



# ProNitro®

## NEW 4G

### SEED COAT TECHNOLOGY

Now available exclusively on selected mixtures

**SHOWING SEEDLING 3 DAYS FROM SOWING**

- Faster establishment
- Reduced costs

# 2016

## QUALITY SPORTS GRASS SEED MIXTURES



# Johnson's

SPORTS SEED

**COVERING THE WORLDS GREATEST STAGES**



## 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! For 2016 we have introduced 15 New mixture formulations and the New close mown rye Mixture J Intense.

### 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!

### Market leading seed portfolio

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. 2016 will see our strongest line up ever in the STRI Turfgrass seed trials, our latest addition the new slender creeping red fescue Nigella which joins Beudin topping the tables for summer sport and fine turf use.

### Discover the benefits of 4turf™ Tetraploid Ryegrass

As world leaders in tetraploid ryegrass technology our new 4turf™ Tetraploid Ryegrass cultivars took centre stage at the World Cup in Brazil. Since then we have introduced them to sports turf managers across the globe in the new J Tee, J Rescue Stadia & J 4turf™ mixtures. The combination of rapid establishment, incredible disease resistance and root strength with improved shoot density and wear tolerance is proving incredibly popular! Why not try them for your self and see what all the excitement is about?

### New ProNitro® 4G 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.

All standard Johnsons Sports turf mixtures are pre-coated with Gromax biostimulant.

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.


**Derek Smith**

AMENITY SALES &  
MARKETING MANAGER










































































































# MIX SELECTOR



 = Highly Recommended

 = Recommended

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															14	
 RYE GREEN															14	
 PREMIER GREEN															15	
 ALL BENT															15	
 VELVET															16	
 CREEPING BENTS															16	
 FESCUE															17	
 LINKS															17	
 FAIRWAY															18	
 PREMIER FAIRWAY															19	
 TEE															19	
 RYE FAIRWAY															20	
 ROUGHS															20	
 INTENSE															23	
 PREMIER WICKET															23	
 PITCH															25	
 PREMIER PITCH															25	
 4TURF															27	
 RESCUE STADIA															27	
 RESCUE 100															28	
 MULTI SPORT															29	
 RR															29	
WILD FLORA															31	



## 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.



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## 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.

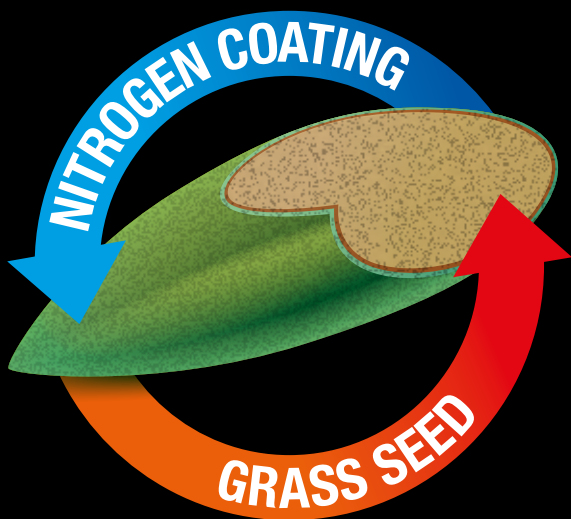


## Mixing

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



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# ProNitro®

## NEW 4G SEED COAT TECHNOLOGY

Now available exclusively on selected Johnsons mixtures.

The UK's only dedicated sports turf seed range

## Benefits of ProNitro®

### IMPROVED SEEDING RESULTS, GUARANTEED!

#### • Faster establishment

- Up to 34% more plants
- Up to 30% increase in root growth
- Improved stress tolerance
- Increased wear tolerance
- Targeted nutrient application, reduces losses to the environment

#### • Reduced costs

- Reduced Poa annua and weed levels
- Replaces seedbed fertiliser
- Quick release nitrogen
- Controlled release nitrogen
- Labour saving and cost effective
- No need to increase sowing rates

## Environmentally friendly, labour saving and cost effective

Our world is changing quickly, customers are always looking for the best solutions and high quality grass seed products. However they are also looking to reduce inputs of herbicides, fertilisers and water to preserve our environment.

The R&D department of DLF has been working on products that need lower inputs for a long time. The aim of which was to combine the best grass seed genetics with all the nutrients needed by a seedling in a single coating, so as to improve the establishment of the plant but also reduce inputs and costs. Our first generation nutrient seed coating was iSeed.

Following significant continued product development & substantial laboratory, greenhouse and user trials, we are proud to introduce the 4th generation of nutrient seed coatings ProNitro® which delivers faster establishment and represents even greater value for money.

## A unique solution

ProNitro® is a patented seed coating that focuses on improving nutrient utilization during the early stages of plant growth. Typical nitrogen content found in other commercial products is 1-2%, with the effects often being negligible. The ProNitro® coating contains 15% nitrogen, a combination of both fast acting and slow release N. As the fertiliser is coated onto the seeds, the germinating and developing seedling receives the benefit, not the surrounding plants. The roots and



shoots grow rapidly and the seedlings become strong and vigorous. This improves the use of all the available soil nutrients and decreases nutrient losses into the environment by fixation or leaching. This is particularly important when overseeding into a competitive sward.

The nitrogen uptake with ProNitro® is up to four times more efficient compared to broadcast applied ordinary fertilisers.





ProNitro® showing growth of new shoot & roots compared to control which showed limited germination and roots only



"The ProNitro® 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".

**Andy Welsby & Matthew Merchant**

Head Groundsman | Lancashire County Cricket

# ProNitro®

## 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



## 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 <sup>2</sup>
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.

## New 4turf™ Turf type tetraploid perennial ryegrass

Latin name:	Lolium perenne
Seeds/gram:	550
Germination:	1-2 weeks
Shoot density:	150-250 shoots/100cm <sup>2</sup>
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.

## Chewings fescue

Latin name:	Festuca rubra commutata
Seeds/gram:	1,000
Germination:	About 2 weeks
Shoot density:	450-800 shoots/100cm <sup>2</sup>
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 to distinguish • 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

**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.

### Key Cultivars

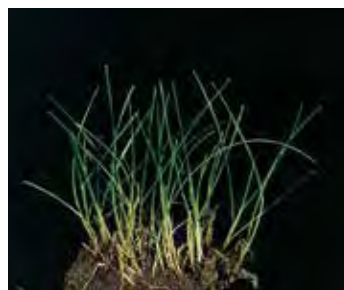
**HUMBOLDT No. 1 rating** for tee and fairway use. The combination of the high shoot density and excellent disease resistance helps to deliver the highest rating for visual merit in the 2015 trial results.

**MUSICA** Excellent tolerance to close mowing. Proven in independent trials and gracing many of the UK's finest golf courses, the combination of exceptional turf density and outstanding summer colour make Musica the essential ingredient in any quality golf course mixture.



## 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 <sup>2</sup>
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*.

## Sheeps and Hard fescue

Latin name:	<i>Festuca ovina</i>
Seeds/gram:	950
Germination:	2-3 weeks
Shoot density:	800-1000 shoots/100cm <sup>2</sup>
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

**NEW NIGELLA** 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.

**VALDORA** Selected for its suitability within the oceanic European climatic region, its excellent shoot density under both fairway and close mown conditions make this a strong addition to any fine turf mixture. High disease resistance and good summer colour being key characteristics.

### 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.

**MANETTO** The perfect partner to Quatro, high salt tolerance, fine leaved and exceptional density. Again it's the excellent natural deep green colour throughout the season and resistance to fungal disease that are the stand out features. Blends perfectly with red fescue for high performance fescue turf.

## Strong creeping red fescue

Latin name:	<i>Festuca rubra rubra</i>
Seeds/gram:	800
Germination:	About 2 weeks
Shoot density:	250-450 shoots/100cm <sup>2</sup>
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** 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 <sup>2</sup>
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.

### Key Cultivars

**CANNAVARO No. 1 rating** Another breeding innovation from the DLF genetic portfolio. Whilst not currently included within the Johnsons range, Cannavaro offers the finest leaf, highest shoot density and best year round colour of any Turf tall fescue in trial. Cannavaro is available for special mixtures.

## Smooth stalked meadow grass

Latin name:	<i>Poa pratensis</i>
Seeds/gram:	3,000
Germination:	3-4 weeks
Shoot density:	200-350 shoots/100cm <sup>2</sup>
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.

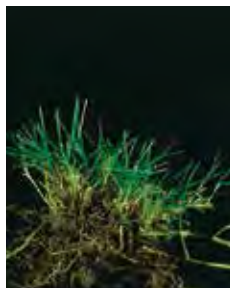
### Key Cultivars

**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 <sup>2</sup>
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 No. 1 Rating** The Johnsons seed range already offered the strongest bentgrass portfolio in the UK but Arrowtown is a cultivar set to re-write the rule book. Arrowtown was 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 <sup>2</sup>
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 <sup>2</sup>
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.

## 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 Quatro & Manetto 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.

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## COVERING THE WORLDS GREATEST STAGES

“ I have chosen Johnsons Sports Seed for the overseeding of all the main areas of the course, in particular the J Fescue mixture. The varieties are top rated and perform exceptionally well in our links environment. With the added pressure of the upcoming Open Championship we rely on high quality seed to compliment our preparation work. ”

Craig Gilholm  
Links Manager | Royal Liverpool Golf Club  
The Open Championship 2014





## **GREEN** Golf & bowling greens

**NEW**  
FORMULATION  
2016



## **RYE GREEN** Intense wear, golf & bowling greens

**NEW**  
FORMULATION  
2016



%	Cultivar	Species	STRI Rating
40%	MUSICA	Chewings Fescue	7.6
40%	NIGELLA 	Slender Creeping Red Fescue	7.6
10%	ARROWTOWN	Browntop Bent	7.9
10%	MANOR	Browntop Bent	7.2

**SOWING RATE 20-30g/m<sup>2</sup>**

**OVERSOWING 10-20g/m<sup>2</sup>**

**MOWING HEIGHT Down to 4mm**

**Fast sustainable greens, now with new top rated Nigella**

**Highest rated bentgrass cultivars**

Traditional green specification

Highly tolerant of close mowing

Fine, dense turf

Excellent disease resistance, & natural colour

**GroMax** treated, maximises seedling development

%	Cultivar	Species	STRI Rating
30%	CLEMENTINE	Perennial Ryegrass	8.0
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	7.9

**SOWING RATE 25-35g/m<sup>2</sup>**

**OVERSOWING 10-20g/m<sup>2</sup>**

**MOWING HEIGHT Down to 4mm**

**Ideal for renovation of extremely heavily worn greens**

Fast establishment

New cv's for improved wear under extreme close mowing

Excellent recovery

Exceptional fineness of leaf

High shoot density

**GroMax** treated, maximises seedling development

## J PREMIER GREEN

Golf greens, high performance renovation mix

**NEW**  
FORMULATION  
2016



## J ALL BENT

Golf greens (A capillaris)

**NEW**  
FORMULATION  
2016



15

%	Cultivar	Species	STRI Rating
20%	MUSICA	Chewings Fescue	7.6
20%	BEUDIN	Slender Creeping Red Fescue	7.8
40%	ARROWTOWN	Browntop Bent	7.9
20%	MANOR	Browntop Bent	7.2

SOWING RATE 15-20g/m<sup>2</sup>

OVERSOWING 8g/m<sup>2</sup>

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!**

Improves natural disease resistance

High tolerance to close mowing

Unbeatable shoot density reduces Poa annua invasion

**GroMax** treated, maximises seedling development

%	Cultivar	Species	STRI Rating
60%	ARROWTOWN	Browntop Bent	7.9
40%	MANOR	Browntop Bent	7.2

SOWING RATE 10g/m<sup>2</sup>

OVERSOWING 5g/m<sup>2</sup>

MOWING HEIGHT Down to 3mm

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

**Increased proportion of No1 rated Arrowtown for 2016**

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

Fast sustainable greens!

**GroMax** treated, maximises seedling development

**NEW**

J Nitro All Bent – ProNitro<sup>®</sup> coated option available





Sustainable golf greens (A canina)



%	Cultivar	Species	STRI Rating
50%	VILLA 1	Velvet Bent	8.1
50%	LEGENDARY	Velvet Bent	-
SOWING RATE 8g/m <sup>2</sup>		OVERSOWING 4g/m <sup>2</sup>	MOWING HEIGHT Down to 3mm

**New generation velvet bentgrass blend for unbeatable greens quality**

**Fast sustainable greens!**

Exceptional turf density, delivers faster ball roll for a given height of cut

Very rapid establishment even in competitive high Poa swards

Lower Nitrogen & water requirements = sustainable turf

Natural dark colour and disease resistance over traditional greens

**GroMax** treated, maximises seedling development



Overseeding (A stolonifera)



%	Cultivar	Species	STRI Rating
100%	INDEPENDENCE	Creeping Bent	6.9
SOWING RATE 8g/m <sup>2</sup>		OVERSOWING 4g/m <sup>2</sup>	MOWING HEIGHT Down to 3mm

**A top rated creeping bent for UK and Irish conditions**

Dense, compact growth

Tolerant of close mowing, fast greens

Rapid establishment and wear tolerance

Low thatch

%	Cultivar	Species	STRI Rating
100%	COBRA NOVA	Creeping Bent	7.2
SOWING RATE 8g/m <sup>2</sup>		OVERSOWING 4g/m <sup>2</sup>	MOWING HEIGHT Down to 3mm

**The No. 1 rated creeping bent for UK and Irish conditions**

Highest rating for tolerance of close mowing STRI & NTEP

Excellent resistance to disease, red thread, dollar spot & fusarium

Rapid establishment and wear tolerance

Exceptional shoot density and dark green colour, low thatch



Greens, tees & fairways

**NEW**  
FORMULATION  
2016



Greens surrounds, tees, fairways  
& semi rough

**NEW**  
FORMULATION  
2016



17

%	Cultivar	Species	STRI Rating
10%	NIGELLA <small>NEW</small>	Slender Creeping Red Fescue	8.0
20%	BEUDIN	Slender Creeping Red Fescue	7.9
20%	CEZANNE	Slender Creeping Red Fescue	7.6
35%	MUSICA	Chewings Fescue	7.4
15%	HUMBOLDT	Chewings Fescue	7.7
SOWING RATE 25-35g/m <sup>2</sup>		OVERSOWING 10-25g/m <sup>2</sup>	MOWING HEIGHT Down to 5mm

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

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

Drought tolerant and highly resistant to disease

Good shade & salt tolerance

Reduces fertiliser and water requirements, lowers carbon footprint

**GroMax** treated, maximises seedling development

**NEW** J Nitro Fescue – ProNitro<sup>®</sup> coated option available

%	Cultivar	Species	STRI Rating
20%	CEZANNE	Slender Creeping Red Fescue	7.6
20%	BEUDIN	Slender Creeping Red Fescue	7.9
10%	MUSICA	Chewings Fescue	7.4
30%	ROSSINANTE	Strong Creeping Red Fescue	6.1
10%	MANETTO	Hard Fescue	7.2
10%	QUATRO	Sheeps Fescue	8.3
SOWING RATE 25-35g/m <sup>2</sup>		OVERSOWING 10-25g/m <sup>2</sup>	MOWING HEIGHT Down to 10mm

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

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

New Beudin, highest rating 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



Sustainable golf fairways & tees

NEW  
FORMULATION  
2016



%	Cultivar	Species	STRI Rating
15%	MUSICA	Chewings Fescue	7.4
15%	HUMBOLDT	Chewings Fescue	7.7
20%	BEUDIN	Slender Creeping Red Fescue	7.9
40%	ROSSINANTE	Strong Creeping Red Fescue	6.1
10%	MANETTO	Hard Fescue	7.2

SOWING RATE 25-35g/m<sup>2</sup>

OVERSOWING 10-25g/m<sup>2</sup>

MOWING HEIGHT Down to 10mm

**100% Fescue mixture, including unique New Manetto Hard fescue**

**New Beudin & Humboldt, top rated for visual merit under fairway management**

**Unbeatable shoot density helps reduce Poa annua invasion**

Improved drought tolerance and disease resistance

Naturally darker colour & fine leaved appearance

Sustainable overseeding mixture can reduce water and fertiliser requirements

Reduced clippings and lower carbon footprint

**Gr<sup>o</sup>Max treated, maximises seedling development**

**NEW J Nitro Fairway – ProNitro<sup>®</sup> coated option available**

## COVERING THE WORLDS GREATEST STAGES

“

I've used Johnson's J Fescue on the fairways before and chose J All Bent on this occasion because of the top STRI ratings for the 2 bent grass cultivars, Arrowtown and Manor. It was so important that this being the first year, we achieved great results and needed a seed that could deliver that.”

“The first pass on the greens began on the 25th September and by the 8th October they had already achieved good germination.”

“Everyone was amazed how quickly it came up, the lines were clearly visible.”

”



Martin Coward  
Head Greenkeeper | Broadstone Golf club





## PREMIER FAIRWAY

Hard wearing fairways  
& tees (with ssmg)

NEW  
FORMULATION  
2016



## TEE

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

NEW  
FORMULATION  
2016



19

%	Cultivar	Species	STRI Rating
10%	MUSICA	Chewings Fescue	7.4
15%	HUMBOLDT	Chewings Fescue	7.7
25%	BEUDIN	Slender Creeping Red Fescue	7.9
15%	SOMBRERO	Smooth Stalked Meadow Grass	7.6
25%	ROSSINANTE	Strong Creeping Red Fescue	6.1
10%	MANETTO	Hard Fescue	7.2

SOWING RATE 25-35g/m<sup>2</sup>

OVERSOWING 10-25g/m<sup>2</sup>

MOWING HEIGHT Down to 10mm

100% Fescue mixture, including unique new Manetto hard fescue

New Beudin & Humboldt, top rated for visual merit under fairway management

Unbeatable shoot density helps to reduce Poa annua invasion

No. 1 rated Sombrero SSMG strengthens turf and increases wear tolerance

Excellent drought tolerance and disease resistance

Reduced water and fertiliser requirements

Reduced cutting requirement & lower carbon footprint

**GroMax** treated, maximises seedling development

%	Cultivar	Species	STRI Rating
20%	FABIAN	4turf <sup>TM</sup> Tetraploid Perennial Ryegrass	6.5
20%	DOUBLE	Perennial Ryegrass	5.2
20%	STRAVINSKY	Perennial Ryegrass	6.0
35%	ROSSINANTE	Strong Creeping Red Fescue	6.1
5%	SABRENE 1	Rough Stalked Meadow Grass	-

SOWING RATE 35-50g/m<sup>2</sup>

OVERSOWING 15-25g/m<sup>2</sup>

MOWING HEIGHT Down to 10mm

Unique Combination of 4turf<sup>TM</sup> tetraploid ryegrass and Sabrene RSMG delivers very rapid establishment for frequently worn shaded turf

Exceptional density and improved disease resistance

Hard wearing even under close mown conditions

Combination of new ryegrass cultivars for exceptional fineness and density

**GroMax** treated, maximises seedling development

NEW

J Nitro Tee – ProNitro<sup>®</sup> coated option available

## RYE FAIRWAY

Hard wearing golf fairways, tees, driving ranges & cricket outfields (with ryegrass)

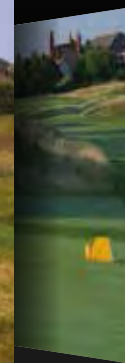
NEW  
FORMULATION  
2016



## ROUGH

Golf rough & dry impoverished soils

NEW  
FORMULATION  
2016



%	Cultivar	Species	STRI Rating
15%	CHARDIN	Perennial Ryegrass	7.6
15%	FABIAN	4turf™ Tetraploid Perennial Ryegrass	6.5
20%	MUSICA	Chewings Fescue	7.4
20%	CEZANNE	Slender Creeping Red Fescue	7.6
30%	ROSSINANTE	Strong Creeping Red Fescue	6.1

SOWING RATE 35-50g/m<sup>2</sup>

OVERSOWING 15-25g/m<sup>2</sup>

MOWING HEIGHT Down to 10mm

Designed for the renovation of high traffic fairways

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

Excellent year round colour

Rapid establishment and hard wearing under fairway mowing conditions

Chardin delivers improved density, fineness and wear tolerance

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

**GroMax** treated, maximises seedling development

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

SOWING RATE 25-35g/m<sup>2</sup>

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 species 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

**GroMax** 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.





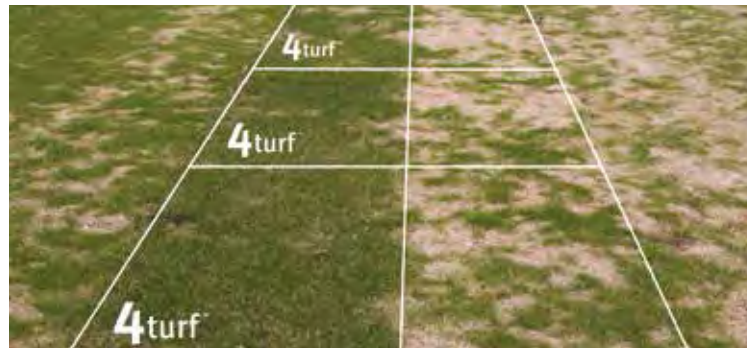
## NEW Fabian 4turf™ Tetraploid Perennial Ryegrass

4turf™ is a unique new turf type Tetraploid Perennial Ryegrass bred specifically by DLF for rapid establishment and unique stress tolerance, not to be confused with standard Tetraploids.

### Rapid establishment

4turf™ seeds are larger than regular ryegrass cultivars, producing stronger seedlings and faster establishment even at lower temperatures.

### Top rated disease resistance and stress tolerance



### Enhanced rooting for a stronger deeper root system



### Excellent mixture partner

4turf™ cultivars are slightly less dense than regular Diploid Ryegrass, allowing companion species in the mixture a better chance of establishment.

## Winter Overseeding Sportsturf Ryegrass

### AXCELLA *Lolium multiflorum* var *westerwoldicum*

Axcella is the first commercially available Annual Ryegrass recommended exclusively for turfgrass use. Developed by DLF from unique dwarf annual ryegrass plants that exhibit greater shoot density, narrower leaf blades, less vertical growth and a darker green leaf colour than standard annual ryegrass cultivars.

### Low temperature germination

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

### Rapid establishment!

Axcella was developed exclusively for the winter overseeding of dormant turf. Axcella exhibits very strong seedling vigour for rapid, weed free establishment and coverage, properties which led to its selection for preparation of the highly acclaimed pitches at the 2010 World Cup.

### Wear Tolerant

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

*(Axcella far right showing strong germination and rapid growth under low temperature conditions, versus standard cultivars).*





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

**NEW  
MIXTURE  
2016**



**PREMIER WICKET**

County quality cricket square  
renovation mixtures

**NEW  
FORMULATION  
2016**



23

%	Cultivar	Species	STRI Rating
50%	DICKENS	Perennial Ryegrass	6.9
50%	CHARDIN	Perennial Ryegrass	6.2
SOWING RATE 35-75g/m <sup>2</sup> OVERSOWING 25-75g/m <sup>2</sup> 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

%	Cultivar	Species	STRI Rating
20%	CLEMENTINE	Perennial Ryegrass	7.6
40%	DICKENS	Perennial Ryegrass	7.0
20%	CHARDIN	Perennial Ryegrass	6.9
20%	MONROE	Perennial Ryegrass	6.2

SOWING RATE 35-75g/m<sup>2</sup>    OVERSOWING 25-75g/m<sup>2</sup>    MOWING HEIGHT Down to 2mm

**New 4 Cultivar mixture including Clementine, Dickens, Chardin & Monroe PRG delivers the highest rating on 2016 STRI close mown list**

**Outstanding shoot density, combined with a fine leaf and incredible cleanliness of cut for improved camera appeal**

Rapid establishment

4 cultivar blend for the highest disease resistance

Attractive colour and fineness of leaf

**GroMax** treated, maximises seedling development

**NEW** J Nitro Premier Wicket – ProNitro<sup>®</sup> coated option available



## COVERING THE WORLDS GREATEST STAGES

“

We choose Johnsons seed because the cultivars rate superbly for fineness of leaf, shoot density and tolerance to close mowing. Our small square means we need to be able to turn pitches around very quickly and we are using Ji Premier Wicket with the nutrient seed coating. Establishment is rapid, enabling us to re-use pitches again and the results have been very impressive. We have already trialled the new ProNitro® coating and get the same benefits as before but with even faster germination.

For the Outfields and Nets we also use J Premier wicket and achieve surfaces that have been rated consistently superb all season long by both players and umpires alike.

Overall last year, the sward showed very little wear and the recovery has been excellent, allowing me the confidence to maintain good, fast surfaces that are less susceptible to breaks in play following rain.

”



IOG

**IOG Cricket Grounds Team of the Year 2015**

Andy Mackay  
Head Groundsman | Sussex CCC





## PITCH Football & rugby pitches

NEW  
FORMULATION  
2016



## PREMIER PITCH Premier quality football & rugby pitches

NEW  
FORMULATION  
2016



%	Cultivar	Species	STRI Rating
15%	EUROSPORT	Perennial Ryegrass	8.0
15%	COLUMBINE	Perennial Ryegrass	8.0
35%	BERLIOZ 1	Perennial Ryegrass	7.4
35%	BIZET 1	Perennial Ryegrass	7.3

SOWING RATE 35-75g/m<sup>2</sup>

OVERSOWING 25-75g/m<sup>2</sup>

MOWING HEIGHT Down to 25mm

Tolerant of heavy wear

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

New highly rated Eurosport for the highest density & wear tolerance

Ideal for training grounds

Strong recovery

**GroMax** treated, maximises seedling development

%	Cultivar	Species	STRI Rating
20%	EURODIAMOND	Perennial Ryegrass	8.2
30%	COLUMBINE	Perennial Ryegrass	8.0
40%	MONROE	Perennial Ryegrass	8.0
10%	EUROCORDUS	Perennial Ryegrass	8.1

SOWING RATE 35-75g/m<sup>2</sup>

OVERSOWING 25-75g/m<sup>2</sup>

MOWING HEIGHT Down to 25mm

The UK's No. 1 sports turf renovation mixture just got even better!

Europe's highest rated cultivars, deliver a sward of exceptional wear tolerance and density, with excellent recovery and regrowth from wear

Rapid establishment, ready to mow in 3-5 weeks

Camera friendly, attractive colour and high disease resistance, delivers a turf with exceptional visual merit with proven performance

**GroMax** treated, maximises seedling development

NEW

J Nitro Premier Pitch – ProNitro<sup>®</sup> coated option available

## COVERING THE WORLDS GREATEST STAGES

“

With the challenge of hosting Rugby World Cup games and the hectic football schedule playing in the Premiership it is so important to use seed you can trust to deliver results, which is why I select Johnsons J Premier Pitch. It gives me great faith that the products are used at leading venues worldwide and that the Company has a fantastic reputation.

”



IOG

IOG Football Grounds Team Of The Year 2015

John Ledwidge  
Head Groundsman | Leicester City Football Club







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

**NEW  
FORMULATION  
2016**



**RESCUE STADIA**

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



27

%	Cultivar	Species	STRI Rating
25%	DOUBLE	4turf Tetraploid Perennial Ryegrass	6.5
25%	FABIAN	4turf Tetraploid Perennial Ryegrass	5.2
50%	BERLIOZ 1	Perennial Ryegrass	7.4
SOWING RATE -		OVERSOWING 10-50g/m <sup>2</sup>	MOWING HEIGHT Down to 12mm

**Very rapid establishment even under low soil temperatures (3-10°C)  
Ideal for Autumn overseeding program**

New 4turf™ Tetraploid Ryegrass deliver deeper rooting for summer drought tolerance plus exceptional year round colour and disease resistance

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**

%	Cultivar	Species	STRI Rating
50%	AXCELLA	Annual Ryegrass	-
20%	DOUBLE	4turf Tetraploid Perennial Ryegrass	5.2
20%	HIMALAYA	Perennial Ryegrass	7.1
10%	SABRENE 1	Rough Stalked Meadow Grass	-
SOWING RATE -		OVERSOWING 10-75g/m <sup>2</sup>	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**

Axcella, unique turf type annual ryegrass, delivers fastest low temp establishment!

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

Himalaya 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**



## RESCUE 100

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



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

### Designed for winter/spring emergency overseeding

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

Axcella, unique turf type annual ryegrass, delivers fastest low temp establishment!

**GroMax** treated, maximises seedling development

## COVERING THE WORLDS GREATEST STAGES

“Not only is BT Murrayfield the home of the Scottish Rugby Union, it plays host to Guinness PRO12, European Champions and Challenge Cup matches. Rugby aside, we have also held seventy-three events in the past year! So I need a grass seed mixture that can really take the pressure. Johnsons J Premier Pitch establishes quickly, looks great and I know I can rely on the blend of top rated cultivars to deliver the dense, wear tolerant surface that I’m looking for in what can be quite a harsh environment.”



Jim Dawson  
Head Groundsman | BT Murrayfield

IOG

**IOG Groundsman Of The Year 2015**



## MULTI SPORT

Sports fields, cricket outfields  
& athletics use



## RR

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



29

%	Cultivar	Species	STRI Rating
25%	CHARDIN	Perennial Ryegrass	7.5
50%	LIGALA	Perennial Ryegrass	7.2
25%	ROSSINANTE	Strong Creeping Red Fescue	—
SOWING RATE 35-50g/m <sup>2</sup>		OVERSOWING 25-50g/m <sup>2</sup>	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

**GroMax** treated, maximises seedling development

%	Cultivar	Species	STRI Rating
20%	BIZET 1	Perennial Ryegrass	7.3
20%	EURODIAMOND	Perennial Ryegrass	8.2
20%	MONROE	Perennial Ryegrass	8.0
20%	SOMBRERO	Smooth Stalked Meadow Grass	7.3
20%	MIRACLE	Smooth Stalked Meadow Grass	5.9
SOWING RATE 25-50g/m <sup>2</sup>		OVERSOWING 25-50g/m <sup>2</sup>	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 No. 1 Rated for wear tolerance, Miracle for improved disease resistance**

Exceptional wear tolerance

Top rated cultivars now including top rated Monroe

High shoot density

**GroMax** treated, maximises seedling development

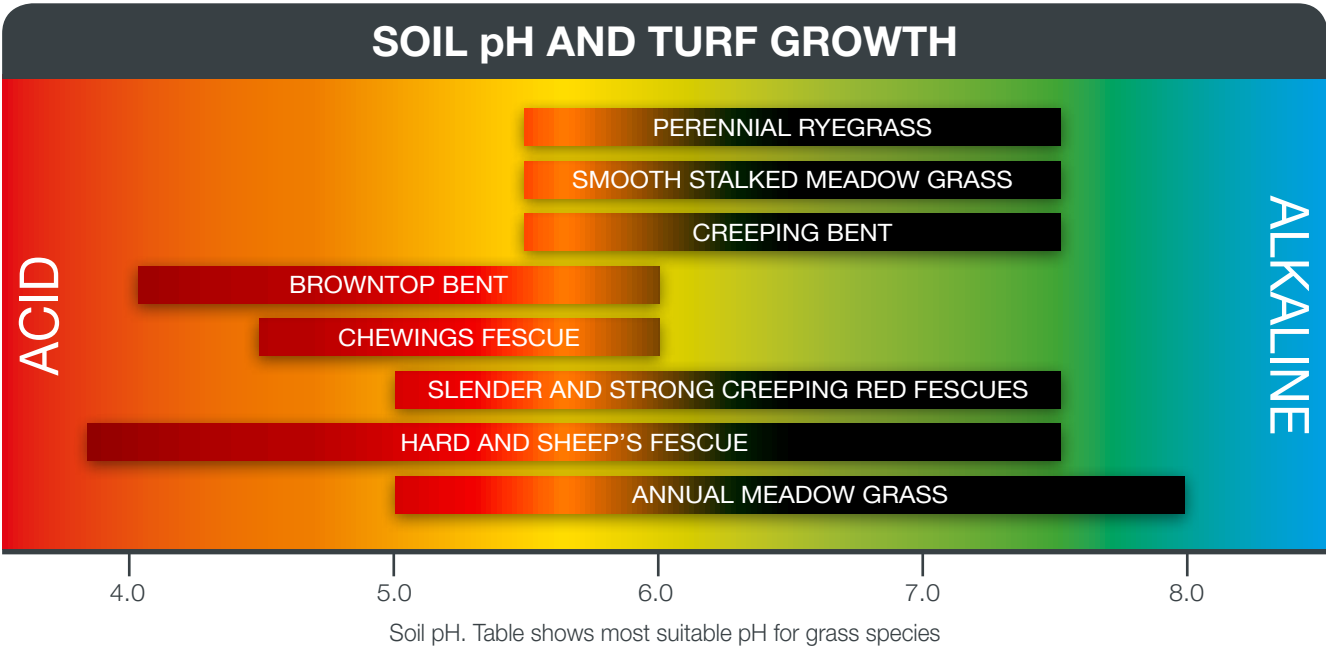
# USEFUL DATA

## 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

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







## 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](https://rhs.org.uk/perfectforpollinators)**



### 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%





# 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/m<sup>2</sup> mixtures with grass  
0.5 – 1.0g/m<sup>2</sup> pure wild flower mixtures**
- d. **Sand – bulk up small seeding rates with 4 parts silica sand to 1 part seed by weight**
- e. **Raking/harrowing – mix seed into soil (depth approx 0.5cm)**
- f. **Ring Roller – use Cambridge Roller to firm seed bed**

## 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.

# WILD FLOWER MAINTENANCE



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For contact details of your local distributor visit

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