



COVERING ^{THE} WORLDS GREATEST STAGES

QUALITY SPORTS GRASS SEED MIXTURES



Johnson's
SPORTS SEED

2018 EDITION

A passion for excellence!

Consistently improving and setting new standards is only possible when you care passionately about what you do. At Johnsons our passion is quality sports turf!

Supporting the natural turf industry through sponsorship and research

Johnsons Sports Seed remains the only dedicated sports turf seed range in the UK. We are major supporters of the UK turf management industry, being lifelong exhibitors at the BIGGA, BTME exhibition, and major sponsors of the IOG Turf Management awards. It is through these close relationships with the industry's leading associations, turf managers, agronomists and the worlds largest seed breeders that we are able to bring you what we believe is our strongest line up of sports turf seed mixtures ever!

Improved results with new mixture range

Taking advantage of the latest grass technology we have created 9 new mixture formulations and 1 completely new mixture for 2018, our objective to help turf management professionals deliver perfect sports surfaces 365 days of the year.

We believe strongly in the value of global breeding backed up with local independent trials and product evaluation. Our customers can judge for themselves the quality of our seed mixtures, based on genuine scientific trials results, rather than marketing hype.

Discover the benefits of 4turf™ Tetraploid Ryegrass

As world leaders in tetraploid ryegrass technology our new 4turf™ Tetraploid Ryegrass cultivars have taken centre stage at the last 2 World Cups and the 2016 European championships in France. Leading sports turf managers across the globe are taking advantage of the rapid establishment, incredible disease resistance, improved root strength, high shoot density and strong wear tolerance! Why not try them for your self and see what all the excitement is about?

Improve your renovation results with ProNitro® seed coat technology

DLF seeds lead the world in seed coat technologies, helping turf professionals save both time and money and ensuring perfect results are achieved every time. Our most popular mixtures are now available pre coated with the latest 4G nutrient seed coating New ProNitro®. Our latest research shows how the unique coating can really improve your overseeding results, with significantly faster establishment and sward development.









































































































COVERING THE WORLDS GREATEST STAGES

For information on how Johnsons latest range of seed mixtures could improve the results of your next overseeding program talk to your local distributor or our team of regional technical support managers.

Mixture Selector

Johnsons SPORTS SEED

Product

	GOLF					SPORTS AREAS										Page No.
	Driving Range	Fairway	Green	Rough	Tee	Bowling Green	Cricket Square	Cricket Outfield	Football	Gallops/Polo	Rugby	Tennis Court	School Playing Fields	Sports Stadia		
 GREEN															18	
 RYE GREEN															18	
 PREMIER GREEN															19	
 ALL BENT															19	
 FESCUE															21	
 LINKS															21	
 FAIRWAY															22	
 PREMIER FAIRWAY															23	
 TEE															23	
 RYE FAIRWAY															24	
 ROUGHS															24	
 INTENSE															26	
 PREMIER WICKET															27	
 OUTFIELD															27	
 PITCH															29	
 PREMIER PITCH															29	
 4TURF															31	
 RESCUE STADIA															31	
 RESCUE 100															32	
 MULTI SPORT															33	
 RR															33	
 WILD FLORA															35	



= ProNitro® Coated Option Available



= Recommended



= Highly Recommended

Why are official turf trials important?

Independent turf trials are crucial for ensuring that new cultivars are adapted to management and growth under local conditions. This ensures the best results.

Independent turf trials in Scandinavia

The turf cultivars are tested on several locations under different mowing regimes (including greens) in the harsh scandinavian climate. Trial results are freely available on www.scanturf.org

UK STRI trials

Sports Turf Research Institute STRI, make a valid testing of new turf cultivars under Green, sport and lawn maintenance. The results are published every year in "Turfgrass Seed - The buyers guide to Quality Amenity Turfgrasses". You can order the guide at www.stri.co.uk

Johnsons - for perfect sports surfaces

Only the highest performance cultivars are selected for the Johnsons sports seed range following independent testing across europe.

Guaranteed results

Johnsons cultivars have been tested under a wide range of climatic and growth conditions in order to ensure optimal performance under the tough conditions they will be exposed to:

- Disease
- Wear
- Cold
- Salt
- Heat
- Drought

03

WITH THE WORLD'S LARGEST BREEDING PROGRAM

We give you access to top performing cultivars from the international turfgrass lists.

We have breeding stations in Denmark, Holland, France, Czech Republic, USA and New Zealand.



It takes 15 years of research and development for a new variety to make it into a Johnsons Sports Seed bag

Full traceability: the green label on our lawn seed bags tells where the seed is produced and that it is tested and certified.

Year 1-3

Different grasses are crossed in order to find new and improved varieties. The new varieties are propagated and sown in thousands of test plots.

Year 4-8

The new breeding lines are tested. Only the best varieties continue in our breeding program.

Year 9-10

Every year we test new varieties under different climatic conditions to evaluate their performance. The very best varieties are chosen for further official trials e.g. STRI.

Year 11-14

The chosen varieties are tested and evaluated in trials by official independent authorities. The highest performing varieties are put into initial production with our experienced seed growers.

Year 14

Official trials are completed. Only the varieties that have passed the official tests appear on the lists of recommended varieties (e.g. STRI, STERF).

Year 15

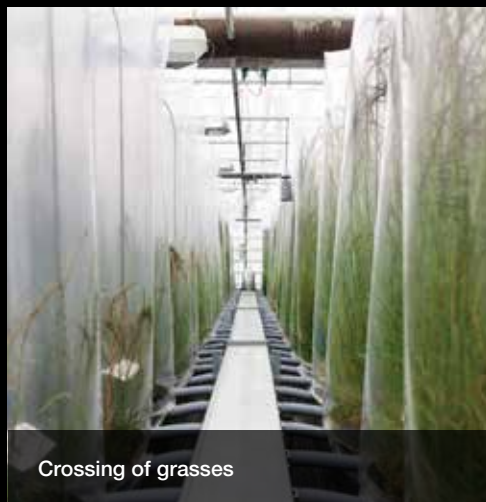
Certified seeds are harvested, cleaned and samples are taken and tested for purity and germination in our own laboratories.

Year 15+

After careful selection the varieties are mixed and packed into our famous black bags at our dedicated amenity warehouse.



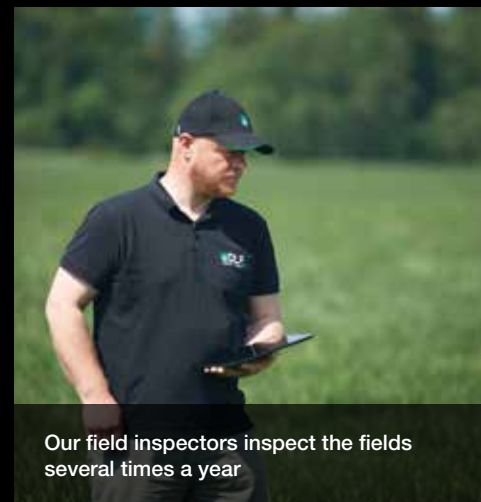
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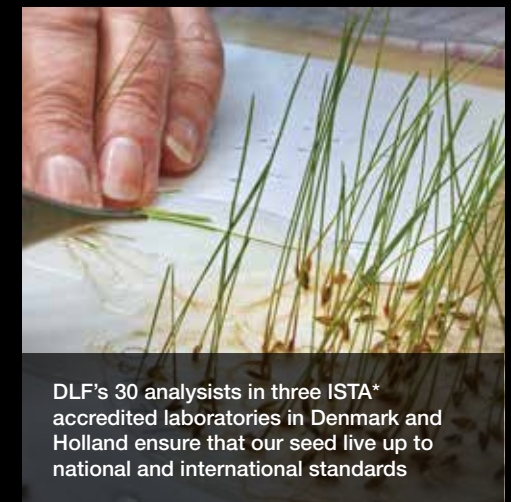
Crossing of grasses



The new varieties are evaluated several times a year



Our field inspectors inspect the fields several times a year



DLF's 30 analysts in three ISTA* accredited laboratories in Denmark and Holland ensure that our seed live up to national and international standards

*International Seed Testing Association.

Why invest in Johnsons seed?

Johnsons, a history of success

Established in 1820 Johnsons Sports Seed mixtures have been helping to produce quality sports turf with an unequalled reputation for technical excellence, reflecting the standards set by the people who use them – men and women who lead the way in sports turf management. Every year more of the UK's leading turf management professionals choose Johnsons seed.

Johnsons Sports Seed mixtures are produced by the world's largest grass breeder and producer, DLF.



IOG Groundsman
Of The Year Sponsor

Global research, UK development

Significant investment in staff and facilities has been made across the globe to support this vital area of the company. Breeding and mixture trials of all species are grown and evaluated in the UK - customers are always welcome to visit our research & demonstration sites. Close links with leading independent organisations such as STRI, TGA, BIGGA, ILI & IOG ensure that Johnsons Sports Seed mixtures remain at the forefront of technical development in amenity grass.

Following the successful establishment of our Irish demonstration plots, we are looking to develop further sites across the UK for product evaluation and customer training.

All products independently tested for proven results.

Quality technical support

Our experienced team of national technical managers are available for Johnsons customers, delivering sound advice on mixture & cultivar selection, field support and maintenance.



Quality production

The quality of the seed that you use depends on the quality of the production.

Johnsons choose their production areas depending on the climate and the expertise of the producers.

These producers receive constant technical support and the production fields are regularly inspected.



Quality seed

Our seed is cleaned and processed in our own facilities.

Using our own laboratories we pay particular attention to the following operations:

DRYING - to ensure that seed stays viable for the longest possible time.

PURITY - selection quality in excess of HVS standard, ensuring seed does not contain anything other than the cultivar that was produced.

GERMINATION - all amenity seed lots checked on intake and tested at regular intervals during storage to ensure the highest levels of germination.

P & G CERTIFICATES - available upon request.



Mixing

Our seed mixtures are produced in our purpose built storage and processing facilities which are staffed by our fully trained personnel. We have the largest dedicated 'amenity only' mixing plant in the UK with separate rye and non ryegrass mixers. This ensures the efficient production and despatch of all products & guarantees results.



Selection, Production, Quality Seed


4turf[®]

by DLF

Stress resistance as standard

Turf Type Tetraploid Perennial Ryegrass

07



Stronger establishment
Drought tolerant
Exceptional disease resistance
and winter performance
Excellent colour



THE STRONGEST PLAYER

Stronger establishment

4turf® larger seeds contain more energy reserves for a stronger faster establishment and healthy plant development. When the weather cools down 4turf® doesn't. 4turf® continues to germinate. 4turf® tetraploid ryegrass has a better germination at 4°C compared to diploid. This is also a big advantage when overseeding.



Drought tolerant

4turf® needs less water during a drought. Its larger root system and natural water reserves help it stay greener for longer. 4turf® varieties are not just drought-tolerant, they also recover quicker when the rain returns.

Drought trials conducted in the Loire Valley in France confirmed that 4turf® cultivars were significantly more drought-tolerant than diploids.



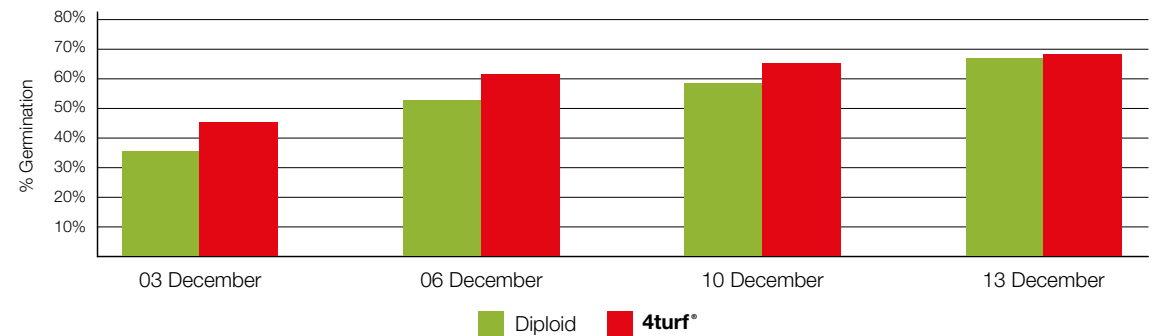
Exceptional disease resistance and winter performance

4turf® gives you healthy green ground cover under the most difficult period of the year because of the improved energy reserves and stronger root system. During autumn and winter 4Turf shows the highest resistance to disease in European trials.



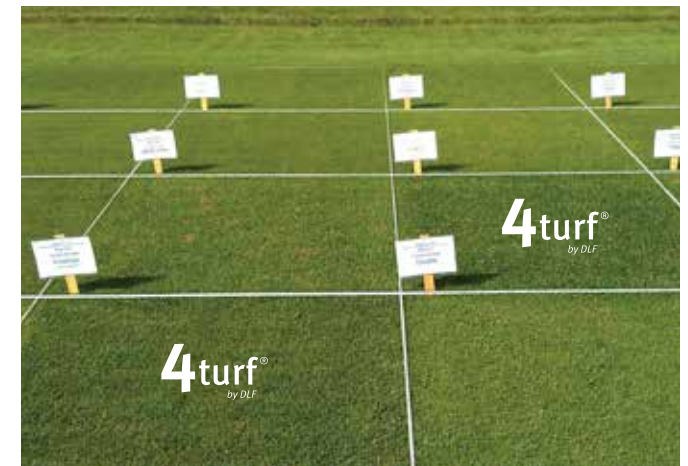
GERMINATION AT 4°C

SOWING DATE NOVEMBER 21ST



Excellent colour

4turf® has a deeper glossier dark green colour than traditional varieties. Its improved stress tolerance throughout the year and its increased resistance to weed invasion means that 4turf® will be greener quicker and for longer than traditional varieties of perennial ryegrass.



ProNitro®

READY TO GROW



Environmentally friendly, labour saving and cost effective

ProNitro® focuses on improving nutrient utilisation during the early stages of plant growth. ProNitro® mixtures contain high quality seed from DLF, only cultivars with superior performance characteristics and seed lots with high vigour are selected for coating. ProNitro® contains a combination of both fast acting and slow release nitrogen encapsulated within a smooth outer coating for improved seed flow.

The New Nitrogen Seed Coating for significantly stronger & faster establishment

High quality grass seed with all the nitrogen needed for fast effective establishment in a single seed coating



As the fertiliser is coated directly onto the seeds, the germinating and developing seedling receives the full benefit of the additional nutrition, not the surrounding plants.

The roots and shoots grow rapidly developing strong, vigorous plants. This is particularly important when overseeding into a competitive sward.

Benefits of ProNitro®

IMPROVED SEEDING RESULTS, GUARANTEED!
Faster, more uniform establishment & Reduced costs

- Labour saving and cost effective
- Targeted nutrient application, can reduce losses to the environment by 50%
- Replaces seedbed fertiliser
- Improved stress tolerance
- Up to 34% more plants and up to 30% increase in root growth
- Increased wear tolerance
- Reduced Poa annua
- ProNitro® germinates rapidly
- Reduced weed invasion
- Strong root development
- Stronger healthier plants

ProNitro® coated seed germinates rapidly
with strong root development



ProNitro® replaces the need for traditional
pre seed fertilisers and can decrease leaching
by up to 50%



Regrowth over one week after cutting back to 20mm ▲

Unique formulation

The unique formulation of ProNitro® delivers stronger establishment with up to 34% more plants and a 30% increase in root mass, resulting in a healthier sward and less weed invasion.

TEE RENOVATION TRIAL



"I would probably
never go back to
using an untreated
seed in that
situation again."

Jody Wilson
Course Manager
Mid Herts Golf Club



Watch the full ProNitro® video online
youtu.be/pkaHxK4DeA8

Mixture Options

 Nitro ALL BENT
PRODUCT FORMULATION: 10% N

 Nitro FESCUE
PRODUCT FORMULATION: 10% N

 Nitro TEE
PRODUCT FORMULATION: 10% N

 Nitro FAIRWAY
PRODUCT FORMULATION: 10% N

 Nitro PREMIER PITCH
PRODUCT FORMULATION: 10% N

 Nitro PREMIER WICKET
PRODUCT FORMULATION: 10% N

 Nitro 4TURF
PRODUCT FORMULATION: 10% N



Turf Grass Seed Treatment

All Johnsons seed mixtures are
GroMax coated as standard!

MAXIMISE PLANT DEVELOPMENT

New GroMax Seed Treatment

- Improves establishment
- Stimulates root growth
- Improved tolerance to stress
- Enhances water and nutrient uptake

Biostimulants assist the seedling's ability to take advantage of the soil's own inherent reserves of nutrient by stimulating the soil's microflora, resulting in improved root growth and establishment.

GroMax is a dry formulation of natural humates and humic acids, seaweed extract, a proprietary blend of natural sugars (sucrose), vitamins (B complex & K), soluble potash and buffering agents. The product is compatible with most micro-nutrients, fertilisers and pesticides.

Humic Acids

Rich in auxin type substances which enhance antioxidant synthesis – important in increasing plant metabolism under stress conditions

Important high carbon food source for soil micro-organisms

Improve the permeability of cell wall membranes in roots allowing more rapid absorption of essential nutrients

Seaweed Extract

Contains high levels of cytokinins which promote cell division and lateral root growth and delay the ageing process of plant tissue

Stimulates root growth after damage by disease or root feeding insects, or under conditions of temperature, water or salt stress

B-Complex and K Vitamins

Act as important catalysts to enhance and drive plant metabolism. Vitamin B1 is widely used as a rooting aid

Amino Acids

Form the building blocks of proteins – essential for plant growth and metabolism

Potassium

Plays a vital role in disease resistance and overall hardiness of grass plants

Sucrose

Serves as high energy food source for plant and soil micro-organisms



Species & Key Cultivars

Perennial Ryegrass

Latin name:	Lolium perenne
Seeds/gram:	600
Germination:	1-2 weeks
Shoot density:	200-350 shoots/100cm ²
Cutting height:	Normal: 28-40mm Not less than 4mm
Growth:	In tufts



Distinguishing features:

Leaves largely parallel-sided, but narrow to a fine tip // Upper leaf surface dull with clear ribs // Underside of leaf glossy with prominent keel // Leaves and stems reddish at base // Leaf blade folded in the shoot // Ligule up to 2mm long // Clear sheath/auricle

Properties:

Perennial ryegrass has very good wearing qualities and germinates quickly. The species is highly suitable for both sports areas and fine turf. Ideal for overseeding because of its rapid establishment in a range of soils.

Key Cultivars

BIZET 1 With a proven track record under heavy wear at many of the UK's leading stadia, and in independent trials, Bizet's ability to recover rapidly make it a reliable mixture partner. In a world of close media scrutiny the incredible disease resistance and strong colour do not disappoint.

BERLIOZ 1 Often selected with its sister cultivar Bizet, Berlioz performs well under high wear conditions. Highlights are its high shoot density and rapid recovery.

CLEMENTINE Quite simply the cutting edge of modern fine turf ryegrass technology. Bred for exceptional shoot density, the fine leaf and clean cut are just two of the reasons that make the **top rated cultivar for lawn, fairway and close mown conditions!** If you are searching for the ultimate cultivar to include in your new wicket mixture, look no further!

CHARDIN Quality and adaptability best describe Chardin. Tolerating the close mown surface of the cricket square, whilst combining high shoot density, a fine leaf, very high disease resistance, exceptional wear tolerance and fast recovery at the end of the season.

COLUMBINE Top rated under intense wear for ground cover, wear tolerance & rapid recovery, the excellent colour and disease resistance makes this an attractive addition to our high performance winter pitch mixtures.

DICKENS 1 Delivers a stunning turf when managed between 10 - 20mm thanks to its combination of incredible shoot density and fineness of leaf, along with a high tolerance to red thread and medium dark year round colour. The strong regrowth also makes this a top performer under close mown conditions.

EUROCORDUS Top rated under intense wear, excellent shoot density and strong recovery make this a strong addition to our sports renovation range.

EURODIAMOND No. 1 ranking under intense wear.

MONROE The ultimate high performance all-rounder!! Already included on the specification list of some of the country's leading turf managers. Monroe is top ranked for all management conditions, something that has never been achieved before! Incredible shoot density, fine leaf, recovery & disease resistance deliver exceptional grass coverage on the pitch, wicket and fairway.

QUICKSTON NEW Lolium Westewoldicum Visual appearance is important, but the role of Quickston is above all to secure a quick establishment in difficult situations and then disappear. The perfect nurse crop! Quickston is the latest technology being finer leaved and significantly darker green in colour than previous generations for a more homogeneous appearance.

Fast Establishment = Fast Ground Cover = Preserving Playing Quality

New 4turf™ Turf Type Tetraploid Perennial Ryegrass

Latin name: Lolium perenne
Seeds/gram: 550
Germination: 1-2 weeks
Shoot density: 150-250 shoots/100cm²
Cutting height: Normal: 28-40mm
Not less than 4mm
Growth: In tufts



Distinguishing features:

4 sets of chromosomes // Leaves largely parallel-sided, but narrow to a fine tip // Upper leaf surface dull with clear ribs // Underside of leaf glossy with prominent keel // Leaves and stems reddish at base // Leaf blade folded in the shoot // Ligule up to 2mm long // Clear sheath/auricle

Properties:

4turf™ Tetraploid Perennial Ryegrass has very good wearing qualities and germinates quickly. Exceptional tolerance to a broad range of environmental stresses. Increased chloroplast and chlorophyll production for improved nitrogen efficiency and deeper colour throughout the seasons. Enhanced root development, stronger and deeper root system. Significantly increased disease resistance to fusarium, leaf spot and red thread. The species is a highly suitable mixture partner for sports turf thanks to its slightly more open nature & because of its rapid establishment in a range of conditions.

Key Cultivars

NEW FABIAN This second generation 4turf™ Tetraploid demonstrates the significant progress that is already being made in this new field of sports turf ryegrass technology, bred by DLF, currently the market leaders. Fabian delivers a significant increase in wear tolerance, shoot density and recovery over first generation tetraploids, whilst maintaining the exceptional root system, stress tolerance and disease resistance.

DOUBLE Rapid establishment, deep rooting, proven resistance to common sports turf diseases in every major European trial. Maintains exceptional turf quality and a deep green year round colour.

Chewings Fescue

Latin name: Festuca rubra commutata
Seeds/gram: 1,000
Germination: About 2 weeks
Shoot density: 450-800 shoots/100cm²
Cutting height: Normal: 20-35mm
Not less than 5mm
Growth: In tufts



Distinguishing features:

Leaves fine, stiff and filamentous // Young leaf folded in shoot (generally remains unfolded when mature) // Ligule short, blunt and difficult // Roots bunched together // No rhizomes // Leaf sheath complete, not overlapping

Properties:

The high shoot density and tolerance to close mowing makes the species particularly suitable for golf greens, tees, and fairways. Maintains good colour and a fine appearance throughout the year. Requires minimal water and fertiliser. Tolerates acidic soils.

Key Cultivars

HUMBOLDT Ideal for tee and fairway use. The combination of the high shoot density and excellent disease resistance helps to deliver first class results.

NEW SISKIN No. 1 rating for fairway use with exceptional density and outstanding colour giving a high visual merit rating even under low input management. Siskin also shows high performance in trials under golf green management and is the highest rated cultivar in trial for red thread resistance. Siskin ranks very highly in the DLF R&D tests for salt tolerance, making this an ideal cultivar for links golf courses and coastal sites.

Slender Creeping Red Fescue

Latin name:	<i>Festuca rubra litoralis</i>
Seeds/gram:	1,000
Germination:	About 2 weeks
Shoot density:	450-800 shoots/100cm ²
Cutting height:	Normal: 20-35mm Not less than 5mm
Growth:	Creeping with short rhizomes



Distinguishing features:

Leaves stiff and filamentous // Young leaf folded in shoot (generally remains unfolded when mature) // Ligule short, blunt and difficult to distinguish // Short rhizomes // Leaf sheath complete, not overlapping

Properties:

The high shoot density and tolerance to close cutting makes the species particularly suitable for golf greens, tees & fairways. Moderately salt tolerant. The runners can regenerate cover in worn areas. Mixes well with *Festuca rubra commutata*.

Key Cultivars

NEW NIGELLA No. 1 rating A perfect partner to our range of high quality fine turf fescues. Nigella is top rated for both fairway and close mown management, demonstrating exceptional density. The improved colour and disease resistance further enhancing the overall visual merit of this top quality cultivar

BEUDIN A welcome addition to the Johnsons portfolio, outstanding turf quality and shoot density under both fairway and close mown conditions increase ball speeds and reduce invasion by poa and other coarse grasses.

CEZANNE A proven fine fescue, excellent salt tolerance, combining high shoot density and outstanding resistance to fusarium with the versatility to perform well under both fairway and golf green conditions. Tolerates hot/dry conditions as well as cold/temperate. Winter colour stands out for the species. A sustainable solution.

Sheeps and Hard Fescue

Latin name:	<i>Festuca ovina</i>
Seeds/gram:	950
Germination:	2-3 weeks
Shoot density:	800-1000 shoots/100cm ²
Cutting height:	Normal: 15-35mm Not less than 5mm
Growth:	In tufts



Distinguishing features:

Very fine leaved plant with high shoot density // Leaves are thread like, hairless with a strongly ribbed ridged upper surface // Leaves greyish to blue green colouration // Characteristically forms whorls as a mature plant, (Sheeps fescue) // Auricles are described as absent or much reduced // Ligule is very short // Rhizomes absent // Leaf sheaths open and overlapping

Properties:

A highly drought tolerant, low nutrient demand grass. Some cultivars tolerate very close mowing. A highly flexible species used in a diverse range of mixtures from golf to moorland. It is particularly useful in low maintenance situations and has a tolerance to a wide range of soils from acidic to neutral. Visually attractive if left uncut.

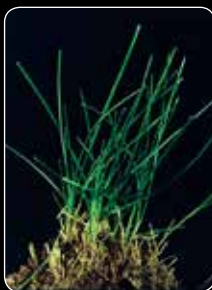
Key Cultivars

QUATRO No. 1 rating across European trials A breakthrough cultivar in fine turf fescues. A fine leaved appearance and level of shoot density that can put the best red fescues to shame. Exceptional salt tolerance and stand out disease resistance, especially to red thread and fusarium. Quatro is hard to beat anytime of year but it is in the winter that the natural colour sets it apart! A truly beautiful cultivar. Perfect for links applications and sustainable management programs.

DUMAS Demonstrates high salt tolerance with a fine leaf and good shoot density. Attractive natural colour throughout the season and a high resistance to fungal disease make this a perfect partner for other fine fescues in high performance fine turf situations especially suitable for low input and links golf scenarios.

Strong Creeping Red Fescue

Latin name:	<i>Festuca rubra rubra</i>
Seeds/gram:	800
Germination:	About 2 weeks
Shoot density:	250-450 shoots/100cm ²
Cutting height:	Normal: 20-35mm Not less than 12mm
Growth:	Creeping long rhizomes



Distinguishing features:

Leaves stiff and filamentous // Young leaf folded in shoot (tends to remain unfolded when mature) // Ligule short, blunt and difficult to distinguish // Long rhizomes // Leaf sheath complete, not overlapping

Properties:

Rhizomatous growth stabilises root zones and provides some recovery from damage. This species is used in turf production for binding. Strong creeping red fescue is not suited to close mown areas such as golf greens. It is, however, used in some tees and fairway mixtures as it has some regenerative capacity due to its rhizomes.

Key Cultivars

ROSSINANTE No. 1 rating Representing a new generation of fine turf strong creeping red fescue, maintaining the aggressive establishment and rhizomatous rooting of a traditional red fescue with the turf quality to match more traditional fine turf red fescue species. The first rubra rubra we have been able to enter into close mown trials. The high shoot density is maintained even down to 6mm.

Tall Fescue

Latin name:	<i>Festuca arundinacea</i>
Seeds/gram:	650
Germination:	2-3 weeks
Shoot density:	200 shoots/100cm ²
Cutting height:	Normal: 30-40mm Not less than 10mm
Growth:	In tufts



Distinguishing features:

Strongly veined upper leaf surface // Blade rolled when young // Large flat mature leaf // Ligules short // Small hairy auricles // Purple red leaf sheath

Properties:

Very good resistance to extremes of hot and cold weather. Very high drought tolerance. Moderate to good wear tolerance. Some varieties do form rhizomes.

Smooth Stalked Meadow Grass

Latin name:	<i>Poa pratensis</i>
Seeds/gram:	3,000
Germination:	3-4 weeks
Shoot density:	200-350 shoots/100cm ²
Cutting height:	Normal: 20-35mm Not less than 8mm
Growth:	Creeping with rhizomes



Distinguishing features:

Leaves dark green or with bluish bloom // Of uniform width, abruptly terminating in boat-shaped tip // Two pale parallel lines visible along midrib when leaf is held up against light // Underside of leaf with keel // Leaf blade folded in the shoot // Ligule short, rounded, 1-3mm long

Properties:

Forms an attractive carpet with good wearing qualities and regenerative ability. Slow to establish. Ideal for turf production, tees and sports areas.

Key Cultivars

SOMBRERO No. 1 rating Re-setting the benchmark for smooth stalked meadow grass, topping trials for both fine and sports turf use. The combination of its fine leaved appearance, high shoot density and rugged wear tolerance and recovery make Sombrero the first choice for professional turf managers.

Browntop Bent Grass

Latin name:	Agrostis capillaris syn. tenuis
Seeds/gram:	10,000
Germination:	2-3 weeks
Shoot density:	400-600 shoots/100cm ²
Cutting height:	Normal: 4-12mm; good durability at 5mm
Growth:	Creeping mainly short rhizomes



Distinguishing features:

Leaves matt green and broadest at base, gradually narrowing to a fine tip // Leaf with parallel venation, no keel // Upper surface and lower surface of similar appearance // Leaf rolled in shoot // Ligule short, truncated, 0.5-2.0mm long // Short rhizomes, to a lesser degree, stolons

Properties:

Ideal for golf greens in a mixture with *Festuca rubra commutata* and *Festuca rubra litoralis*. Does best under relatively poor growth conditions. Over-fertilising, over-watering and compact or waterlogged soil will result in displacement of the species by *Poa annua*.

Key Cultivars

ARROWTOWN Top Rating Bred from exceptionally fine and dense plants collected from greens at Arrowtown Golf Club in NZ. The really exceptional level of shoot density and fineness of leaf even at the closest of cuts deliver maximum ball speed and trueness potential..

MANOR This New Zealand bred cultivar has exceptional shoot density and a high tolerance to close mown wear, helping to prevent the spread of *Poa annua*. Manor also has excellent tolerance to fusarium. An ideal alternative to a fescue for inland courses wishing to reduce *Poa annua* and improve green speed.

Creeping Bent Grass

Latin name:	Agrostis stolonifera
Seeds/gram:	12,000
Germination:	About 2 weeks
Shoot density:	400-600 shoots/100cm ²
Cutting height:	Normal: 3-12mm Not over 15mm
Growth:	Creeping stolons



Distinguishing features:

Leaves matt grey-green and broadest at base, gradually narrowing to fine tip // Leaf with ribs above // Leaf rolled in shoot // Ligule rounded, lightly toothed, up to 5 mm long // Can root at nodes // Numerous stolons

Properties:

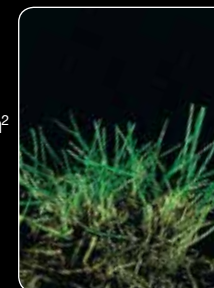
High tolerance to close cutting. Relative to browntop bent grass, requires intensive management, fertilising and watering. Tends to become dormant in winter.

Key Cultivars

COBRA NOVA No. 1 rating Quite simply the highest rated creeping bentgrass in both STRI and NTEP trials suitable for golf greens. The fine leaf, exceptional density and remarkable colour lead the market. Tolerates mowing down to 2.5mm.

Velvet Bent Grass

Latin name:	Agrostis canina
Seeds/gram:	12,000
Germination:	About 2 weeks
Shoot density:	700-800 shoots/100cm ²
Cutting height:	Normal: 3-10mm Not over 15mm
Growth:	Slender creeping stolons



Distinguishing features:

Leaves bright green or grey green, finely bladed // Hairless and finely ribbed above // Ligules often pointed, 2-4 mm long // Numerous slender stolons rooting at the nodes

Properties:

Of the bent grass species, velvet bent tolerates the closest cutting, forming a dense attractive sward which can help to prevent the invasion of *Poa annua*. This native bent grass has the highest natural resistance to common turf grass diseases and exceptional drought tolerance. Over feeding will cause excessive growth and thatch build up.

Key Cultivars

VILLA 1 Proven results across Europe, exceptional shoot density and wear tolerance under close mown management, attractive colour and exceptional disease resistance.

Please check availability

GOLF MIXTURES

Johnsons Sports Seed is made up of a range of mixtures for greens, tees, fairways and roughs. Within each mixture the varieties have been carefully selected for top performance.

Fast, true greens

Johnsons Sports Seed is selected for year round homogeneous surfaces with a lack of disease. Choices of mix can be made from traditional high input mixtures to sustainable solutions based on the most recent research developments.

Low growing fairways

The fairway surface is always under pressure as it performs such an important task. The annual growth of mixtures containing modern cultivars from the Johnsons Sports Seed range such as New Siskin & Nigella fine fescue is less than many standard mixtures and consequently a more satisfactory quality turf, along with reduced costs and carbon outputs can be achieved.

Improved wear tolerance

Increased wear tolerance eases maintenance and ensures that the grass, even in the most exposed areas, meets the needs of the most demanding players.

Hardwearing tees

Johnsons Sports Seed tee mixtures allow frequent play even on relatively small tee areas. High density and wear tolerance give a perfect turf for ideal teeing off. Overseeding with carefully selected mixtures provides a quick recovery.

Long lasting low input rough

The Johnsons Sports Seed range for golf roughs is designed to reduce input requirements and improve visual quality without slowing play.



COVERING THE WORLDS GREATEST STAGES



GREEN Golf & bowling greens

NEW
FORMULATION
2018

%	Cultivar	Species	STRI Rating
20%	HUMBOLDT	Chewings Fescue	7.6
20%	SISKIN 	Chewings Fescue	7.3
20%	NIGELLA	Slender Creeping Red Fescue	7.5
20%	CEZANNE	Slender Creeping Red Fescue	7.6
10%	ARROWTOWN	Browntop Bent	7.1
10%	MANOR	Browntop Bent	6.9

SOWING RATE 20-30g/m²

OVERSOWING 10-20g/m²

MOWING HEIGHT Down to 4mm

Fast sustainable greens, with top rated fine fescues

Highest rated bent grass cultivars

Traditional green specification, Highly tolerant of close mowing

Exceptional fine, dense turf for true putting surfaces

Excellent disease resistance from the blend of proven cultivars

Enhanced summer colour with new Siskin

GroMax treated, maximises seedling development

RYE GREEN Intense wear, golf & bowling greens

%	Cultivar	Species	STRI Rating
30%	CLEMENTINE	Perennial Ryegrass	7.6
30%	DICKENS 1	Perennial Ryegrass	6.9
20%	CEZANNE	Slender Creeping Red Fescue	7.7
10%	MANOR	Browntop Bent	7.2
10%	ARROWTOWN	Browntop Bent	7.8

SOWING RATE 25-35g/m²

OVERSOWING 10-20g/m²

MOWING HEIGHT Down to 4mm

**Fast establishment and High wear tolerance under extreme close mowing,
Ideal for the renovation of extremely heavily worn greens**

Excellent recovery from intensive wear

Exceptional fine, dense turf for true putting surfaces

GroMax treated, maximises seedling development

PREMIER GREEN

Golf greens, high performance renovation mix

NEW
FORMULATION
2018

%	Cultivar	Species	STRI Rating
20%	HUMBOLDT	Chewings Fescue	7.6
20%	CEZANNE 	Slender Creeping Red Fescue	7.6
40%	ARROWTOWN	Browntop Bent	7.1
20%	MANOR	Browntop Bent	6.9

SOWING RATE **15-20g/m²**

OVERSOWING **8g/m²**

MOWING HEIGHT **Down to 3.5mm**

Unique 60% bent mixture with fescue nurse crop content for successful overseeding!

Increased Arrowtown bent for Fast sustainable greens!

Improved natural disease resistance for reduced chemical inputs

High wear tolerance under close mowing

Unbeatable shoot density - reduces Poa annua invasion

GrqMax treated, maximises seedling development

ALL BENT

Golf greens (A tenuis - overseeding)

NEW
FORMULATION
2018

%	Cultivar	Species	STRI Rating
40%	ARROWTOWN	Browntop Bent	7.1
30%	MANOR	Browntop Bent	6.9
30%	TROY	Browntop Bent	6.4

SOWING RATE **10g/m²**

OVERSOWING **5g/m²**

MOWING HEIGHT **Down to 3mm**

J All Bent sets a new standard for density and visual quality

Top rated Arrowtown and Manor for fast sustainable greens!


All bent overseeding mixture, helps to reduce invasion by Poa annua when used regularly throughout the growing season

Quality bent grass allows a closer cut and greater wear tolerance over pure fescue swards

Troy provides tolerance to red thread and excellent summer colour

Fast sustainable greens

GrqMax treated, maximises seedling development

NEW
 **NITRO**
ALL BENT
ProNitro
coated option
available





“About 10 years ago we decided to try and reintroduce the traditional fescues that you would expect to find, back into our greens. We have had excellent results with Johnsons J Fescue and every year the composition of our sward improves. Our Greens, Tees and Fairways are now regularly overseeded with J Fescue as we have been so impressed with the speed of establishment that the Gromax brings.”

Peter Read
Course Manager
Hunstanton Golf Club

FESCUE Fairways, greens & tees - overseeding

%	Cultivar	Species	STRI Rating
10%	NIGELLA <small>NEW</small>	Slender Creeping Red Fescue	7.9
20%	BEUDIN	Slender Creeping Red Fescue	7.9
20%	CEZANNE	Slender Creeping Red Fescue	7.5
25%	SISKIN <small>NEW</small>	Chewings Fescue	8.0
25%	HUMBOLDT	Chewings Fescue	7.7

SOWING RATE 25-35g/m²OVERSOWING 10-25g/m²

MOWING HEIGHT Down to 5mm

100% Fine fescue blend ideal for sustainable management programs & links greens

Top rated new cultivars, Nigella & Siskin No 1 rating for fairway use

Drought tolerant and highly resistant to disease

Strong salt tolerance of mix is improved further with Siskin chewings fescue

Reduces fertiliser and water requirements, lowers carbon footprint

GroMax treated, maximises seedling development

NEW
NITRO
FESCUE
ProNitro[®]
coated option
available



NEW
FORMULATION
2018

LINKS Greens surrounds, tees, fairways & semi rough - overseeding

%	Cultivar	Species	STRI Rating
20%	BEUDIN	Slender Creeping Red Fescue	7.9
20%	NIGELLA	Slender Creeping Red Fescue	7.9
20%	SISKIN <small>NEW</small>	Chewings Fescue	8.0
20%	ROSSINANTE	Strong Creeping Red Fescue	5.9
10%	QUATRO	Sheeps Fescue	8.2
10%	DUMAS	Hard Fescue	5.7

SOWING RATE 25-35g/m²OVERSOWING 10-25g/m²

MOWING HEIGHT Down to 10mm

100% Fine fescue blend designed for links golf conditions & sustainable management programs

Top rated sheeps fescue for improved salt tolerance & excellent colour, can help to reduce fertiliser requirements

New Nigella, Beudin & Siskin, No1 ratings for visual merit under fairway management

Highly resistant to disease, can reduce fungicide inputs

High drought tolerance, can reduce water requirements

Lower carbon footprint

GroMax treated, maximises seedling development



NEW
J NITRO
FAIRWAY
ProNitro®
coated option
available



J FAIRWAY Sustainable golf fairways & tees

%	Cultivar	Species	STRI Rating
10%	HUMBOLDT	Chewings Fescue	7.7
20%	WAGNER	Chewings Fescue	6.5
20%	ARCHIBAL	Slender Creeping Red Fescue	6.7
40%	ROSSINANTE	Strong Creeping Red Fescue	5.9
10%	DUMAS	Hard Fescue	5.7

SOWING RATE 25-35g/m ²	OVERSOWING 10-25g/m ²	MOWING HEIGHT Down to 10mm
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100% fescue sustainable overseeding mixture for improved sward quality and reduced input costs

New Humboldt, top rated for visual merit under fairway management

High shoot density reduces Poa annua invasion

Improved drought tolerance and disease resistance

Reduced water and fertiliser requirements

Reduced clippings and lower carbon footprint

GrMax treated, maximises seedling development



“I’ve been using Johnsons seed for the past 10 years on two different course and always had great results.

I use J Tee for divoting tees and we also disc seed these areas twice a year to help build up a strong seed bank at the start of a long season as well as to help repair the tees before the winter.

At both courses we generally use the tees all year round so the turf gets a really good test.

Having the ability to disc seed areas has also given us the opportunity to introduce new seed into weak areas of the course such as approaches and walk off areas. In both of these areas the J Tee seed has established quickly and gone on to provide use with a high wearing grass sward that looks great.

We also use J All Bent seed for overseeing our greens and have also found this to establish quickly and fill in areas that are weak or damaged.

The latest seed coatings from DLF help to give us a bit more from the seed depending on what environment you are planting into.”

Steve Lloyd
Course Manager
The Worcestershire GC



PREMIER FAIRWAY

Sustainable golf fairways
& tees

%	Cultivar	Species	STRI Rating
20%	SISKIN	Chewings Fescue	8.0
20%	HUMBOLDT	Chewings Fescue	7.7
10%	NIGELLA	Slender Creeping Red Fescue	7.9
15%	BEUDIN	Slender Creeping Red Fescue	7.9
35%	ROSSINANTE	Strong Creeping Red Fescue	5.9

SOWING RATE 25-35g/m²

OVERSOWING 10-25g/m²

MOWING HEIGHT Down to 10mm

100% fescue sustainable overseeding mixture for improved sward quality and reduced input costs

No1 ratings for visual merit under fairway management, Nigella, Beudin & Siskin fine fescues deliver unbeatable shoot density and help reduce poa annua invasion

Excellent drought tolerance and disease resistance

Reduced water and fertiliser requirements

Reduced cutting requirement & lower carbon footprint

GroMax treated, maximises seedling development

TEE

Hard wearing, shaded golf tees
& pathways (with ryegrass)

%	Cultivar	Species	STRI Rating
20%	FABIAN	4turf TM Tetraploid Perennial Ryegrass	6.5
20%	DOUBLE	4turf TM Tetraploid Perennial Ryegrass	4.9
20%	CLAUDINE	Perennial Ryegrass	7.3
35%	ROSSINANTE	Strong Creeping Red Fescue	5.9
5%	SABRENA 1	Rough Stalked Meadow Grass	-

SOWING RATE 35-50g/m²

OVERSOWING 15-25g/m²

MOWING HEIGHT Down to 10mm

Unique Combination of 4turfTM tetraploid ryegrass and Sabrena RSMG delivers very rapid establishment for frequently worn turf

Exceptional disease resistance and high shoot density for attractive tees

4turfTM mixture reduces inputs of water, fertiliser and chemicals

New Claudine for improved density and wear tolerance

High shade tolerance and hard wearing even under close mown conditions

Combination of new cultivars for exceptional fineness and improved colour

GroMax treated, maximises seedling development

NEW

**NITRO
TEE**
ProNitro[®]
coated option
available



NEW
FORMULATION
2018



RYE FAIRWAY

Hard wearing golf fairways, tees and driving ranges (with ryegrass)



%	Cultivar	Species	STRI Rating
15%	CHARDIN	Perennial Ryegrass	7.5
15%	FABIAN	4turf™ Tetraploid Perennial Ryegrass	6.5
15%	HUMBOLDT	Chewings Fescue	7.7
20%	NIGELLA	Slender Creeping Red Fescue	7.9
35%	ROSSINANTE	Strong Creeping Red Fescue	5.9

SOWING RATE 35-50g/m²

OVERSOWING 15-25g/m²

MOWING HEIGHT Down to 10mm

Designed for the renovation of high traffic tees & fairways

New Fabian 4turf™ Tetraploid ryegrass for improved drought tolerance and disease resistance

4turf™ mixture for excellent year round colour and reduced fertiliser requirements

Rapid establishment and hard wearing under fairway mowing conditions

Chardin PRG delivers improved density, fineness and wear tolerance

Top rated cultivars deliver an attractive, dense and fine leaved sward

 treated, maximises seedling development

ROUGHS

Golf rough & dry impoverished soils



%	Cultivar	Species	STRI Rating
10%	SAMANTA	Slender Creeping Red Fescue	-
25%	MAXIMA	Strong Creeping Red Fescue	-
25%	SERGEI	Strong Creeping Red Fescue	-
25%	DUMAS	Hard Fescue	-
10%	-	Crested Dogstail	-
5%	HIGHLAND	Browntop Bent	-

SOWING RATE 25-35g/m²

MOWING HEIGHT Down to 10mm

Attractive when left uncut, the open sward will not slow play unnecessarily & allows the natural regeneration of wild flower meadow species

This mixture can be customised with the addition of local wild grasses such as Sweet Vernal

Very slow regrowth, reducing maintenance costs

Ideal for embankments or areas where access is restricted

Reduced fertiliser requirements

Year round colour

 treated, maximises seedling development

SPORTS MIXTURES

Johnsons Sports Seed is made up of a range of mixtures for tennis, cricket, football, rugby & equestrian turf. Within each mixture the varieties have been carefully selected for top performance.

Guaranteed quality

Turf managers maintaining the full range of sports areas will appreciate the extensive work carried out by our breeding team to produce cultivars offering high ratings for wear tolerance, sward density and tolerance of close mowing. The mixture formulations hereafter and the varieties used, take full advantage of these characteristics, providing the sports turf manager with assured sward performance.

Fast results

The common denominator for all Johnsons Sports Seed mixtures is very quick establishment whether for new seeding or renovation purposes. Results are enhanced by the addition of GroMax and ProNitro® seed treatments.

Superior wear tolerance

All varieties in the Johnsons Sports Seed range are selected so that they are hardwearing, dense and disease resistant, minimising the invasion of Poa annua and other weed species.

High visual merit

The use of top rated cultivars in all Johnsons Sports Seed mixtures ensures very high visual merit throughout the season, as well as quick establishment, wear tolerance and disease resistance.



COVERING THE WORLDS GREATEST STAGES



Golf tees, cricket squares
and tennis courts (Overseeding mix)

%	Cultivar	Species	STRI Rating
50%	DICKENS	Perennial Ryegrass	6.9
50%	CHARDIN	Perennial Ryegrass	6.0

SOWING RATE **35-75g/m²**

OVERSOWING **25-75g/m²**

MOWING HEIGHT **Down to 2mm**

Rapid establishment and high wear tolerance under close mown management

High shoot density & rapid regrowth from wear

Good colour & exceptional disease resistance

Fast establishment & rapid regrowth

Fine leaved

GroMax treated, maximises seedling development

“Since using J-Nitro Premier Wicket we were very impressed with germination and establishment of the premier wicket mix. These top rated cultivars have helped us develop first class and international wickets.”

Sean Williams

Head Groundsman
Gloucestershire County Cricket Club





NEW
NITRO
PREMIER
WICKET
ProNitro®
 coated option
 available



PREMIER WICKET

County quality cricket square
renovation mixture

%	Cultivar	Species	STRI Rating
40%	CLEMENTINE	Perennial Ryegrass	7.6
20%	MONROE	Perennial Ryegrass	6.9
20%	DICKENS	Perennial Ryegrass	6.9
20%	CHARDIN	Perennial Ryegrass	6.0

SOWING RATE 35-75g/m²

OVERSOWING 25-75g/m²

MOWING HEIGHT Down to 2mm

Proven results at the highest level with 4 cultivar mix delivering high disease resistance and attractive colour

Clementine for outstanding shoot density, combined with a fine leaf and incredible cleanness of cut for improved camera appeal

Rapid establishment

GroMax treated, maximises seedling development



OUTFIELD

High Quality cricket outfields

%	Cultivar	Species	STRI Rating
25%	CLAUDINE	Perennial Ryegrass	7.3
25%	FABIAN	4turf™ Perennial Ryegrass	6.5
5%	WAGNER	Chewings Fescue	6.5
10%	ARCHIBAL	Slender Creeping Red Fescue	6.7
35%	ROSSINANTE	Strong Creeping Red Fescue	5.9

SOWING RATE 35-50g/m²

OVERSOWING 25-50g/m²

MOWING HEIGHT Down to 10mm

Rapid establishment and high wear tolerance under outfield management

4turf™ technology for reduced inputs and exceptional turf colour

High shoot density & rapid regrowth from wear

Excellent disease resistance

Requires less fertiliser than standard ryegrass mixtures

GroMax treated, maximises seedling development

NEW
 FORMULATION
 2018



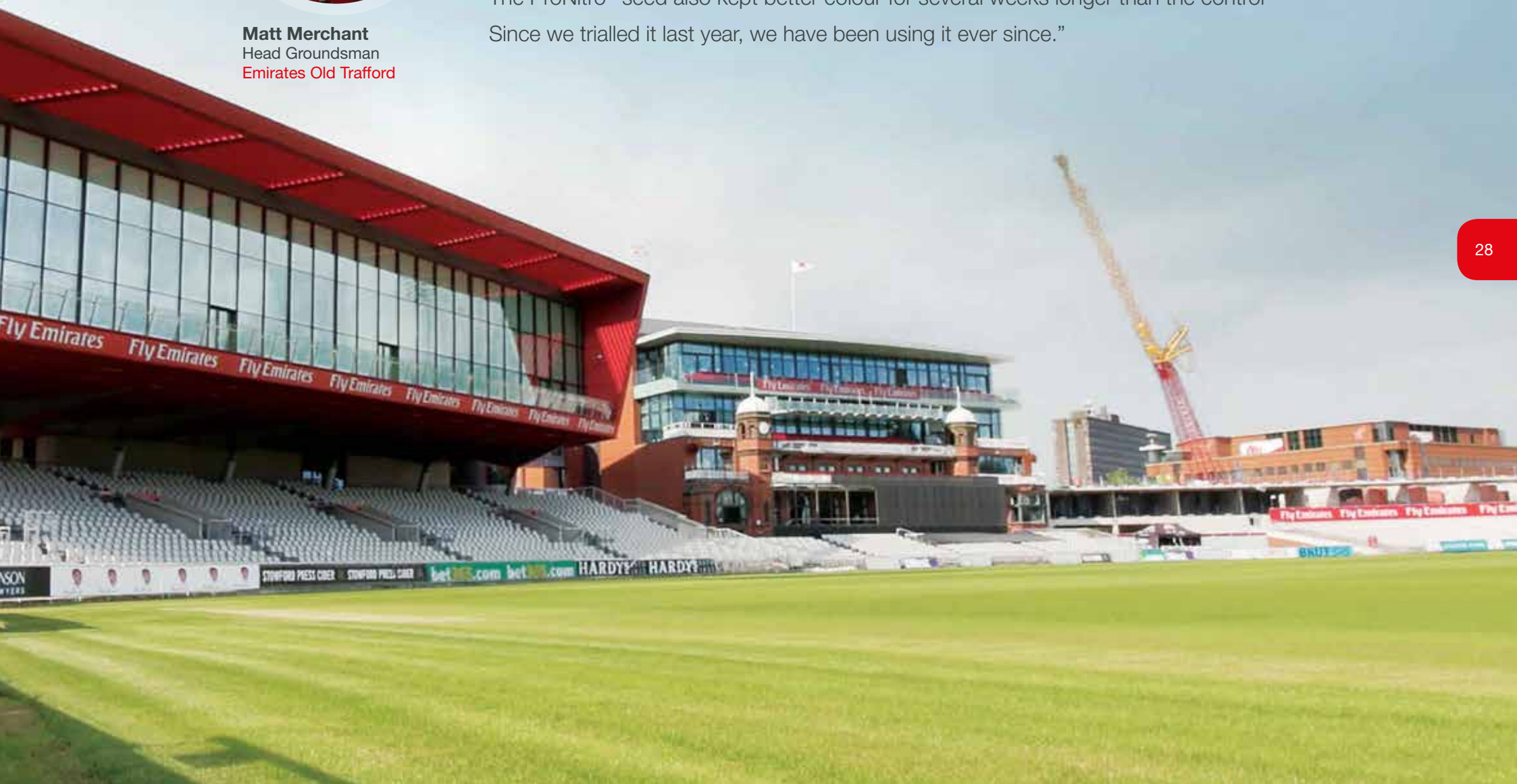
Matt Merchant
Head Groundsman
Emirates Old Trafford

“The ProNitro® coated J Premier Wicket gave a more dense, stronger growth than the control with good root development. The sward had better colour and definitely established much faster across the wicket, including the difficult bowling and batting foot holes”.


The ProNitro® is a cost effective way of maximising a dense grass cover over a shorter period of time and saves the time and cost of applying fertiliser.

The ProNitro® seed also kept better colour for several weeks longer than the control

Since we trialled it last year, we have been using it ever since.”



PITCH Ideal for football & rugby training pitches

%	Cultivar	Species	STRI Rating
20%	FABIAN	 Tetraploid Perennial Ryegrass	6.5
20%	COLUMBINE	Perennial Ryegrass	7.6
30%	BERLIOZ 1	Perennial Ryegrass	7.4
30%	BIZET 1	Perennial Ryegrass	7.1

SOWING RATE **35-75g/m²**OVERSOWING **25-75g/m²**MOWING HEIGHT **Down to 25mm**

Top rated Fabian 4turf™ Tetraploid ryegrass is proven to deliver deeper rooting for summer drought tolerance plus exceptional year round colour and disease resistance for reduced input costs

Very rapid establishment, ready to mow in 3-5 weeks

Strong hard wearing sward Ideal for training grounds

Rapid recovery

 **treated, maximises seedling development**

PREMIER PITCH Premier quality football & rugby pitches

%	Cultivar	Species	STRI Rating
30%	EURODIAMOND	Perennial Ryegrass	8.1
25%	COLUMBINE	Perennial Ryegrass	7.6
30%	MONROE	Perennial Ryegrass	7.8
15%	EUROCORDUS	Perennial Ryegrass	8.0

SOWING RATE **35-75g/m²**OVERSOWING **25-75g/m²**MOWING HEIGHT **Down to 25mm**

The UK's No. 1 sports turf renovation mixture just got even better with increased Eurodiamond

Europe's highest rated cultivars ensure a sward proven to deliver exceptional wear tolerance, density and rapid recovery under heavy wear

Rapid establishment, ready to mow in 3-5 weeks

Camera friendly, attractive summer and winter colour, high disease resistance, delivers a turf with exceptional visual merit with proven performance at many of Europe's leading stadia

 **treated, maximises seedling development**

NEW

 **NITRO
PREMIER
PITCH**

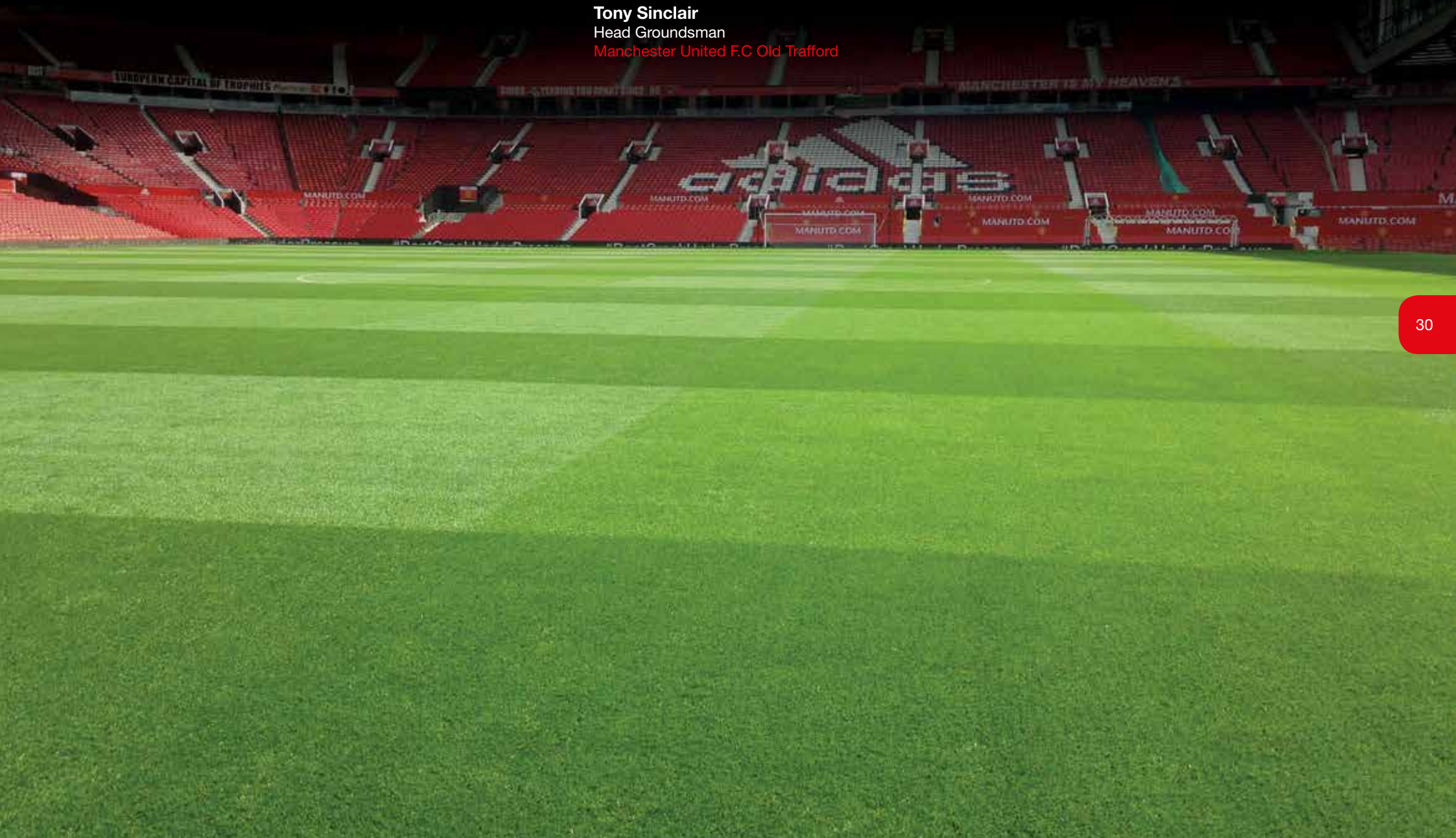
ProNitro®
coated option
available



**NEW
FORMULATION
2018**

“We have used the Johnsons Sport Seeds Premier Pitch mixture for over eight seasons. The blend provides rapid uniform cover with tremendous wear tolerance. I have every confidence in great results from this mixture year in year out.”

Tony Sinclair
Head Groundsman
Manchester United F.C Old Trafford



4TURF

Pre winter overseeding program, winter sports pitches, racecourses & high wear turf

%	Cultivar	Species	STRI Rating
25%	FABIAN	4turf™ Tetraploid Perennial Ryegrass	6.5
25%	DOUBLE	4turf™ Tetraploid Perennial Ryegrass	4.9
50%	BERLIOZ 1	Perennial Ryegrass	7.4
SOWING RATE -		OVERSOWING 10-50g/m²	MOWING HEIGHT Down to 12mm

4turf™ tetraploid rye ensure very rapid establishment even under low soil temperatures (3-10°C) and exceptional disease resistance - Ideal for Autumn overseeding program

4turf™ perennial rye No1 ranked for disease resistance in European turf trials

Deep rooting for summer drought tolerance and improved colour

Highly rated diploid companion cultivar for high shoot density and increased wear tolerance

Ideal for equestrian use and training grounds demanding high wear tolerance or where irrigation may be restricted

GroMax treated, maximises seedling development

RESCUE STADIA

Oct - Dec winter overseeding program, shaded sportsturf, football & rugby pitches

%	Cultivar	Species	STRI Rating
50%	QUICKSTON <small>NEW</small>	Annual Ryegrass	-
20%	DOUBLE	4turf™ Tetraploid Perennial Ryegrass	4.9
20%	BERLIOZ	Perennial Ryegrass	7.4
10%	SABRENA 1	Rough Stalked Meadow Grass	-
SOWING RATE -		OVERSOWING 10-75g/m²	MOWING HEIGHT Down to 12mm

Specifically designed for autumn/winter overseeding program - rapid establishment even under low soil temperatures (0-9°C), increased disease resistance and shade tolerance

Quickston, the latest generation turf type Annual Ryegrass, delivers the fastest low temp establishment, now with a finer leaf, improved density and turf colour

Double 4turf™ Tetraploid PRG, rapid establishment & improved disease resistance

Berlioz Diploid PRG (proven low temp germination) high wear tolerance

Sabrena 1 RSMG delivers rapid germination, high shoot density and excellent shade tolerance

GroMax treated, maximises seedling development

Winter Overseeding Sportsturf Ryegrass

NEW QUICKSTON

Lolium multiflorum var westerwoldicum

Quickston is the new generation of Annual Ryegrass recommended exclusively for turfgrass use. Developed by DLF from unique Dwarf Annual Ryegrass plants that exhibit greater shoot density, finer leaf blades and a significantly darker green leaf colour than standard Annual Ryegrass cultivars.

Low temperature germination

Quickston has proven to offer the fastest establishment in both laboratory and field trials under low temperature conditions (4°C).

Rapid establishment!

Quickston was developed exclusively for the winter overseeding of dormant turf exhibiting very strong seedling vigour for rapid, weed free establishment and coverage.

Wear tolerant

The dense and vigorous growth habit delivers the wear tolerance required for the emergency renovation of winter damaged turf!



(Quickston demonstrates rapid establishment and significantly improved visual merit over all existing turf type Annual Ryegrass cultivars on the market today).



RESCUE 100

Emergency overseeding & rapid repairs!
Football & rugby pitches, tees, polo fields
& racecourses

%	Cultivar	Species	STRI Rating
100%	QUICKSTON <small>NEW</small>	Annual Ryegrass	-
SOWING RATE -		OVERSOWING 30-50g/m ²	MOWING HEIGHT Down to 12mm

Designed for winter/spring emergency overseeding

Rapid establishment even under low soil temperatures (down to 3°C)

Quickston, the latest generation turf type Annual Ryegrass, delivers the fastest low temp establishment, now with a finer leaf, improved density and turf colour

GroMax treated, maximises seedling development

MULTI SPORT

Sports fields, cricket outfields
& athletics use

%	Cultivar	Species	STRI Rating
25%	CHARDIN	Perennial Ryegrass	7.4
50%	BERLIOZ	Perennial Ryegrass	7.4
25%	ROSSINANTE	Strong Creeping Red Fescue	—
SOWING RATE 35-50g/m ²		OVERSOWING 25-50g/m ²	MOWING HEIGHT Down to 25mm

A multi purpose mixture designed for schools and colleges where a high quality flexible sward is required

Top rated cultivars, providing a sward of exceptional wear tolerance and density

Rapid establishment, ideal for renovation

New generation fine turf Strong Creeping Red Fescue Rossinante

Attractive colour, cuts cleanly

GrqMax treated, maximises seedling development

RR

Rhizome Recovery: new sports stadia, football & rugby
pitches, polo fields & racecourses

%	Cultivar	Species	STRI Rating
20%	BERLIOZ	Perennial Ryegrass	7.1
20%	COLUMBINE	Perennial Ryegrass	7.9
20%	MONROE	Perennial Ryegrass	7.8
20%	SOMBRERO	Smooth Stalked Meadow Grass	7.3
20%	MIRACLE	Smooth Stalked Meadow Grass	5.9
SOWING RATE 25-50g/m ²		OVERSOWING 25-50g/m ²	MOWING HEIGHT Down to 25mm

The significant rhizomes of Sombrero & Miracle Smooth Stalked Meadow Grass deliver improved spring recovery & increased sward strength over traditional Ryegrass blends

Sombrero Top Rated for wear tolerance, Miracle for improved disease resistance

Exceptional wear tolerance

Top rated cultivars now including top rated Columbine

High shoot density

GrqMax treated, maximises seedling development

Useful Data

Conversion Factors

Weight

lbs	to kilograms	divide by	2.205
kilograms	to lbs	multiply by	2.205
tons	to tonnes	multiply by	1.016
tonnes	to tons	divide by	1.016
cwts	to kilograms	multiply by	50.794
kilograms	to cwts	divide by	50.794

Area

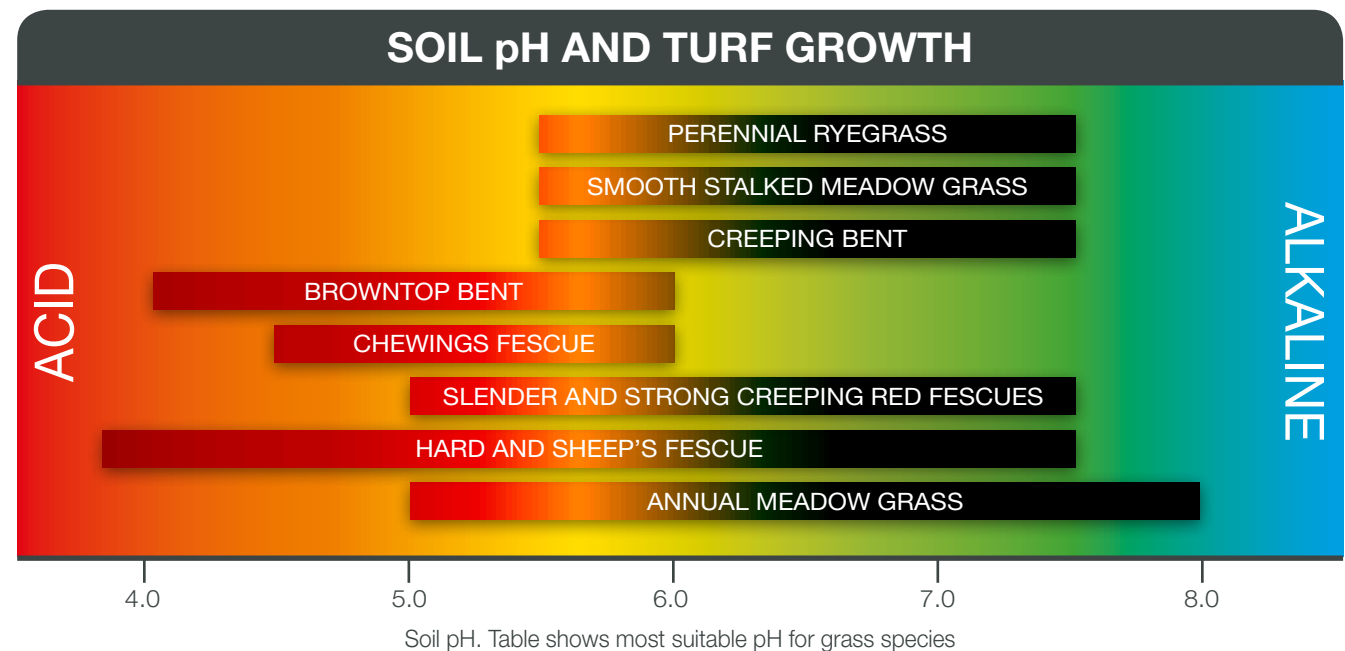
acres	to hectares	divide by	2.471
hectares	to acres	multiply by	2.471
square yards	to square metres	multiply by	0.8361
square metres	to square yards	divide by	0.8361

Volume

pints	to litres	multiply by	0.568
litres	to pints	divide by	0.568
litres	to gallons	divide by	4.546

Sports Pitch Dimensions

Weight	Dimensions Metres (length x width)	Area
Soccer	100 x 64	6400m ²
Rugby	100 x 69	6900m ²
Hockey	91.4 x 55	5027m ²
Cricket Square	30 x 23	690m ²
Lawn Tennis	23.8 x 11	262m ²
Bowls	40 x 40	1600m ²
Croquet	32 x 25.5	816m ²
Golf Green		500m ² /600m ²
Golf Tee		250m ² /500m ²



WILD FLORA

Add colour, diversity and interest to the golf course with UK native wild flower meadow mixtures

In order to meet with the increasing demand for conservation mixtures we have formulated twelve seed mixtures, each designed to recreate a particular habitat.

Origin

The wild flowers used in the Wild Flora range are guaranteed to be of native UK origin.

Quality

Johnsons Seeds has in-house production facilities allowing us to further improve seed quality.

Technical support

Our experienced team is available to provide advice on mixture selection and site management, for larger projects, site visits followed by a written report are available.

Contract growing service

Johnsons has many years experience in the contract production of wild flower seed and plants. This is particularly useful where extremely large quantities or unusual/rare species are required.

Special mixture service

Whilst our standard mixtures will cater for most situations we are always happy to advise upon and produce mixtures to your own specification.



The RHS Perfect for Pollinators mark is only given to plants or mixtures that support pollinating insects. Bees, butterflies, moths, hoverflies and many others visit flowers to feed on nectar and pollen; while doing so they transfer pollen and increase seed set and fruit development.

Find out more at: rhs.org.uk/perfectforpollinators



NEW

CORNFIELD ANNUALS PRO FLORA 1

Native Wild Flowers 20%
Grasses 80%



ACID SOILS (BELOW pH6) PRO FLORA 2

Native Wild Flowers 20%
Grasses 80%



DAMP, LOAMY SOILS PRO FLORA 3

Native Wild Flowers 20%
Grasses 80%



CALCAREOUS SOILS (CHALK) PRO FLORA 4

Native Wild Flowers 20%
Grasses 80%



WET, LOAMY SOILS PRO FLORA 5

Native Wild Flowers 20%
Grasses 80%



DRY, LOAMY SOILS PRO FLORA 6

Native Wild Flowers 20%
Grasses 80%



HEDGEROW & LIGHT SHADE PRO FLORA 7

Native Wild Flowers 20%
Grasses 80%



COUNTRY MEADOW, GENERAL PURPOSE PRO FLORA 8

Native Wild Flowers 20%
Grasses 80%



HERITAGE GENERAL PURPOSE PRO FLORA 9

Wild Flowers 10%
Grasses 90%



COUNTRY MEADOW (GENERAL PURPOSE) PRO FLORA 10

Native Wild Flowers 10%
Grasses 90%



WOODLAND & HEAVY SHADE PRO FLORA 11

Native Wild Flowers 20%
Grasses 80%



WATER MARGIN & POND EDGES PRO FLORA 12

Native Wild Flowers 20%
Grasses 80%



New Colour Boost Non Native Wild Flower Mixtures

The new colour boost range has been designed for maximum floral impact, incorporating both wild flower and garden flowering species. Colour boost mixtures establish rapidly to deliver a dazzling floral display throughout the year whilst providing welcome food and shelter for wildlife.

COLOUR BOOST 1 Seasonal Annuals Mixture 100% Wild Flowers

COLOUR BOOST 2 Low-Growing Seasonal Annuals Mixture 100% Wild Flowers

COLOUR BOOST 3 Seasonal Perennials Mixture 100% Wild Flowers

Mixture Selection

It is important that the correct mixture is selected to coincide with the soil type and drainage characteristics of each site.

Site preparation

The aim is to produce a firm weed-free tilth to promote healthy germination. Subsoils often provide weed-free areas with a low nutrient status and are therefore suitable for wild flora planting. It is occasionally necessary to remove the topsoil in areas of high fertility (this can be sold to raise revenue) as these soils tend to promote the growth of more vigorous grasses and pernicious weeds. To remove docks and thistles, nettles and weed grasses, the site should be treated with Glyphosate (following the manufacturer's instructions) prior to seed bed cultivation.

Summary

- a. **Cultivate site and allow to remain fallow if practical**
- b. **Treat with herbicide or remove topsoil**
(always read the label and follow manufacturers instructions)
- c. **Cultivate to 10cm**
- d. **Create a surface tilth**

Sowing

Sowing can take place throughout most of the year, providing a good tilth can be prepared, however the months of March/April and August/September are generally the most suitable.

- a. **Mix seed – regularly mix to ensure even species distribution**
- b. **Drill/broadcast – calibrate sowing device**
- c. **Rate – 5g/m² mixtures with grass 0.5 – 1.0g/m² pure wild flower mixtures**
- d. **Bulking agent - Bulk up low seeding rates with 5 parts Rehofix MK1500 biodegradable corn skin granule as a carrier to 1 part seed**
- e. **Raking/harrowing – mix seed into soil (depth approx 0.5cm)**
- f. **Ring Roller – use Cambridge Roller to firm seed bed**

37 Wild Flower Maintenance

First year

The requirements in the first year are to control weeds and reduce competition from grasses. Cut the sward to a height of 5cm every two months or when the sward reaches 15cm. Remove all cut material to avoid smothering the sward.

Where persistent weeds are a problem, spot treat or dig out.

Future maintenance

The sward should be well established after the first 12 months and contain a diverse range of species. Cut to 7.5cm during March/April and remove cuttings. The second cut should take place at the end of the flowering season during August/October (the flowering period may alter slightly according to climatic conditions). Remove all cuttings. The site may require further cuts in the autumn period to remove untidy growth in an extended growing season.

Maintenance summary

First year

First Cut 5cm March/April (Spring seeding 1st cut in May)
Cut every 2 months or when sward reaches 15cm
Final Cut September/October - Remove all cuttings

Future years

First Cut 7.5cm March/April
Second Cut 7.5cm August/October - Remove all cuttings

Cornfield annuals

Cut once the flowering period is over - September/October.
Harrow autumn or spring to regenerate annuals.

Regional Technical Support

Our experienced team of national technical representatives are available for Johnsons customers, delivering sound advice on mixture & cultivar selection, field support and maintenance.



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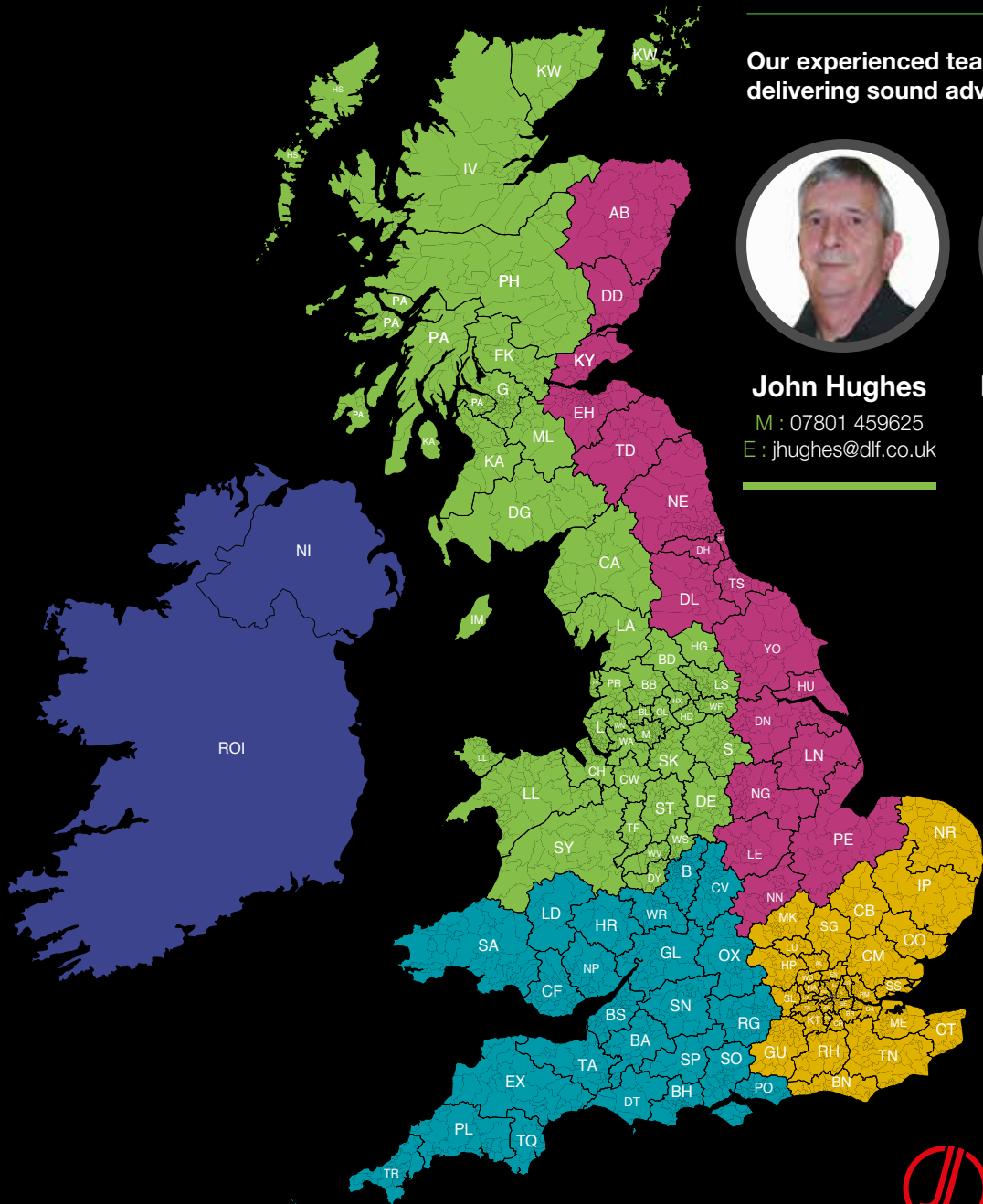
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