. Please only use this as a guide, however, and if in doubt enlist the help of a qualified agronomist to advice on fertiliser requirements. Many fertiliser suppliers offer a free soil analysis service, though please be willing to critically evaluate any fertiliser recommendations based on such analysis before buying anything.

Depending on the number of pitches you are dealing with, you will either use a pedestrian spreader or a tractor mounted spreader. In all cases you should carry out a calibration exercise on the machine you plan to use before you apply anything. Set out a set of catch cans at 90 degrees to your pass.

The catch cans should be 0.5 m apart from the centreline of your pass and extend beyond the maximum throw of the spreader. Plastic take-away boxes make great catch cans but should be weighted down in windy conditions.

Set your spreader to the correct settings for the product you plan to use then giving yourself enough room to get up to normal walking speed, open the spreader and walk through the line of catch cans. Have a look at what you have collected in the cans as you may need to go through several times to get enough to measure. Either visually assess the results (see if the fertiliser has been spread evenly both sides of the spreader) as some spreaders seem to push more out of one side than the other so you will need to go up and down the same line to spread evenly as but adjust the rate accordingly. Alternatively you can collect and weigh the amounts in each can but you need a sensitive balance for this. It is best to do this exercise on a close mown area of turf.

It might be worth investing in a soil test that gives you an idea of micro-nutrient status of your soil if

you cannot achieve good turf quality. This does not need to be done frequently, but will allow you to judge whether the cause of your problem is associated with a lack of certain micro-nutrients.

- Over-seed at the rate of 250 kg/ha immediately prior to top dressing, using 3 cultivars of fine-leaved perennial ryegrass with a rating in excess of 6.5 for the mean of live ground cover and visual merit (from the Turfgrass Seed booklet).
- Make at least two passes with seeding equipment designed to place the seed approximately 5 mm below the surface.

Apply additional seed into thin goalmouths or other heavily worn areas.

Top Dressing

You need to be careful here, especially if you have sand slit drainage or a sand constructed pitch or a pitch that has been heavily top-dressed in the past. The golden rule is that you must use a sand that has the same particle size range or is coarser than that used previously (either as a dressing, in the sand slits / grooves or in the construction). If you apply a material that is finer (e.g. a soil over a sand or fine sand over a medium / coarse sand) then you will create a hydraulic barrier to water infiltration and could rapidly turn a free-draining pitch into a waterlogged quagmire. It most often happens when pitches are turfed, but can and does happen when top-dressing routines or materials are changed without thinking about it.

If in doubt, get a sample of the sand on your pitch tested. You need a grading curve of the material – dry sieved and passed through a range of decreasing sieves. Contact TurfTrax GMS if you need more information on this kind of testing, see contact details at the bottom of this article.

Also consider the type of sand in respect to its abrasive qualities – ideally a sub-rounded sand is best as this is less likely to be a problem for players diving or falling onto the surface. I am pretty sure the users would not appreciate a layer of coarse, angular, grit over the whole pitch – especially the goalie!

Aeration

A lot of nonsense is spoken about aeration. Just using a solid tine to punch a hole into the soil is not adding pore space. Indeed, as the tine compresses the soil, the pores around the tine hole may well be lost and will certainly be made smaller at the expense of creating one large pore. To truly add pore space you either need to remove soil material (hollow tining) or increase the volume the soil occupies (by heaving the soil). In dry soil conditions, where brittle failure occurs, linear aeration devices such as "The Shockwave" or "The Earthquake" can be effective but the soil must be dry and friable. In all cases, the soil must be as dry as possible (ideally the soil should just be soft enough to allow the tine or blade to penetrate) before aeration or decompaction work is carried out. There really is no point in aerating soils in wet conditions, have a tea instead and come back when it is drier.

Some new devices are now available – the SISIS Aer-Aid and other air injection tine based systems push compressed air into the soil as the tine penetrates. In the right conditions these can be very effective in heaving the soil and relieving compaction but again, be careful with the timing of the operation and, with the high-powered air injection devices, make sure you have solid rooting.

- So consider verti-draining or Linear Aerate the pitch on two occasions. Once at the end of the season, to coincide with sand top dressing, and once in October (but only when the soil conditions are suitable).

Supply and spread fertiliser according to the following generalised programme making allowances for your own situation:

- March/April 12:6:6 at 350kg/ha
- June/July 12:0:9 at 350kg/ha
- September/October 10:5:20 at 350kg/ha

Weed Control

Weed control is really important if you want to maximise not only the aesthetic appeal of your pitches, but also the playability and resistance to wear. There are many contractors who supply weed control services if you are not fully qualified and licensed to apply herbicides or agro-chemicals yourself. You really need specialist service and advice from a BASIS qualified advisor when considering the use of agro-chemicals.

The law is clear on this issue and it not only makes sound sense in respect to health and safety and environmental protection, it will also ultimately save you cash by ensuring the correct products are specified and applied as appropriate for your site and the problem you have. It is your responsibility to make sure that anyone who applies agro-chemicals to your pitches is licensed and qualified to do so and is applying licensed products in accordance with a full risk assessment, in accordance with the manufactures instructions and in compliance with a relevant COSHH assessment.

- Given the above, here are some other general points to consider:
- Use a selective herbicide designed to combat the weeds present (this means you need to correctly identify them in the first place!). Ideally the herbicide should be applied at least two weeks after the most recent fertiliser treatment and at a time when grass growth is strong and healthy.
- Do not apply herbicide during periods of potential turf stress, i.e. if the weather is hot and dry or if the weather is frosty.

Keep copies of the appropriate operator's certificates showing competence for the spraying operation to be undertaken.

Over-seeding

It is my view (and feel free to disagree with me) that when over-seeding rye-grasses, it is most effective when the seed is drilled using a purpose designed grass seed-drill. Though some of the indentation type seeders work well, if the soil conditions are not perfect, the results can be a little disappointing. I guess you need to decide what is best for your situation, but this is my view.

You may wish to sow other grass varieties in conjunction with (or instead of) rye grasses. In which case remember to check with the supplier about any particular requirements that the seed you use might have in respect to germination and sowing. It might be that pitches should be sequentially sown if you are using a mix of grasses that have different germination and growth rates. It might be that you are using a grass that needs light to germinate. By checking ahead of time and over-seeding in a way which best suits the seed you are using your results will be much improved.

Heavy clay soils may shrink on drying, so use of a Linear Aeration Device when the soil is wet might lead to some significant cracking as the soil dries along the line of the blade. If the pitch is used as a cricket outfield in the summer this might result in some problems so tine based aeration might be better! Instigating cracking is fantastic for the development of structure in heavy clay soils come the winter however, so if it does not impede summer use then this is worth considering.

Repairs

Repair as frequently as possible, it keeps the task manageable and helps to maintain the pitch in the best shape you can.

- Fork and apply sand (same as the top-dressing sand) to any low spots or wet areas, particularly goalmouths, during the playing season.
- Divot the pitch as frequently as possible and apply a mix of sand and seed into divot scars and tamp the mix into the scar.

If you have the time you might want to pre-germinate a batch of seed specifically for this task but do it in small batches or you may end up wasting a lot.

Marking

Mark the pitches with approved white line marker as required throughout the playing season. Make sure the lines are true and comply with the rules and laws of the games being played. Check the right angles using the 3, 4, 5 rule.

Lots of different paint applicators are on the market from simple transfer wheels through to the laser guided systems. With all of these systems, keeping the machines clean and washed after use will increase their lifespan and give you better results.

Other specialist tasks might be required from time to time such as worm control, spraying against specific pathogens (Fusarium, Brown Patch, etc). In all cases, prevention is better than cure but if you do need more serious intervention, consult a qualified Agronomist for advice. You need correct identification of the problem before you spend lots of cash on the solution. As with herbicides, you need to comply with the regulations so use a specialist unless you are qualified to do the operations yourself.

Should you wish to order this product or make an enquiry please visit us online today, or call us on 01277 887 313 for more information on this service.