

Fertilisers

TECHNICAL OVERVIEW

In very general terms, fertilisers are products that improve the levels of available plant nutrients either directly to the plant or via the soil.

The soil is the grass plant's nutrient resource and the aim is to balance the nutrients within it.

In order to make an informed choice of what type of fertiliser to choose, it is important to understand some of the key features/benefits of the different types.

Some fertilisers release all of their nutrients immediately after application (conventionals, liquids, WSFs). These products will produce a quick turf response in terms of colour and

growth, but care should be taken as they may increase nutrient losses out of the system. These losses may be via a flush of growth (clippings removal), surface run-off, leaching or gaseous losses).

Slow release, controlled release and organic fertilisers deliver their nutrients over a certain period, with SRFs and CRFs doing this in the most consistent and reliable way. By delivering nutrients in a gradual way over 6-8 weeks (SRFs, i.e. Sierraform GT) or from 3 months up to 9 months (Sierrablen and Sierrablen Plus) then losses out of the system can be greatly minimised and nutrient use efficiency greatly improved.

Turf benefits include:

- Safe and consistent feeding
- Nutrient release based in turf needs
- Efficient use of nutrients
- Environmentally friendly
- Better turf quality

Regular maintenance is key to producing premium quality turf. Fertilisers assist in the production of uniform surface conditions. They help keep turf healthy and aid its recovery from wear and tear. In addition to benefiting the health of the plant, they also enhance the appearance of turf. Whilst this is a long list of tasks, all are achievable with the right planning and implementation. Today's modern fertilisers have a lot to offer the turf professional.



Lindsays Fertilisers

Premium range of fine turf and sportsfield fertilisers



Fine turf range

Lindsays

8.0.0 + 4% FE

A high quality nitrogen feed plus 4% iron. This mini granular fertiliser is ideal for all fine turf surfaces where phosphate and potassium levels are adequate. The addition of sulphate of iron will improve colour and hardness. Apply from early spring to late summer.

Application Rate 35gms square metre
Pack Size 25kg
Pack Coverage 714 square metres
Suggested use period

Jan | Feb | Mar | **Apr** | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

Lindsays

12.0.9 + 2% FE + 1% MG

A zero phosphate mini granular fertiliser with a well balanced nitrogen and potash content, plus iron, which especially meets the needs of golf and bowling greens where additional phosphates are not required.

Application Rate 35gms square metre
Pack Size 25kg
Pack Coverage 714 square metres
Suggested use period

Jan | Feb | Mar | **Apr** | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

Lindsays

11.5.5

A well balanced spring and summer mini granular fertiliser for use on golf and bowling greens, cricket squares and all fine turf areas.

Application Rate 35gms square metre
Pack Size 25kg
Pack Coverage 714 square metres
Suggested use period

Jan | Feb | Mar | **Apr** | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

A complete range of turf care fertilisers designed by professionals to meet the needs of modern day turf management

Sportsfield range

Lindsays

9.7.7

An ideal spring and summer granular fertiliser recommended for use on all outfield turf such as football and rugby pitches, golf fairways, and other large recreational areas. Containing balanced levels of nitrogen, phosphate and potash to encourage healthy and vigorous top growth as well as good root development.

Application Rate 60gms square metre
Pack Size 25kg
Pack Coverage 416 square metres
Suggested use period

Jan | Feb | Mar | **Apr** | **May** | **Jun** | **Jul** | Aug | Sep | Oct | Nov | Dec

Lindsays

12.6.6

A well proven formulation which keeps turf healthy and good looking during the spring and summer months. Particularly useful on sportsfields that have sustained heavy wear.

Application Rate 35gms square metre
Pack Size 25kg
Pack Coverage 714 square metres
Suggested use period

Jan | Feb | Mar | **Apr** | **May** | **Jun** | **Jul** | Aug | Sep | Oct | Nov | Dec

Lindsays

3.12.12

Lindsay's autumn outfield keeps turf playable and looking good during the variable winter months. It strengthens the sward and helps the turf resist damage caused by extensive use.

Application Rate 35gms square metre
Pack Size 25kg
Pack Coverage 714 square metres
Suggested use period

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | **Sep** | **Oct** | **Nov** | Dec

Sierraform GT

The powerful new engine for fine turf



- Small, physically uniform granules for even spreading and quick dispersion
- Fast dispersion into the turf
- Chemically uniform, with every granule containing the same amount of NPK plus trace elements
- Dual effect thanks to slow-release nitrogen and slow-release potassium
- Optimum protection against stress; cold, heat, drought and wear
- Perfect for a programmed approach!

Spring Start

16+0+16 +Fe+Mn
(16+0+13.3+Fe+Mn)

- Active at lower temperatures

Application rate: 20-30g per sq. m
Area treated by a 20kg bag: 667-1,000sq.m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Momentum

22+5+11 +MgO+Trace Elements
(22+2.2+9.1+1.2%Mg+Trace Elements)

- Matches nutrient input during periods of strong growth

Application rate: 20-30g per sq. m
Area treated by a 20kg bag: 667-1,000sq.m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

All Season

18+6+18 +2%MgO+Trace Elements
(18+2.6+14.9 +1.2%Mg+Trace Elements)

- NK fertiliser without P

Application rate: 20-30g per sq.m
Area treated by a 20kg bag: 667-1,000sq.m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Chemically uniform, with every granule containing the same amount of NPK plus trace elements

Nitrogen is the key nutrient for driving growth in a plant

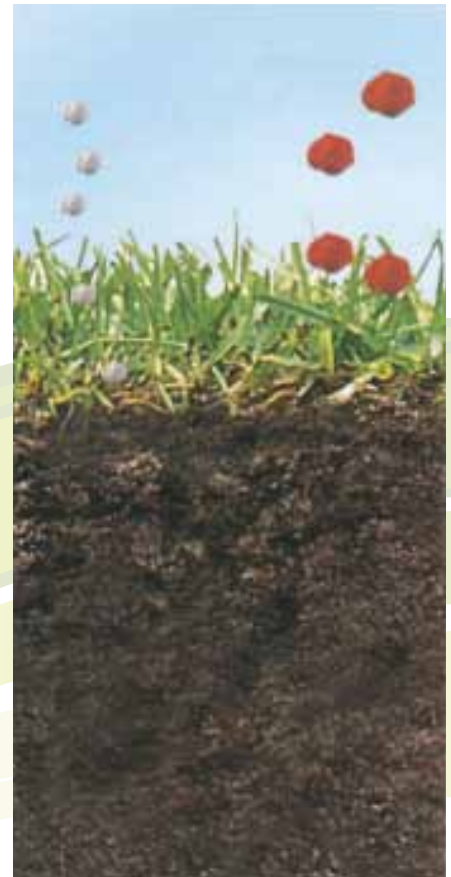
Even more powerful, with a dual effect

Nitrogen is the key nutrient for driving growth in a plant. Potassium ensures that your turf is even more resilient to external stresses. A sufficient quantity of nitrogen and potassium is released immediately after application, so that the plant can make use of it straight away.

After that, extra potassium and nitrogen is released over a period of several weeks, whenever the grass plant needs it. This keeps turf strong and healthy for several weeks after application. As a turf manager, you no longer have to worry - the Sierraform GT granules do the work for you.

Maximum power in a tiny granule

Each small, uniform Sierraform GT granule (0.7-1.4 mm) will contain the same analysis as on the bag. These tiny granules are also easy to spread and this ensures that the best coverage per square metre of turf is achieved.



Anti Stress

15+0+26 +Fe
(15+0+21.6 +Fe)

- Help turf survive during stressful times

Application rate: 20-30g per sq. m
Area treated by a 20kg bag: 667-1,000sq.m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

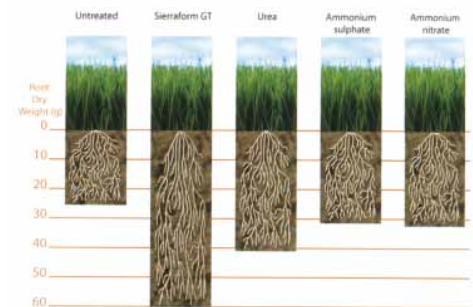
K-Step

6+0+27 +MgO+Trace Elements
(6+0+22.4+1.2 Mg+Trace Elements)

- Encourages condensed growth

Application rate: 20-30g per sq. m
Area treated by a 20kg bag: 667-1,000sq.m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec



All treatments in the trial were applied at equal nitrogen levels

everris.

Greenmaster Pro-Lite

A range of fertilisers using Scotts Pro-Lite technology



- Quick turf reaction
- Pro-Lite/zeolite technology enhances longevity
- Fine granule for quick dispersal

Turf Tonic

**8+0+0 +3%MgO+Fe
(8+0+0 +1.8%Mg+Fe)**

- Provides essential nitrogen for healthy growth
- Works well at low soil temperatures
- Assists early season growth and improves wear resistance
- Can be used at any time in the season
- Discourages weed and moss invasion
- The iron and magnesium aid turf hardness
- The iron sulphate deters moss

Application rate: 30-35g per sq. m
Area treated by a 25kg bag: 714-833sq. m
Suggested use period

Jan Feb Mar **Apr** May Jun Jul Aug Sep Oct Nov Dec

Longevity 6 weeks

Invigorator

**4+0+8 + 4%Fe+3%MgO+Seaweed
(4+0+6.6 +4%Fe+2%Mg+Seaweed Extract)**

- A feed and general turf conditioner for use throughout the season - spring maintenance, autumn boost or prior to tournaments for quick green-up
- Ideal analysis for use where phosphate levels are adequate
- Iron and magnesium help give rapid greening and turf hardening
- Lower nitrogen reduces risk of growth flush whilst still enabling replenishment

Application rate: 30-35g per sq. m
Area treated by a 25kg bag: 714-833sq. m
Suggested use period

Jan Feb Mar Apr **May** Jun Jul Aug Sep Oct Nov Dec

Longevity 6 weeks

Autumn

**6+5+10 +6%Fe
Contains 18.1% w/w ferrous sulphate**

- Controls moss, whilst strengthening the sward to overcome any mechanical damage.
- Low nitrogen content will not encourage diseases such as Fusarium Patch.
- Improves health and appearance of fine turf.
- MAPP No. 12196 PCS No. 92155
Application rate: 35g per sq. m
Area treated by a 25kg bag: 714sq. m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug **Sep** Oct Nov Dec

Longevity 6 weeks

What is Pro-Lite technology?

Pro-Lite is the Scotts registered trade name for a new type of 'micro' fertiliser granule technology that contains zeolite in an homogenous form. Zeolite's molecular structure is a 3D cage-like framework of silica and alumina molecules. Due to the spaces and channels in each molecule it acts as a microscopic sponge. Excess oxygen is held in the framework and creates a negative charge that holds cations and water molecules until needed by the plant. As a result zeolite gives improved longevity, dispersion and a more homogenous granule.



Spring & Summer

14+5+10
(14+2.2+8.3)

- Produces growth and colour response within about seven days
- Keeps fine turf in good condition for approximately six weeks
- Higher nitrogen level ensures correct top growth throughout playing season
- Phosphate and potash to encourage a strong, resilient sward
- Replaces nutrients lost in grass clippings

Application rate: 30-35g per sq. m
Area treated by a 25kg bag: 714-833sq. m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Longevity 6 weeks

NK

12+0+12 +2%Fe+3.3%MgO
(12+0+10 +2%Fe+1.8%Mg)

- For use in potash-deficient situations
- High nitrogen level provides a quick colour response and sustained growth for up to six weeks
- Extra potash overcomes deficiency, balances growth and toughens sward
- Contains iron and magnesium to aid growth and boost colour on light soils
- Phosphate-free formulation aids management of soil phosphate build-up.

Application rate: 30-35g per sq. m
Area treated by a 25kg bag: 714-833sq. m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Longevity 6 weeks

Double K

7+0+14 +4%Fe
(7+0+11.6 +4%Fe)

- High potash, phosphate-free turf hardener
- Provides 42kg/ha K but only 21kg/ha N when applied at 30g/sq. m
- Overcomes potash deficiency, controls soft growth, helps turf resist disease
- Limits Phosphate build-up and Poa annua establishment
- Low nitrogen application allows use throughout the year.
- Ideal alternative autumn treatment where phosphate levels are adequate

Application rate: 30-35g per sq. m
Area treated by a 25kg bag: 714-833sq. m
Suggested use period

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Longevity 6 weeks

Organic Fertilisers

Feeds turf and stimulates soil micro-organisms in one treatment

- High organic N and slowly available K sources
- From 5-8 weeks longevity
- 100% derived from plant material
- Consistent, uniform and dust-free granulation



Greenmaster and Sportsmaster Organic fertilisers are composed of a mix of organic and mineral nutrients. The mineral and organic part provide the grass plant with the essential nutrients, and the organic component stimulates soil life. These Organic fertilisers feed the turf and stimulate the soil micro-organisms in one treatment.

Scotts Organics provide a naturally slow release source of nutrients that ensure an even growth without growth peaks. They can help increase the CEC of the soil, therefore increasing the efficiency of nutrient applications both now and in the future. These fertilisers also improve soil structure and natural nutrient cycling. The organic content in all three formulations is 100% derived from plant material.

Greenmaster High N

12+5+11

- A balanced analysis for use throughout the growing season
- For use on golf greens, tees, fairways, sportsfields and other amenity areas
- Particle size 1-2mm

Application rate: 35-45g per sq. m
Area treated by a 25kg pack: 555-714sq. m
Suggested use period

Jan Feb Mar **Apr** May Jun Jul Aug Sep Oct Nov Dec

Longevity 5-8 weeks

Greenmaster High K

7+5+16

- High K analysis for use during time of slow growth
- For use on golf greens, tees, fairways, sportsfields and other amenity areas
- Particle size 1-2mm

Application rate: 35-45g per sq. m
Area treated by a 25kg pack: 555-714sq. m
Suggested use period

Jan Feb Mar Apr May Jun **Jul** Aug Sep Oct Nov Dec

Longevity 5-8 weeks

Sportsmaster High N

13+5+10

- A balanced analysis for use throughout the growing season
- For use on tees, fairways, sportsfields and other outfield areas
- Particle size 2-4mm

Application rate: 35-45g per sq. m
Area treated by a 25kg pack: 555-714sq. m
Suggested use period

Jan Feb Mar **Apr** May Jun Jul Aug Sep Oct Nov Dec

Longevity 5-8 weeks



The inclusion of humates into these quality fertilisers will stimulate the microbes to create a living organic soil.

Humate is an excellent chelator, making the nutrients in the soil more ready available to plants. The inclusion of humates will help to:

- Develop a deeper, more substantial root system.
- Stimulate microbial activity in the soil.
- Improve plant vigour and increase the uptake of nutrients.

SSD Microbial



SSD Microbial 8-0-0

A high quality nitrogenous fertiliser for fine turf with single particle round sand carrier. Contains magnesium and iron to improve colour. For spring and summer use (March to end of August).

Application rate: 70 g/sq.m (2 oz/sq. yd)

Pack size: 25kg

Suggested use period

Jan Feb **Mar** Apr May Jun Jul Aug Sep Oct Nov Dec

SSD Microbial 8-0-6

A quality powder fertiliser for all fine turf areas, but especially recommended for golf and bowling greens. Contains magnesium and iron to improve colour, plus added seaweed which acts as a natural turf tonic. For spring and summer use (March to end of August).

Application rate: 70 g/sq.m (2 oz/sq. yd)

Pack size: 25kg

Suggested use period

Jan Feb **Mar** Apr May Jun Jul Aug Sep Oct Nov Dec

SSD Microbial 8-0-0 Iron Free

A high quality, nitrogenous fertiliser with iron free formulation for spring and summer use.

Application rate: 70 g/sq.m (2 oz/sq. yd)

Pack size: 25kg

Suggested use period

Jan Feb **Mar** Apr May Jun Jul Aug Sep Oct Nov Dec

Sierrablen®

Controlled release fertilisers with fast start portion for coarse mown turf

Scotts®

- Granular controlled release fertilisers
- Release nutrients over a growing season from just one application
- Feature Scotts resin and/or Poly-S coated granules which rely on soil temperature as their main mechanism of release

The Sierrablen range features Scotts unique resin and/or Poly-S coated fertiliser granules which rely on soil temperature as their main mechanism of release. On application to turf, the granule takes up moisture from its environment gradually dissolving the enclosed nutrients. At soil temperatures just above 0°C pressure starts to build up within the granule forcing the nutrients through the semi-permeable resin coating. The length of release is determined by the thickness of the coating surrounding the granule. The thicker that coating, the slower the daily release rate and so the longer the product lasts. Therefore nutrient is accurately released, matched exactly to turf growth requirements. The combination of resin and Poly-S technology in the same analyses results in improved nitrogen release characteristics and better low temperature performance. To enable a quick response in the spring, most products contain some lightly coated material.

Sierrablen Turfmix

27+5+5 +Fe (27+2.2+4.1 +Fe)
(27+2.2+4.1 +Fe)

- A one application per season, NPK, spring and summer fertiliser
- Contains controlled release NPK and a low amount of fast start nitrogen for a more gentle response
- Suitable for use on tees, fairways, aprons and surrounds and winter season pitches

Application rate: 40-60g per sq. m
Area treated by a 25kg bag: 417-625sq. m
Suggested use period

Jan Feb **Mar** **Apr** **May** **Jun** **Jul** **Aug** **Sep** **Oct** **Nov** **Dec**

Longevity 8-9 months

Sierrablen Turfmix

28+5+5 +Fe (28+2.2+4.1 +Fe)
(28+2.2+4.1 +Fe)

- A one application per season, NPK, spring and summer fertiliser
- Contains controlled release NPK and a fast start portion of N for an immediate response even at low soil temperatures
- Suitable for use on tees, fairways, aprons and surrounds and winter season pitches
- Proven history of use as a base fertiliser application in new course 'grow in'

Application rate: 35-55g per sq. m
Area treated by a 25kg bag: 455-714sq. m
Suggested use period

Jan Feb **Mar** **Apr** **May** **Jun** **Jul** **Aug** **Sep** **Oct** **Nov** **Dec**

Longevity 5-6 months

Sierrablen Turfmix

15+0+22 +Fe (15+0+18.3 +Fe)
(15+0+18.3 +Fe)

- A one application per season, high potassium, autumn and winter fertiliser
- Contains controlled release NK and a fast start of nitrogen, potassium and iron for an immediate response
- Suitable for use on tees, fairways, aprons and surrounds and winter season pitches

Application rate: 35-55g per sq. m
Area treated by a 25kg bag: 455-714sq. m
Suggested use period

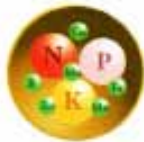
Jan Feb **Mar** **Apr** **May** **Jun** **Jul** **Aug** **Sep** **Oct** **Nov** **Dec**

Longevity 5-6 months



The working principles of Scotts coated fertilisers

Granules contain NPK, B, Cu, Fe, Mn, Mo and Zn (Mg is added for specific products)



Water penetrates through the coating and dissolves the nutrients inside the granule

Influenced by the temperature, the nutrients are released at a constant, regular and controlled rate during the longevity



The nutrient is accurately released, matched exactly to turf growth requirements



Scotts®



Sierrablen® Plus

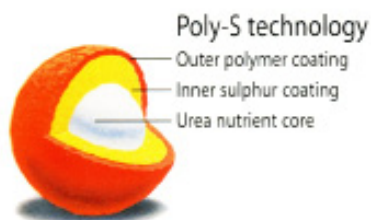
The new generation Sierrablen

- Updated coating technology
 - guaranteed extended longevity
 - homogeneous colour and even growth
 - 3 months and 4-5 month longevities
- Smaller granules
 - 7,500 granules per sq.m – six times more than CRF/coated standard fertiliser
 - better distribution when spreading
 - disperses fast into the sward

Applying modern coating technology and making the granules smaller, SierrablenPlus gives you a fertiliser with long-lasting effects that also guarantees a more even and prolonged growth of your grass. Which is exactly what you want!

The new generation Sierrablen - a winner

Sierrablen Plus features Poly-S coated fertiliser granules which rely on a dual coated urea granule to regulate the release of nutrients. By utilising a combination of primary sulphur coating followed by an exclusive outer polymer coating, the release of nutrients takes place according to soil temperature and moisture surrounding the granule.



Large changes in soil temperature and/or moisture do not result in severe fluctuations in the release pattern, ensuring that Poly-S provides a non-surge growth characteristic accompanied by deep greening. To enable a quick response in the spring or autumn, most products contain some readily available nutrients.

In common with the Sierrablen range, the length of release is determined by the thickness of the coating allowing good longevity to be obtained from a fine granule controlled release fertiliser.

The application of new coating technology guarantees a longer-lasting effect and a fast start

Spring Starter

24+5+13 +2%MgO
(24+2.2+10.8 +1.2%Mg)

- Ideal fertiliser for the start of the season
- High nitrogen content ensures a fast initial effect
- Also active at lower temperatures
- Stimulates root growth and ensures a strong, healthy sward

Application rate: 25-35g per sq. m

Area treated by a 25kg pack: 714-1,000sq. m

Suggested use period

Jan Feb **Mar Apr May Jun** Jul Aug Sep Oct Nov Dec



Active

19+5+18 +2%MgO+Trace Elements
(19+2.2+14.9 +1.2%Mg+Trace Elements)

- Improved coating technology ensures more efficient nitrogen release
- Extra magnesium to reinforce turf colour
- Complete spectrum of trace elements for healthy strong grass

Application rate: 25-35g per sq. m

Area treated by a 25kg pack: 714-1,000sq. m

Suggested use period

Jan Feb **Mar Apr May Jun** Jul Aug Sep Oct Nov Dec

Stress Control

15+0+28
(15+0+23.2)

- The best preparation for winter gives a full, green sward in the spring
- Extra magnesium reinforces colour
- High proportion of potassium ensures stronger cell walls, resulting in strong grass plants (hardening off)
- The grass plant is more resistant to lower temperatures

Application rate: 30-45g per sq. m

Area treated by a 25kg pack: 556-833sq. m

Suggested use period

Jan Feb Mar **Apr May Jun Jul Aug Sep Oct** Nov Dec