

Turf Solutions

Why You Need Fertilizer

Why Does Turf Need Feeding?

There is always lots of debate in the turf industry as to how much, what type and when to feed turf. Turf is dynamic and constantly changing, there will be many influencing factors such as time of year, weather and soil conditions, grass species etc. The following article gives some basic guidelines although the information is not 'set in stone'.

Why Does Turf Need Fertilizer?

Very simply turf needs feeding for the following reasons:

- To supply essential nutrients for growth
- To encourage healthy turf and aid recovery
- To replace nutrients removed (clippings)
- To encourage uniform surface conditions
- To enhance turf appearance
- To balance soil nutrients

Probably the first five points are fairly straight forward however, the last point is not so clear. Balancing soil nutrients is becoming a popular terminology with the turf industry. The uptake and availability of certain nutrients can be restricted by excesses or insufficient quantities of other nutrients.

For example high amounts of potassium can restrict the uptake of magnesium. Soil analysis can help to determine nutrient balance within the root zone.

What Nutrients Do Turf Need?

Its possible that certain fine turf areas will only ever need low amounts of three or four different types of nutrients however the list below shows the nutrients that are **essential** for healthy turf grass growth. The reason that some turf areas do not need these nutrients applied on regular basis is because they are either already present within the root zone or they are already supplied via top dressing treatments etc. The macro nutrients are needed in far higher quantities than micro nutrients.

MICRO	MAKRO
Iron	Nitrogen
Zinc	Potassium
Copper	Phosphate
Magnanese	Calcium
Molybdenum	Magnesium
Chlorine	Sulphur
Boron	
Sodium	
Silicon	



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What Do Essential Nutrients Do?

Its very difficult to make a definitive list of what role nutrients play in the growth of the grass plant because they are all involved with many physiological responses within the grass plant. However the following list highlights some of the primary functions that each nutrient is responsible for:

- Nitrogen – Vegetative growth plant production
- Phosphate – root development and energy transfer
- Potassium – plant metabolism and resilience
- Magnesium – foliage and root growth
- Calcium – plant strength cell structure
- Iron – Chlorophyll constituent
- Manganese – protein, N availability

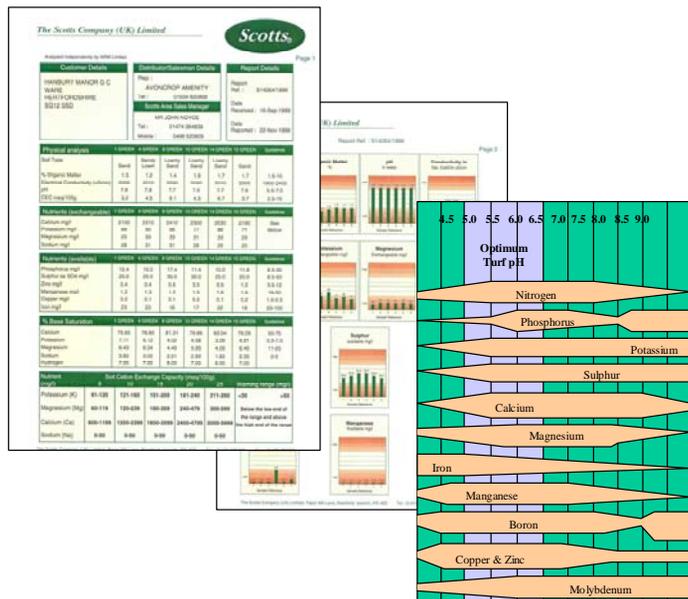
In addition to mineral nutrients - What other nutrients does turf need?

- Air, Oxygen, Light
- Macro nutrients
- Micro nutrients

How Do You Know What Is Needed & How Much To Apply?

Soil analysis is a good starting point in helping the turf manager ascertain the ideal amount of nutrient input for a particular type of turf.

Experience of turf manager, advisor, fertiliser sales manager etc



At end of the day, if it isn't broke, don't fix it!



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In addition to soil analysis there are lots of other influencing factors affecting nutritional input – see below.

Influencing Factors

- Sward species composition
- Root zone construction
- Type of surface
- Climate conditions?
- Timing



What Type Of Nutritional Input? – Lots Of Choice!

There is lots of ways of applying nutrient to turf, it's really a case of using what works best for you on your particular turf area. Some people will prefer granular applications and some will prefer liquids etc. Many turf managers are using a combination of two or more fertiliser types to achieve good growing conditions. The most ideal fertiliser program is one that maintains consistent root and vegetative growth throughout the growing season without flushes of vegetative.

- Conventional release - Greenmaster
- Slow release - Sierraform
- Controlled release – Sierrablen
- Organic – Greenmaster Organic
- Liquid – New Liquid Greenmaster
- Water Soluble - Sierrasol

What Are Ideal Fertilizer Characteristics?

Normally fertilisers are sold showing the percentage of nutrient present within that particular product. The normal convention shows the amounts of the main nutrients - N (nitrogen), P (phosphate) and K (potassium), other nutrient are also shown. However, the type of material used is not always shown and this can have an affect on the quality and performance of the product.

Bad granulation or poor quality materials with, for example, a high scorch potential will not be apparent until you actually open the bag and apply the material. Remember - Not all fertilisers are the same! The following list highlights some of the key points to look for when choosing a fertiliser.

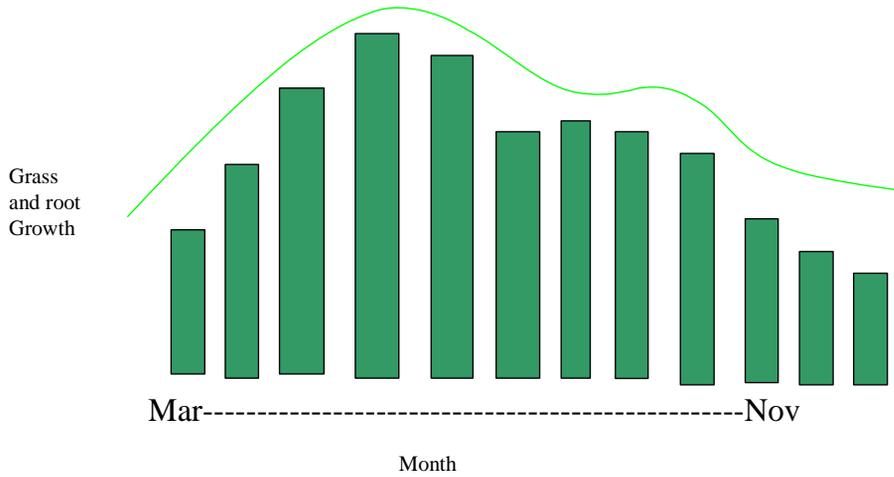
- High quality materials
- Rapid breakdown (Granular)
- Consistent spread pattern
- Granule uniformity/Particle distribution
- Homogenous granule
- Good longevity
- Ease of application/handling
- Performance
- Value for money
- Proven through research



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When To Apply

Matching nutrient timing with growth peaks:



Conclusion

Nutritional input is a subjective matter, what works well on one type of turf may not work well on another, the most important point is to work out what works for you on your turf! However, one thing that is certain is that nutrient inputs are only effective if the turf is growing in a well aerated, free draining root zone that can support a thriving soil microflora population.



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