

# Turf Grass

seed 2016



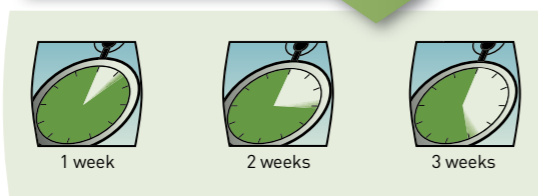
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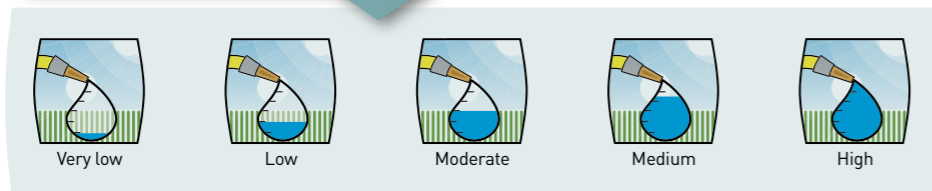
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# keys

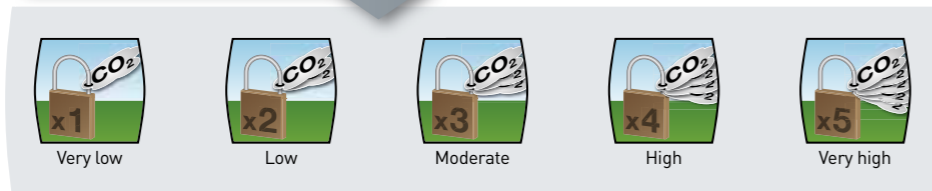
## Establishment



## Water needs



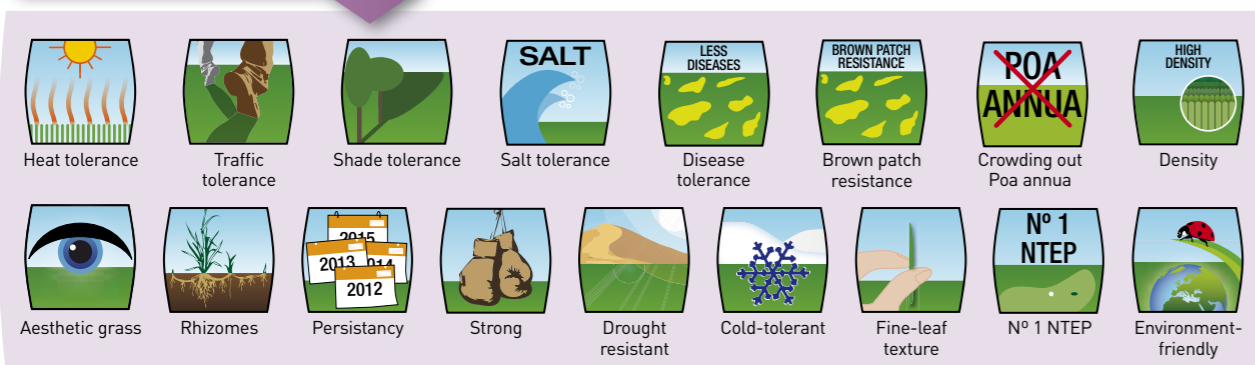
## CO2 capture



## Maintenance



## Other



# Our commitment to the environment



- >> SEMILLAS FITÓ focus closely on customer demands, breeding varieties with high endophyte levels to increase drought tolerance and insect resistance.
- >> Our varieties are highly suited to Mediterranean conditions, use less water and are more stress-tolerant.
- >> Our dark green varieties are environmentally friendly, using less water, less nitrogen and fewer phytosanitary products.
- >> SEMILLAS FITÓ has been a pioneer in introducing warm-season species with high environmental value such as Seashore paspalum SEA SPRAY, extremely high salt-tolerant, or GOBI bermudagrass, extremely drought-tolerant.
- >> Our varieties have slow-growing habits in order to reduce mowing needs.



# The Spanish multinational leader in the Mediterranean region



## Multinational Different since 1880

SEMILLAS FITÓ is a different multinational than others because since 1992 it has been working side by side with distributors, greenkeepers, groundsmen and end users in each area and use, assessing people on site, studying the best varietal options and giving them all the technical support in order to maximize the turf result in the Mediterranean region, where turfgrass is always a difficult crop.



## Experience Offering top quality always

Turfgrass users ask for the best products: weed free, with the highest germination and adapted to specific use needs and particular soils, climates and water.



## R&D+innovation Investing in innovation

SEMILLAS FITÓ, the Mediterranean turfgrass leader, invests 13% of total sales in R&D + innovation.

The SEMILLAS FITÓ research stations are managed by highly qualified professional teams, with the most up-to-date technology to evaluate every variety in any stress situation. Our agreement with the world's best turfgrass universities and breeding stations brings us the most suitable material for our customers.

Once the new material is released, the stress controls are very tough in order to ensure the success of the variety.



## Proximity Working together

All varieties and blends have been developed over years of experience and research in trials and field with the help of technicians, greenkeepers, groundsmen, specialists and end users.

Our focus is on the end customer, on society in general, maximizing our respect for the environment, making it more sustainable.

More than 130 years of experience to add value to our landscape and sports fields, improving our living standards.



# Efforts and dedication to turfgrass

## Production centers

We have several turfgrass seed facilities.

The main one, where we do cleaning, conditioning, mixing, packing and delivering, is at Bellpuig (Lleida), around 100 km west of Barcelona.

Antalya is a good reception and expedition center for Turkey and Middle Eastern markets.

The new facility in Anglesola (130 km west Barcelona) with 27.000 m<sup>2</sup> of warehouses will be the biggest in Southern Europe with the highest seed technology.



New mixer.

Palletiser. Bellpuig.



## Official tag specs

- ① Official organization that takes care of seed quality control.
- ② Name of the mixture and ingredients.
- ③ Percentage in weight of each component detailing species and variety.
- ④ Official tag number.
- ⑤ Packaging date.
- ⑥ Lot number.



## Quality control

Seed quality control is essential at Semillas Fitó.

Purity, germination, vigour and resistance are controlled in every seed lot from seed receipt to packing and shipment.



Species	Minimum germination (%)	Minimum specific purity (% in weight)
GRASSES	1	2
Agrostis stolonifera	75	90
Agrostis tenuis	75	90
Cynodon dactylon	70	90
Festuca arundinacea	80	95
Festuca ovina	75	85
Festuca pratensis	80	95
Festuca rubra	75	90
Lolium perenne	80	96
Poa nemoralis	75	85
Poa palustris	75	85
Poa pratensis	75	85
Poa trivialis	75	85



# Trials

## research and results

Before being launched, SEMILLAS FITO varieties must fulfil the following requirements:

1. Genetics suited to conditions in the Mediterranean area.
2. Tested for at least two years trials under real conditions in order to evaluate strengths and weaknesses; e.g. Cabrera de Mar turf trials.
3. Meeting customer needs.
4. Gaining (if possible) the best marks at international official trials; e.g. US National Turfgrass Evaluation Program (NTEP).



Individual plant test.



Overseeding trial. Picture taken on 22/5/2012 comparing overseeding on Bermuda of Poa trivialis QUASAR, Lolium multiflorum GREENLINKS, Lolium multiflorum THUNDER and Lolium perenne RINOVO.



Thatch and root system control.

Bentgrass trials.



# Cabrera de Mar

## Research Station

Our Turfgrass Research Station located in Cabrera de Mar is the biggest in the Iberian Peninsula dedicated to turfgrasses.

The newest material from all over the world is included in the plots.

Its excellent situation by the Mediterranean sea and in a mild winter area with high humidity, hot summers and water irrigation with high electrical conductivity ensure that varieties working in this situation will perform well in any area of the Mediterranean.

All varieties spend a minimum of two years under non-spraying conditions before being launched on the market.

The plots are divided into areas with different irrigation quantities and treatments for their evaluation.

Turfgrass plots visit.



Turfgrass trial (first part).



Turfgrass trial (second part).

## Future

The future is coming, with the new generation of varieties that will lead the market in the coming years.

Creeping perennial ryegrass, tall fescues as fine as rye and with rhizomes, annual rye with top turf specs, high stress-tolerant bentgrass or cold-tolerant bermudagrass will make the difference.

Varieties like TERRANO, a new tall fescue with high spreading ability and fine leaf texture, or ZURICH, the newest Perennial ryegrass with a high level of spreading ability and extreme traffic tolerance, are the next ones.

Turfgrass culture Handbook available through SEMILLAS FITO



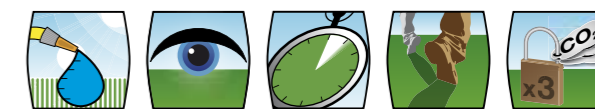


**>> DID YOU KNOW...**

On a sunny summer's day, the turfgrass surface keeps the temperature 8-10°C lower than asphalt.

# Perennial Ryegrass

(*Lolium perenne*)



Cool-season grass (C3), fast-growing bunch type that spreads by stems.

The leaves are dark green and glossy on the underside, tapered, pointed with a folded vernation.

**Strengths of SEMILLAS FITO varieties**

- Mediterranean type with no winter dormancy and dark green color.
- Well-suited to summer heat, drought, salinity, shade and heavy traffic conditions.
- Gray leaf spot resistance.
- Endophyte-enhanced.

**Uses:**

- High-quality lawns, tees, fairways, rough, interseeding and overseeding purposes, soccer, football, racetracks, polo fields...
- Overseedings and interseeding in any lawn.



PERENNIAL RYEGRASS	ZURICH (PPG-PR 124)	LOVER	RINGLES	SUN	FIESTA 4	RINOVO
Seeding rate g/m <sup>2</sup>	35	35	35	35	35	20-35
Overseeding rate on bermuda greens g/m <sup>2</sup>	140	140	-	-	150	150
Winter overseeding rates on tees, fairways, rough, lawns g/m <sup>2</sup>	50	50	50	50	50	40
Seeds per gram	580	568	546	614	520	662
Days to germination	3-8	3-8	4-8	3-7	5-7	3-7
Recommended planting dates	Spring-Fall	Spring-Fall	Spring-Fall		Spring-Fall	
Color	Bright green	Medium green	Dark green	Dark green	Dark green	Dark green
Establishment	Very fast	Very fast	Fast	Very fast	Medium fast	Very fast
Growth	Moderate	Moderate	Slow	Moderate	Slow	Medium
Leaf texture	Very fine	Very fine	Fine	Fine	Very fine	Fine
Creeping ability	Yes	No	No	No	Yes	Yes
Maintenance	Moderate	Moderate	Low	Low	Low	Low
Fertilizing needs	Low	Low	Moderate	Moderate	High	Medium to low
Shade tolerance	Low	Low	Moderate	Low	Moderate	Medium
Winter dormancy	No	No	No	No	No	No
Disease resistance	Pythium, Red thread	Pythium, Red thread	Pythium, Red thread, Gray leaf spot, Dollar spot	Brown patch, Leaf spot	Gray leaf spot, Pythium, Brown patch	Dollar spot, Brown Patch, Gray Leaf spot, Fusarium spp., Helminthosporium spp., Red Threat
Recovery capacity	Very good	Very good	Excellent	Very good	Excellent	Excellent
Traffic tolerance	Excellent	High	Excellent	Excellent	Excellent	Excellent
Heat tolerance	Good	Excellent	High	Moderate	Excellent	Exceptional
Mowing height	Tolerates 10 mm	Tolerates 10 mm	8-20 mm	Tolerates 10 mm	Tolerates 3 mm	Since 8 mm
Mowing frequency	Moderate	Moderate	Moderate	Moderate	Low	Medium
Salt tolerance	Moderate	Moderate	High	Moderate	Excellent	Unbeatable
Irrigation needs	High	High	Moderate	Moderate	High	Medium
Endophyte-enhanced	Yes	Yes	Yes	Yes	Yes	Yes





## Bright-green color

### ZURICH (PPG PR 124)

#### >> Regenerating perennial ryegrass

- Highest persistency.
- Extremely traffic tolerant.
- Good winter growth and regrowth.
- Low mowing height.
- Hides Poa annua contamination.

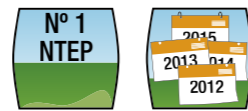


## Medium green color

### LOVER

#### >> Quick recovery from traffic

- Fine leaf texture with excellent seedling vigour and establishment.
- Excellent summer performance with maximum drought tolerance.
- Medium-colored. Reduces Poa annua appearance.
- Excellent wear tolerance.

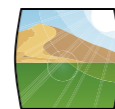


## Dark green color

### RINGLES

#### >> Maximum drought tolerance

- Dwarf variety. Upright growth and fine leaf texture.
- Excellent seedling vigour with low maintenance.
- Highly tolerant to heat and salinity conditions (up to 15,000 ppm).
- Dark green color.



### SUN

#### >> Versatile

- Ideal for low-maintenance situations.
- The best establishment rate.
- Moderate shade tolerance.
- Excellent winter growing variety with an easy spring transition.
- Dark-colored.

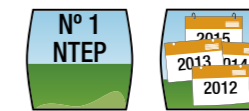


## Dark green color. Highest persistence

### FIESTA 4

#### >> Superior overall turf quality

- N° 1 2009 NTEP trials.
- Top all-year quality and summer turf density.
- High salinity tolerance in hot conditions.
- Extremely low mowing height, minimum 3 mm in overseeding situations.
- Pythium blight- and gray leaf spot-resistant.
- Creeping ability.



Short stolons.



### RINOVO

#### >> The new generation never seen before

##### OBTENTION:

- RINOVO is a unique and outstanding variety developed at RUTGERS UNIVERSITY.
- The raw material origin of the variety has been collected in many areas of the world where perennial rye is under high pressure from heat, salt, traffic and diseases.
- The result is a variety never seen before.
- Production is being undertaken in very specific fields under exhaustive quality controls in order to obtain the best product.

##### SPECS:

- Exceptional variety No. 1 NTEP in multiple advanced traits.
- Late maturity variety. It avoids steamy appearance during late springtime.
- The strongest persistence under Mediterranean summers. Highly heat-tolerant.
- RINOVO demonstrated great spreading ability that makes it very dense over time, specially in summer.
- Unbeatable salt resistance.
- Excellent gray leaf spot and brown patch resistance.
- Number one in traffic tolerance.
- Dark green color.
- Fine leaf texture.
- Good resistance to surface and crown-feeding insects such as webworms, army worms, bill bugs and others.
- Recommended for improving the quality and persistence of any mixture with perennial ryegrass.

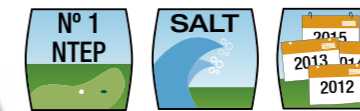


TABLE 14. POA ANNUA COUNTS OF PERENNIAL RYEGRASS CULTIVARS 1/ 2013 DATA

NAME	MA1	NAME	MA1
DLF LGT4182	78.0	Sunstreaker (APR 2036)	7.0
Linn 48.0		LTP-PR 135	7.0
GO-DHS	44.0	Rio Vista	7.0
PST-2ACR	40.3	Uno	7.0
Seductive (ISG-30)	39.3	Amazing A+ (PPG-PR 138)	6.3
...		Pizzazz 2 GLR (PR 909)	6.0
<b>Rinovo</b>	<b>9.0</b>	Provost (PPG-PR 143)	5.0
Fastball RGL (PPG-PR 133)	8.7	Pinnacle	4.7
Sr 4650 (PSRX-3701)	8.7	Sienna	3.3
Stamina (IS-PR 487)	8.3		
PST-2K9	8.0	<b>Lsd Value</b>	<b>12.3</b>
Grand SlamGld (Ppg-Pr 164)	7.7	<b>C.V. (%)</b>	<b>41.6</b>

TURFGRASS QUALITY/ TURFGRASS QUALITY RATINGS 1-9; 9=IDEAL TURF

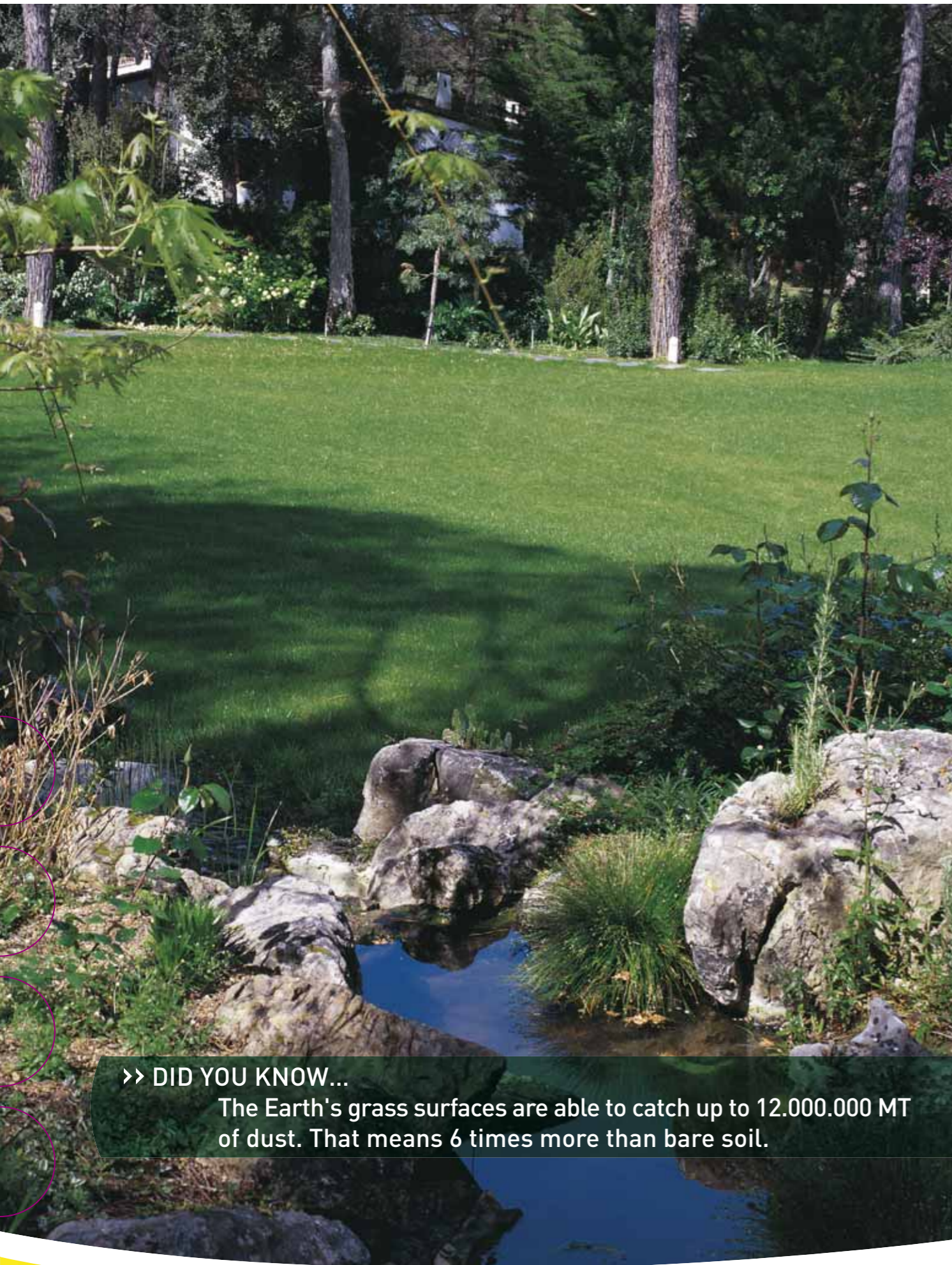
NAME	IA1	IL1	MA1	MD1	MI1	MN1	MO1	NE1	NJ2	OR1	VA1	MEAN
<b>RINOVO</b>	<b>4.7</b>	<b>6.0</b>	<b>6.3</b>	<b>5.5</b>	<b>6.2</b>	<b>1.0</b>	<b>5.9</b>	<b>5.8</b>	<b>5.7</b>	<b>6.3</b>	<b>5.5</b>	<b>5.4</b>
PPG-PR 142	5.9	5.7	5.7	6.0	6.6	2.3	5.3	5.3	4.4	6.1	5.6	5.4
*Pillar (CST)	5.8	5.7	6.3	5.2	6.4	1.7	6.0	6.0	4.3	6.1	5.4	5.4
BAR LP 10969	5.2	5.5	5.1	3.4	6.9	4.0	5.6	5.5	5.4	5.8	5.9	5.3
PPG-PR 128	4.9	5.7	5.7	5.1	6.7	2.3	5.6	5.8	4.7	6.1	5.5	5.3
JR-192	5.8	6.3	5.8	3.8	6.7	2.0	6.0	6.0	4.4	6.0	5.6	5.3
<b>FIESTA 4</b>	<b>5.3</b>	<b>5.5</b>	<b>6.0</b>	<b>4.5</b>	<b>6.4</b>	<b>1.0</b>	<b>5.5</b>	<b>5.4</b>	<b>5.7</b>	<b>6.4</b>	<b>6.3</b>	<b>5.3</b>
*Hancock (IS-PR 479)	5.8	6.1	5.7	4.0	6.7	1.3	5.7	6.0	4.4	6.4	5.8	5.3
PST-2TQL	5.3	5.8	5.2	3.7	7.1	2.0	5.6	5.6	5.5	5.8	6.0	5.2
BAR LP 10972	4.9	4.9	5.3	3.8	6.3	4.7	5.4	5.4	4.9	5.8	6.1	5.2
PST-2ACR	5.8	5.9	4.8	4.6	6.2	1.7	5.5	5.6	4.9	5.8	6.4	5.2
LTP-RAE	5.6	5.1	5.5	4.7	6.7	1.7	5.5	5.8	4.8	6.2	5.5	5.2
*Manhattan 6 GLR (PST-2MA6S)	4.9	6.1	5.4	5.1	6.4	1.0	5.8	5.9	4.7	6.1	5.6	5.2

TABLE 7. GENETIC COLOR RATINGS OF PERENNIAL RYEGRASS CULTIVARS 1/ 2013 DATA

NAME	IA1	IL1	MA1	MI1	MO1	NE1	NJ2	OR1	MEAN
<b>FIESTA 4</b>	<b>6.3</b>	<b>7.0</b>	<b>7.7</b>	<b>6.3</b>	<b>6.3</b>	<b>7.0</b>	<b>8.0</b>	<b>7.0</b>	<b>7.0</b>
Mach I	6.7	6.3	7.7	6.7	6.7	7.0	7.0	7.7	6.7
RAO-PR5FR	7.3	6.0	7.7	6.7	6.7	6.7	8.0	6.7	7.0
Thrive (IS-PR 469)	7.0	6.3	7.7	6.0	7.0	7.0	7.7	7.0	7.0
APR 2445	7.3	6.7	7.7	6.0	7.0	6.3	7.7	6.7	6.9
APR 2320	7.3	6.0	7.0	6.3	6.3	6.7	7.3	7.0	6.8
PPG-PR 136	6.7	5.3	7.0	6.7	6.3	7.0	8.0	7.0	6.8
Amazing A+ (PPG-PR 138)	7.3	6.0	6.7	6.3	5.3	7.0	8.0	7.0	6.7
Rio Vista	7.3	6.0	6.3	6.7	6.7	6.7	7.3	6.7	6.7
Ripside (IS-PR 409)	6.7	6.0	7.3	7.0	6.3	6.3	7.0	6.7	6.7
<b>RINOVO</b>	<b>7.3</b>	<b>5.7</b>	<b>7.0</b>	<b>6.0</b>	<b>6.3</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>6.7</b>
Banfield (IS-PR 489)	7.7	6.0	6.3	6.3	6.3	6.7	7.0	7.0	6.7

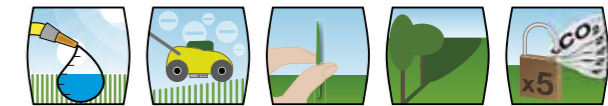
Source: NTEP 2013.





**>> DID YOU KNOW...**  
 The Earth's grass surfaces are able to catch up to 12.000.000 MT of dust. That means 6 times more than bare soil.

# Fine Fescues



Narrow-leaved, cool-season (C3) perennial and creeping and/or bunch growth habit.

Found mostly in shaded areas. The leaves have a folded vernation and a dull underside. It is a slow establisher.

### Strengths of SEMILLAS FITO varieties

- Mediterranean type, tolerant to heat, salt and drought conditions.
- Persistent in our challenging conditions.
- Low input, sustainable turf.
- Moderate traffic resistance.

### Uses:

- Shaded lawns, golf roughs in mild climates. Ingredient for fine and aesthetic mixtures.



FINE FESCUES	ABERCHARM	GARNET	RUFI	ZODIAC	SPARTAN 2
Type	Festuca Rubra Trichophylla	Festuca Rubra Rubra		Festuca Rubra Commutata	Festuca Trachyphilla
Seeding rate g/m <sup>2</sup>	20	20-25	15-25	15-25	15-25
Overseeding rate g/m <sup>2</sup>	30	30	30	20	25
Seeds per gram	1.020	786	770	1.060	1.042
Days to germination	7-10	10-12	10-12	10-12	18-21
Recommended planting dates	Spring-Fall				
Color	Medium	Dark	Dark	Dark	Bluish - green
Establishment	Fast	Average	Average	Average	Slow
Growth	Slow	Slow	Moderate	Slow	Moderate
Leaf texture	Fine	Fine	Medium	Very fine	Very fine
Spreading activity	Rhizomes	Short rhizomes	Short rhizomes	No	No
Maintenance	Low	Low	Low	Very low	Very low
Fertilizing needs	Moderate	Low	Low	Low	Very low
Shade tolerance	High	High	High	High	High
Winter dormancy	No	No	No	No	No
Disease resistance	Dollar spot, Rust, Dreschlera	Brown patch, Leaf spot	Brown patch, Dollar spot	Dollar spot, Summer patch, Leaf spot, Dreschlera	Brown patch, Dollar spot
Recovery capacity	Moderate	Good	Good	Low	Medium
Traffic tolerance	High	Moderate	Moderate	Low	Medium
Heat tolerance	High	High	High	High	High
Mowing height	6-15 mm	Tolerates 12 mm	Tolerates 10 mm	Tolerates 10 mm	Tolerates 20 mm
Mowing frequency	Low	Low	Low	Low	Very low
Irrigation needs	Moderate	Low	Low	Low	Very low
Salt tolerance	Excellent	High	High	Moderate	Low
Endophyte-enhanced	Yes	Yes	Yes	Yes	Yes



**ABERCHARM**

*Festuca rubra trichophylla*  
Slender creeping red fescue

**>> Persistent**

- Medium color.
- Great summer density in Mediterranean climate.
- Excellent salt resistance.
- Fast to establish.
- Drought tolerant.

**GARNET**

*Festuca rubra rubra*  
Strong creeping red fescue

**>> High density**

- New generation of fine fescue, ideal for Mediterranean climate.
- Sustainable turf. Easy recovery in low-maintenance conditions.
- The highest endophyte level in seeds.
- Maximum drought tolerance.

**RUFI**

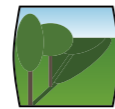
*Festuca rubra rubra*  
Strong creeping red fescue

**>> Traffic-tolerant**

- Top rated for drought and heat tolerance.
- Low maintenance needs.
- Mowing height from 10 mm.
- Dollar spot- and brown patch-resistant.
- Shade-tolerant.

**ZODIAC**

*Festuca rubra commutata*  
Chewings fescue

**>> Ideal for shade**

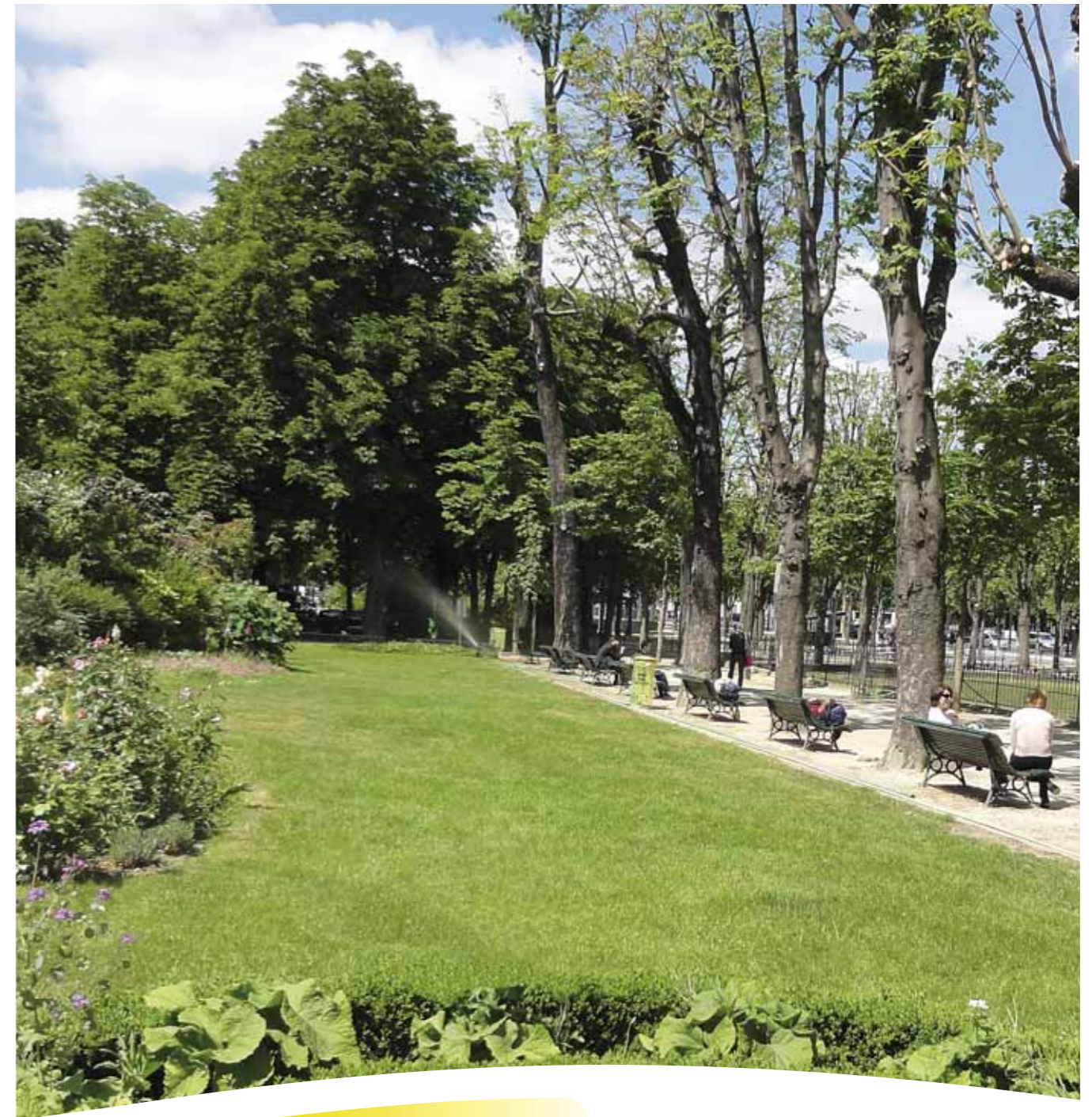
- New generation of fine fescue No. 1 NTEP.
- Mowing height from 8 mm.
- Non-patchy when included in mixtures.
- Very stable and non-encroaching. Low input and maintenance needs.

**SPARTAN 2**

*Festuca trachyphilla*  
Hard fescue

**>> The grass that needs no mowing**

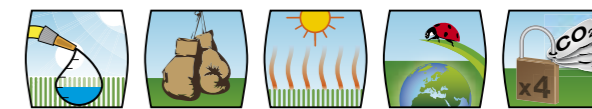
- Sustainable turf does not require fertilization or mowing. When the plant is not mowed, it only reaches a maximum height of 12 cm.
- Easy establishment.
- Keeps excellent density in summer.
- Maximum drought and heat tolerance.





**>> DID YOU KNOW...**  
 230 m<sup>2</sup> of lawn absorb carbon dioxide and release enough oxygen for a family of four.

## Tall Fescues (Festuca arundinacea)



Deep-rooted, cool-season (C3) perennial bunchgrass.  
 Grows from tillers and sometimes has pseudorhizomes.  
 Glossy leaf blades on the underside with serrate margin.  
 Wide leaf blades with rolled veneration.

### Strengths of SEMILLAS FITÓ varieties

- Mediterranean type with no winter dormancy, dark green color.
- Well-suited for low maintenance, summer heat, drought, salinity, shade and heavy traffic conditions.
- Brown patch-resistant.
- Endophyte-enhanced.

### Uses:

- Public and private lawns from very low to medium-maintenance conditions.
- Sod production, rough, soccer, football, racetracks, polo fields.
- The blends including tall fescue should contain at least 70% of it.

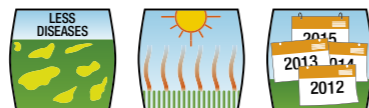


TALL FESCUES	FESNOVA	GOLDEN GATE	PATRÓN	UMBRELLA	FIRACES	MÉRIDA	TURBO RZ	TERRANO
Seeding rate g/m <sup>2</sup>	40	40	40	40	40-50	40	50	50
Overseeding rate g/m <sup>2</sup>	50	50	40	50	50	50	50	50
Seeds per gram	484	467	485	495	523	490	484	484
Days to germination	7-12	6-15	10-15	7-12	7-12	7-12	10-12	10-12
Recommended planting dates	Spring-Fall							
Color	Very dark	Dark green	Dark green	Dark green	Dark green	Dark green	Dark green	Dark green
Establishment	Fast	Fast	Fast	Fast	Fast	Fast	Fast	Fast
Growth	Slow	Slow	Slow	Slow	Slow	Slow	Slow	Slow
Leaf texture	Fine	Medium	Fine	Fine	Medium	Medium	Medium	Medium
Spreading activity	No	No	No	No	No	No	Rhizomes	Rhizomes
Maintenance	Low	Low	Low	Low	Low	Low	Low	Low
Fertilizing needs	Moderate	Low	Low	Moderate	Low	Low	Low	Low
Shade tolerance	High	High	High	High	High	High	High	High
Winter dormancy	No	No	No	No	Fair	No	No	No
Disease resistance	Brown patch, Pythium spp., Leaf spot	Brown patch	Brown patch, Dollar spot, Pythium	Brown patch, Leaf spot	Brown patch	Brown patch, Leaf spot	Leaf spot	Leaf spot
Recovery capacity	Very high	Very high	Very high	Very high	Excellent	Very high	Excellent	Excellent
Traffic tolerance	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Heat tolerance	Excellent	Excellent	Excellent	Excellent	High	Excellent	Excellent	Excellent
Mowing height	From 10 mm but 20 mm is better	Tolerates 10 mm	Tolerates 10 mm	Tolerates 10 mm	20-30 mm	Tolerates 10 mm	Tolerates 15 mm	Tolerates 15 mm
Mowing frequency	Low	Moderate	Low	Low	Low	Low	Low	Low
Irrigation needs	Low	Very low	Low	Low	Low	Low	Low	Low
Salinity tolerance	Excellent	Excellent	Excellent	Excellent	High	Excellent	High	High
Endophyte-enhanced	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

## Highest density, fine leaf texture, low mowing, sport uses

### FESNOVA

#### >> The Brown patch solution



- Outstanding new variety developed at RUTGERS UNIVERSITY and highly adapted to the Mediterranean climate.
- Dark green color kept also in wintertime.
- Broad crown growth type. Makes the canopy itself denser.
- Fine leaf texture like Kentucky blue.
- Excellent heat- and salt-tolerant.
- High traffic-tolerant type, widely adapted to compact soils.
- Low maintenance and fertilization needs.
- Double-dwarf type with slow-growing habit and very low mowing frequency.
- Top choice for sod farms, athletics fields, golf roughs, racetracks, parks and home lawns.

### GOLDEN GATE

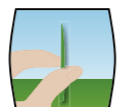
#### >> Heat and drought tolerant



- High quality under saline irrigation.
- Genetic, fall and winter dark color.
- Fine Leaf texture.
- Brown patch tolerant.
- Excellent density all year around. Ideal for sod production.

### PATRÓN (COCHISE IV)

#### >> Nº 1 NTEP. As fine as Lolium



- Broad crown with excellent density.
- Brown patch-tolerant.
- Easy recovery.
- Heat and salt-tolerant.
- Recommended for sod production and sports fields.

### UMBRELLA

#### >> Cold tolerant

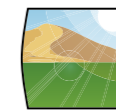


- Salt and drought tolerant.
- High density.
- Low mowing height.
- Highest traffic and wear tolerance.

## Highest performance under tough conditions

### FIRACES

#### >> Easy



- Low maintenance and fertilization needs.
- Superb traffic tolerance and maximum recovery ability.
- Double-dwarf type.
- Very low mowing frequency.

### MÉRIDA

#### >> A vigorous semi-dwarf



- Outstanding fine leaf texture and slow growing.
- Excellent summer performance.
- Maximum drought tolerance.
- Excellent traffic tolerance and recovery.

## Spreading type

### TURBO RZ

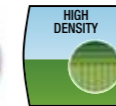
#### >> Spreading type



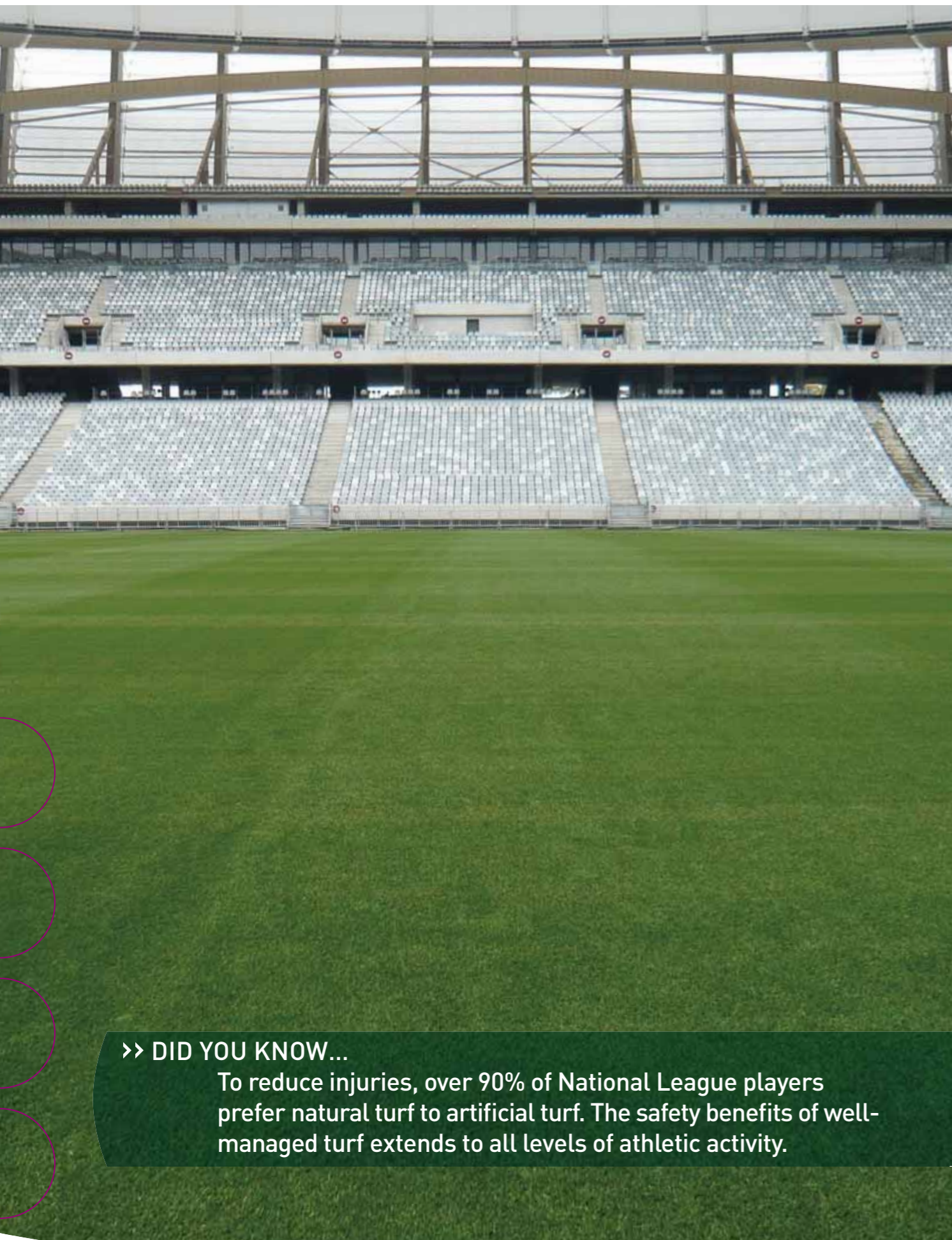
- Well suited for sports and other stress conditions.
- Lateral growing based on underground stems.
- High recovery ability in most situations.
- Top density all year round.

### TERRANO

#### >> The new generation with spreading ability



- Best drought and heat tolerance.
- Brown patch and Leaf spot tolerant.
- Extremely traffic tolerant.
- Best growing in winter time.
- Excellent to produce sod for sport and landscape uses.

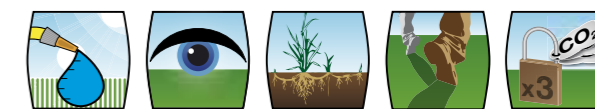


» DID YOU KNOW...

To reduce injuries, over 90% of National League players prefer natural turf to artificial turf. The safety benefits of well-managed turf extends to all levels of athletic activity.

# Kentucky Bluegrass

(*Poa pratensis*)



Cool-season grass (C3), dense, sod-forming, long-lived and winter-hardy.

Plants spread by rhizomes. The leaf is boat-shaped and has a folded vernation with a smooth top side and a dull underside. Slow to germinate.

**Strengths of SEMILLAS FITO varieties**

- Mediterranean type with excellent diseases resistance, specially to rust and strip smut. Dark green color.
- Suited for stress conditions such as heat, drought and heavy traffic.
- No winter dormancy.
- Endophyte-enhanced.

**Uses:**

- Sports fields, soccer, football, polo fields, racetracks, tees, fairways, rough, sod production and gardening with high quality standards.
- Should be used only in mixtures in the Mediterranean area.

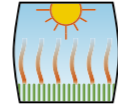


KENTUCKY BLUEGRASS	IMPACT	NUGLADE	PRAFIN	RUGBY 2	HEATMASTER
Seeding rate g/m <sup>2</sup>	10-15	10-15	10-15	10-15	10-15
Overseeding rate g/m <sup>2</sup>	20	20	20	20	20
Seeds per gram	2.380	2.497	2.400	2.702	2.460
Days to germination	15-20	17-24	15-20	15-25	15-30
Recommended planting dates	Spring-Fall				
Color	Medium	Dark green	Dark green	Dark green	Dark green
Establishment	Slow	Medium	Medium	Medium fast	Medium fast
Growth	Slow	Slow	Slow	Slow	Slow
Leaf texture	Fine	Fine	Fine	Fine	Medium
Spreading activity	Rhizomes	Rhizomes	Rhizomes	Rhizomes	Rhizomes
Maintenance	High	Moderate	Moderate	Moderate to high	Moderate to high
Fertilizing needs	Moderate to high	Moderate	Moderate	Moderate to high	Moderate
Shade tolerance	Moderate	High	Moderate to high	High	Moderate
Winter dormancy	No	No	No	No	No
Disease resistance	Leaf spot, Rust, Summer patch, Dollar spot	Leaf spot, Rust, Summer patch, Dollar spot	Leaf spot, Rust, Summer patch, Dollar spot, Antrac-nosis	Microdochium, Leaf spot, Rust, Dollar spot	Pythium, Brown patch, Summer patch
Recovery capacity	Excellent	Excellent	Very good	Very good	Excellent
Traffic tolerance	Excellent	Excellent	Excellent	Excellent	Excellent
Heat tolerance	Excellent	Excellent	Excellent	Excellent	Excellent
Mowing height	Tolerates 10 mm	Tolerates 12 mm	Tolerates 12 mm	Tolerates 12 mm	Tolerates 12 mm
Mowing frequency	High	Moderate	Moderate	Moderate	Moderate
Irrigation needs	Moderate	High	Moderate	Moderate	Moderate
Salt tolerance	Moderate	Moderate	High	High	Moderate
Endophyte-enhanced	Yes	Yes	Yes	Yes	Yes



## IMPACT

## &gt;&gt; Heat-tolerant

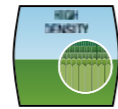


- Superior heat and drought resistance yet tolerant to cold winters.
- Superior against Dollar spot, summer patch, necrotic ring spot and leaf rust diseases.
- Medium maintenance needs. Best with high nitrogen rates.
- Excellent lateral growth. Ideal for sod production.



## NUGLADE

## &gt;&gt; Shade-tolerant

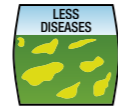


- MIDNIGHT type. N° 1 NTEP.
- Rich, dark green color with top density and quality.
- Excellent traffic tolerance.
- Excellent fairway performance even below 12 mm mowing height.
- Less thatchy.



## PRAFIN

## &gt;&gt; Easy to manage



- Mediterranean compact type with the best heat tolerance.
- Less prone to thatch.
- Drought and salt-tolerant.
- Low mowing frequency.



## RUGBY 2

## &gt;&gt; Top traffic tolerant

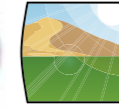


- Suited for sports fields with heavy traffic.
- Medium shade-tolerant.
- Drought-tolerant.
- Mowing height from 12 mm.



## HEATMASTER

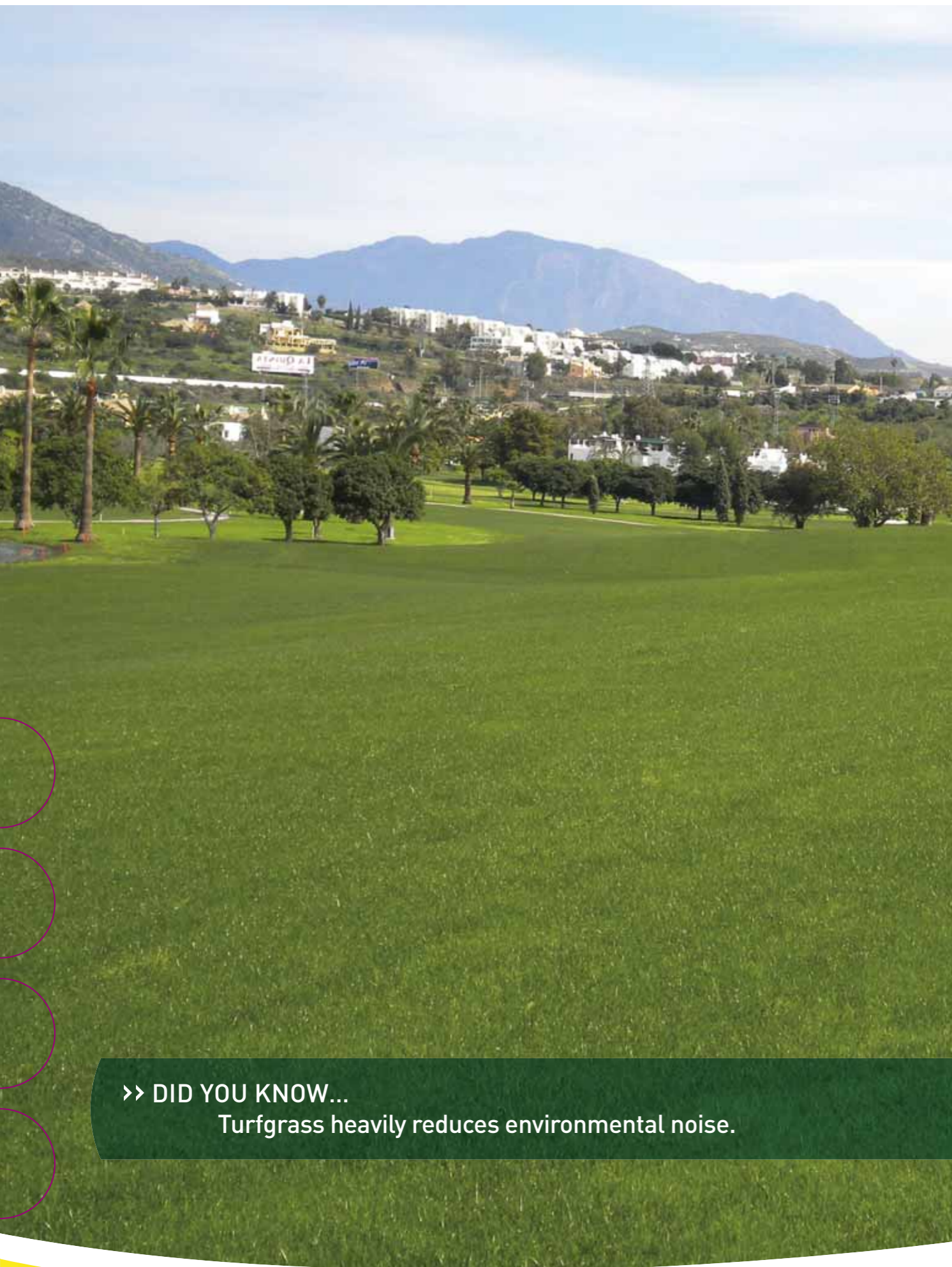
Hybrid Kentucky bluegrass



## &gt;&gt; Top heat tolerance

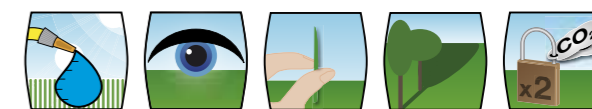
- Top salt tolerance.
- Medium to fine leaf texture. It combines perfectly with tall fescues.
- Fast establishment, excellent summer performance and lateral spreading.
- Excellent disease tolerance in hot conditions.
- Suited to mixing with perennial rye and tall fescues to increase heat tolerance.





»» DID YOU KNOW...  
Turfgrass heavily reduces environmental noise.

# Poa Trivialis



Cool-season grass (C3), fine-textured, yellow-green, stoloniferous.

Folded veneration, membranous, auricles absent, blades flat and boat-shaped tip.

### Strengths of SEMILLAS FITÓ varieties

- Dark green color and fast establishment. Smooth transition in Mediterranean conditions.

### Uses:

- Warm-season grass for overseeding purposes (cynodon spp., paspalum vaginatum, zoysia spp.....). Shaded locations in cool areas.



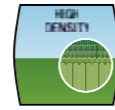
POA TRIVIALIS	QUASAR	WINTERWAY
Seeding rate g/m <sup>2</sup>	20	20
Overseeding rate g/m <sup>2</sup>	25-50	25-50
Seeds per gram	4.400	5.350
Days to germination	5-8	5-8
Mowing height	3-30 mm	Tolerates 7 mm
Recommended planting dates	20°C in the soil	20°C in the soil
Color	Medium-dark	Medium-dark
Establishment	Fast	Fast
Growth	Slow	Slow
Leaf texture	Fine	Fine
Spreading activity	Stolons in cool location	Stolons in cool location
Maintenance	Low	Low
Fertilizing needs	Low	Low
Shade tolerance	High	High
Winter dormancy	No	No
Cold tolerance	High	Excellent
Disease resistance	Rust, Leaf spot	Leaf spot, Rust, Summer patch, Dollar spot
Recovery capacity	Excellent	Excellent
Traffic tolerance	Excellent	Excellent
Heat tolerance	Low	Low
Mowing height	3-30 mm	Tolerates 7 mm
Mowing frequency	Low	Medium to low
Irrigation needs	High	High
Endophyte-enhanced	No	No



## QUASAR

### >> Smooth transition

- Very small seed size, allowing for easy overseeding on surfaces going dormant.
- Fast to establish in low temperatures.
- Dark green color and upright growth.
- Excellent spring transition.



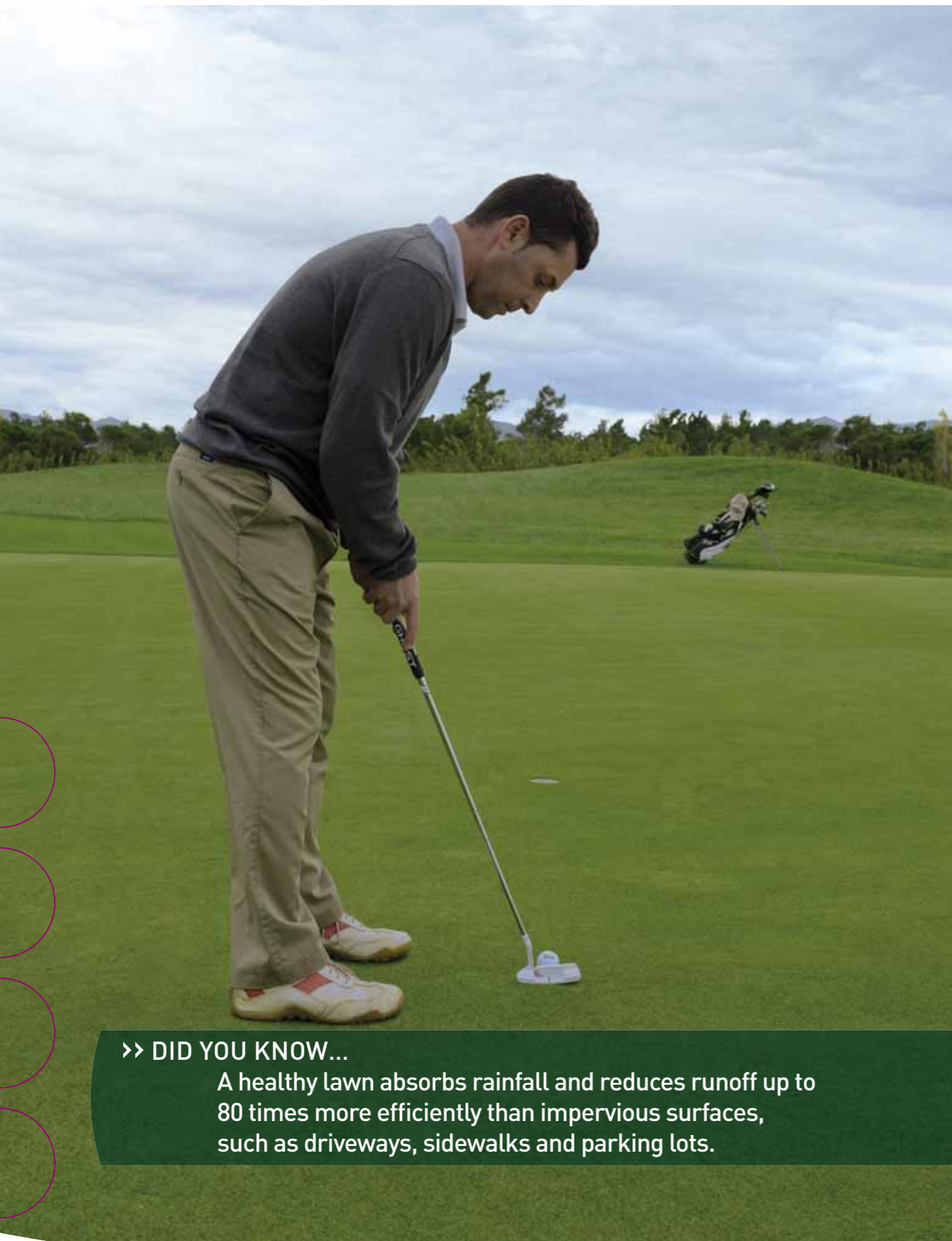
## WINTERWAY

### >> Very fast

- Green surface quality.
- Maximum density.
- Excellent traffic resistance.
- Highly shade-tolerant.





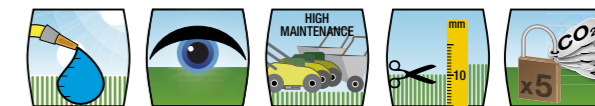


» DID YOU KNOW...

A healthy lawn absorbs rainfall and reduces runoff up to 80 times more efficiently than impervious surfaces, such as driveways, sidewalks and parking lots.

# Creeping Bentgrass

(*Agrostis stolonifera*)



Cool-season (C3) fine-textured grass with aggressive stoloniferous dense-growth habit. Susceptible to thatch problems. Pointed leaf tip.

Tolerance to very low mowing heights. High maintenance is required.

**Strengths of SEMILLAS FITÓ varieties**

- Upright growth, grainless.
- Moderate maintenance. Allows correction of maintenance deficiencies.
- Very persistent in summer.
- Excellent resistance to common lawn diseases.
- Great ability to fill in ball marks and avoid annual bluegrass encroachment.

**Uses:**

- Greens, tees, fairways, tennis courts, high-maintenance lawns.



CREeping BENTGRASS	TEEONE (T-1)	50% PENN A1 + 50% PENN A4	007 DSB	13 M	MARINER
Type	High density	High density	Medium to high density	Medium to high density	Dry-arid climate
Use	Greens, Tees	Greens, Tees	Greens, Tees, Fairways	Greens, Tees, Fairways	Greens, Tees, Fairways
Seeding rate g/m <sup>2</sup>	5-8	5-8	5-8	5-8	5-8
Overseeding rate g/m <sup>2</sup>	5-15	5-15	5-15	5-15	5-15
Seeds per gram	14.640	7.017	14.000	13.200	12.600
Days to germination	2-5	4-8	3-5	3-5	3-7
Color	Dark bluish	Dark green	Dark bright	Dark bright	Dark bright
Establishment	Very fast	Moderate	Fast	Fast	Very fast
Growth	Upright	Upright	Upright	Upright	Upright-postrate
Leaf texture	Fine	Fine	Fine	Fine	Medium
Endophyte-enhanced	Yes	Yes	Yes	Yes	Yes
Fertilizing needs	Low	Low	Moderate	Moderate	High
Thatch tendency	Moderate to high	High	Moderate	Moderate	Moderate
Topdressing and verticutting needs	High	Very high	Moderate	Moderate	Moderate
Ballmarks recovery	Very fast	Moderate	Fast	Fast	Slow
Shade tolerance	Moderate to high	Moderate	Moderate	Moderate	Moderate
Winter-active growing	Excellent	Moderate	Excellent	Excellent	Low
Dollar spot resistance	Moderate	Moderate	Excellent	Excellent	Low
Brown patch resistance	Moderate	Moderate	Excellent	Excellent	Low
Poa annua resistance	Excellent	High	Excellent	Excellent	Moderate
Traffic tolerance	Excellent	Excellent	Excellent	Excellent	Moderate
Summer stress tolerance	High	High	Excellent	Excellent	Moderate
Bentgrass blood-scalp	No	Light	No	Moderate	Moderate
Mowing height	3-5 mm	3-5 mm	3-6 mm	3-6 mm	3-7 mm
Irrigation needs	High	High	Moderate	Moderate	Moderate
Salt tolerance	High	High	Excellent	Moderate	Moderate



## Ultradwarf varieties for greens

### TEEONE (T-1)

#### >> Forgiving bent

- First-class greens without first class maintenance. For greens, tees, fairways.
- Rapid repair of ball marks and divots.
- Rich green color.
- Best dollar spot resistance.
- Visible crowding out of Poa annua every year.



### 50%PENN A-1 + 50%PENN A-4

#### >> The safe blending

- It brings together PENN A1+PENN A4 advantages and synergies.
- It comes with a special coating that ensures water absorption in the worst conditions, improving rate and germination speed.
- Fastest germination.
- It can be seeded in less-than-ideal soil conditions.

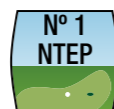


## High density variety with moderate inputs for greens, tees, fairways

### 007 DSB

#### >> Reduced fungicide use

- No. 1 NTEP for greens, tees and fairways (bred from L-93 and Southshore).
- Enhanced Dollar spot and brown patch resistance.
- Vigorous, uniform, moderately dense growth.
- Excellent winter color with no purpling.
- Heat-tolerant. Ideal for stress conditions. Reduced maintenance costs.



### 13 M

#### >> Superb disease tolerance

- Moderate maintenance needs.
- Superb disease pressure performance includes dollar spot, brown patch, pythium and microdochium patch.
- Excellent for interseeding in greens.
- Less prone to thatch build up.



## Variety for tees, fairways

### MARINER

#### >> Salt-tolerant

- Bred from plants corresponding to SEASIDE.
- Excellent uniformity, turf performance, heat and drought resistance.
- Ideal for greens, tees and fairways.
- Very persistent in summer stress conditions.



## Other Bents

### Agrostis Castellana

Cool-season grass (C3), coarse-textured.

This bunch grass has short stolons and rhizomes that give it a weakly creeping habit well-adapted to temperate-oceanic climates.

#### Uses:

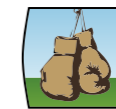
- Low-cost roadside and utility lawns.

### HIGHLAND

Dryland bentgrass

#### >> Standard

- Coarse and poor cultivar.
- For landscape uses.



### Agrostis Tenuis

Cool-season grass (C3), vertical growth but weaker lateral growth habit.

Keeps better color than creeping bent in winter time.

More susceptible to heat stress and brown patch.

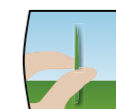
#### Uses:

- Very aesthetic lawn mixtures in coastal oceanic-temperate areas. Greens in the same regions.

### ABERROYAL

#### >> Sustainable turf

- Excellent winter performance.
- Bright green color.
- Excellent Dollar spot resistance.
- Wear-tolerant.
- Mowing height from 10 mm.





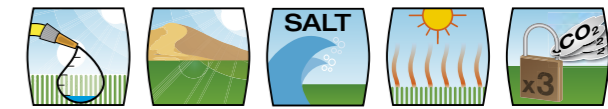


>> DID YOU KNOW...

Turfgrass is highly adapted to reclaimed and saline water irrigation and to high levels of nitrogen, phosphorus and other fertilizers.

# Bermudagrass

(Cynodon dactylon)



Warm-season grass (C4) adapted to a wide range of soils. A minimum temperature of 18°C in the soil is needed for germination. Goes dormant below 10-12°C.

Lateral growth by stolons and rhizomes.

Highly tolerant to heat, salt, drought and traffic conditions.

**Strengths of SEMILLAS FITO varieties**

- Shorter dormancy period and earlier green-up in spring time.
- Shorter internodes distance.
- TIFWAY 4-19 quality with fewer cultivation needs.
- Very tolerant to cold. Can be used far from the coast in cold areas.

**Uses:**

- Sports fields, football, soccer, tees, fairways, rough, racetracks, polo fields. Sustainable lawns with very low water consumption.



BERMUDAGRASS	GOBI	RIVIERA
Seeding rate g/m <sup>2</sup>	10-15	5-15
Overseeding rate g/m <sup>2</sup>	10	10
Seeds per gram	2.200	1.860
Days to germination	5	7-10
Recommended planting dates	Late spring, summer	Late spring, summer
Color	Bright green	Dark green
Establishment	Very fast	Average
Growth	Fast	Slow
Leaf texture	Medium	Fine
Spreading activity	Rhizomes, stolons	Rhizomes, stolons
Maintenance	Moderate to low	Moderate
Fertilizing needs	Low	Low
Shade tolerance	Low	Moderate
Winter dormancy	Below 12° C	Below 9° C
Cold tolerance	High	Excellent
Disease resistance	Spring dead spot	Spring dead spot, Dollar spot
Recovery capacity	Excellent	Excellent
Traffic tolerance	High	Excellent
Heat tolerance	Excellent	Excellent
Mowing height	Tolerates 15 mm	Tolerates 10-30 mm
Mowing frequency	Moderate	Low
Drought tolerance	Excellent	Excellent
Salt tolerance	High	Excellent



**GOBI**

**>> Very fast**

- Mediterranean type with unbeatable drought and salt tolerance.
- Fast establishment with great recovery capacity.
- Less thatchy.
- Mowing height from 10 mm.

Can be used as a single variety or mixed either with cool-season varieties (i.e. COSTA mixture) or with Bermuda RIVIERA to improve quality and density.

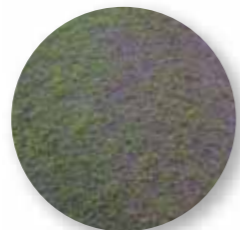
Suited for landscaping, public and private lawns, sport fields, roughs,...



**RIVIERA**

**>> Cold-resistant**

- TIFWAY 4-19 quality with fewer cultivation needs.
- The earliest spring green-up variety in the market.
- Outstanding wear tolerance.
- Dead spot-resistant.
- Very few seedheads.
- Saves up to 30% of water compared to TIFWAY 4-19.



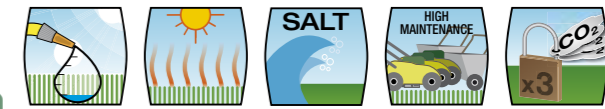
14 days after seeding



Suited for tees, fairways, roughs, sports fields and high-quality public and private lawns.



**Seashore Paspalum, Knot Grass (Paspalum vaginatum)**



Warm-season grass (C4) forming a dense, fine textured turf. A minimum temperature of 18°C in the soil is needed for germination. It goes dormant below 4°C, depending on crop management.

Rhizomatous and stoloniferous growth habit.

Outstanding salt tolerance.

**Strengths of SEMILLAS FITÓ varieties**

- Quick establishment. Our technology ensures easier and faster germination.
- Less prone to thatch accumulation.
- Easy to manage.
- Fine leaf texture.

**Uses:**

- Salty areas. Reclaimed water irrigation areas, soccer fields, racetracks, polo fields, greens, tees, fairways, rough, public and private lawns.
- Should be sown alone with temperatures above 18°C in the soil.



**SEA SPRAY**



**>> Sustainable turf, salt-resistant**

- Sea Spray can withstand saline soils and effluent water once established.
- Mature turf can tolerate up to 25.000 ppm when managed correctly.
- Goes dormant more slowly than Bermuda.
- Sea Spray is a deeper green similar to Kentucky bluegrass.
- More shade-tolerant than Bermuda with fewer nitrogen needs.
- Needs very specific fertilization high in Ca and Mn.



PASPALUM VAGINATUM	SEA SPRAY
Seeding rate g/m <sup>2</sup>	5
Overseeding rate g/m <sup>2</sup>	10
Seeds per gram	923
Days to germination	7-10
Recommended planting dates	Summer
Color	Dark green
Establishment	Moderate
Growth	Slow, mainly rhizomatous
Leaf texture	Fine
Spreading activity	Rhizomes and stolons
Maintenance needs	Moderate to high
Fertilizing needs	Low in Nitrogen. Calcium and Manganese are very important
Shade tolerance	Moderate
Winter dormancy	Below 0° C depending of management
Disease resistance	Spring dead spot, Dollar spot
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	5-30 mm
Mowing frequency	Moderate to low
Drought tolerance	Very high
Salt tolerance	Tolerates up to 25.000 ppm



# Kikuyu

(*Pennisetum clandestinum*)



Medium to coarse-textured, light green warm-season grass (C4) spreading by vigorous rhizomes and stolons. It needs a minimum of 18°C in the soil for germination and goes dormant below 4-5°C.

Maximum tolerance to drought.

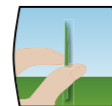
Must be sown alone or mixed with a starter variety like perennial ryegrass or fine fescue.



**Uses:**

- Seaside salt-affected soils where only low-quality water is available. Public and private lawns, sports fields, rights of way,...

## AZ-1



**>> Less thatchy**

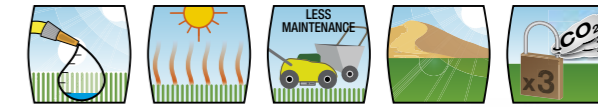
- Longer vegetative period. No dormancy close to the sea on the Mediterranean coast during winter.
- Finer stolons, less prone to seed heads.
- Spring dead spot- and brown patch resistant.



KIKUYU	AZ-1
Seeding rate g/m <sup>2</sup>	5-15
Overseeding rate g/m <sup>2</sup>	10
Seeds per gram	515
Days to germination	7-10
Recommended planting dates	Summer
Color	Medium to dark
Establishment	Fast
Growth	Fast
Leaf texture	Coarse
Spreading activity	Rhizomes and stolons
Maintenance	Moderate
Fertilizing needs	Low
Shade tolerance	Moderate-High
Winter dormancy	Below 4° C
Disease resistance	Spring dead spot, Brown patch
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	5-30 mm
Mowing frequency	Moderate-High
Drought tolerance	Very high
Salt tolerance	Excellent

# Zoysiagrass

(*Zoysia japonica*)



Medium-textured, slow-growing, warm-season (C4) grass that spreads by stolons and rhizomes.

Adapted to tropical and subtropical climates. Needs a minimum temperature of 18°C in the soil to germinate and goes dormant below 10°C.

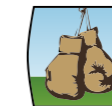
Maximum tolerance to heat, drought and salinity conditions. Sustainable turf. Must be sown alone with 25°C in the soil to speed up germination.



**Uses:**

- Sustainable turf. Public and private lawns looking for low maintenance, less mowing, regular wear, shade, minimum water availability and less input.

## ZENITH



**>> Easier to establish**

- Medium leaf texture.
- Faster to establish than any vegetative variety: 3-4 months in summertime conditions.
- Outstanding drought tolerance.
- 4-5 mowings per year are enough.



Zoysia tenuifolia.



ZOYSIA JAPONICA	ZENITH
Seeding rate g/m <sup>2</sup>	5-15
Overseeding rate g/m <sup>2</sup>	10
Seeds per gram	1.409
Days to germination	14-35
Recommended planting dates	Summer
Color	Medium to dark
Establishment	Slow
Growth	Slow
Leaf texture	Medium
Spreading activity	Rhizomes and stolons
Maintenance	Very low
Fertilizing needs	Very low
Shade tolerance	Moderate to high
Winter dormancy	Below 7° C
Disease resistance	Spring dead spot, Brown patch
Recovery capacity	High
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	10-30 mm
Mowing frequency	Very low
Drought tolerance	Very high
Salt tolerance	Excellent

# Weeping lovegrass

(*Eragrotis curvula* Schab.)

Warm season grass(C4). Perennial bunchgrass typically grown in light, coarse soils forming a large tuft with long narrow drooping leaves. Seed head formation occurs in long stems reaching 1 m. Seeds form on panicles.

## ERMELO

### » Ornamental without maintenance

- Easy to establish.
- No irrigation needs.
- 2-3 mowings/year.
- Very aggressive against other weeds.

Uses: As ornamental grass for Out Rough purposes in mediterranean, tropical, desert and mild climates.



# Dichondra Repens

A soft, green, ground-hugging and broad-leafed plant used as turf in most areas where winter temperatures do not drop below 0°C.

Produces a mat of small, round leaves. It spreads by surface runners and underground runners.

When planted in sunny areas, it keeps low and tight. Grown in shade it can reach 16 cm. It has a lush uneven appearance. Must be planted alone when the soil temperature reaches 20°C.

### Uses:

- Sustainable turf, sun-shade, underneath, areas with very low mowing needs. Ornamental.



DICHONDRA REPENS	COMUN
Seeding rate g/m <sup>2</sup>	5-15
Overseeding rate g/m <sup>2</sup>	10
Seeds per gram	236
Days to germination con 30°C	7-21
Recommended planting dates	Summer
Color	Bright green
Establishment	Slow
Growth	Slow
Leaf texture	Broad-leafed
Spreading activity	Runners
Maintenance	Very low
Fertilizing needs	Low
Shade tolerance	High
Winter dormancy	No in coastal areas
Disease resistance	Poor
Recovery capacity	High
Traffic tolerance	Poor
Heat tolerance	High
Mowing height	Tolerates 10 mm
Mowing frequency	Very low
Drought tolerance	Low
Salt tolerance	Low



# Buffalo grass

(*Bouteloua dactyloides*)

## NUSTAR

### » Lowest maintenance needs

- Sustainable.
- No mowing needs.
- Suited for continental extreme temperatures.
- Outstanding drought and heat tolerance.
- Not tolerant to traffic and shade.

Uses: Well suited for Out Rough and low maintenance areas in continental weather conditions.

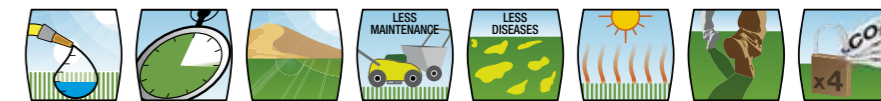


## Alternative warm-season grasses (C4)

	BOUTELOUA DACTYLOIDES	ERAGROSTIS CURVULA	EREMOCHLOA OPHIUROIDES	PASPALUM NOTATUM	STENOTAPHRUM SECUNDATUM	ZOYSIA TENUIFOLIA
Variety	NUSTAR	ERMELO	TIFFBLAIR	PENSACOLA	SAN AGUSTIN GRASS	-
Seeding rate g/m <sup>2</sup>	100 kg/ha	5	5-10	30-45	Vegetative	Vegetative
Overseeding rate g/m <sup>2</sup>	100 kg/ha	10	10	50	Vegetative	Vegetative
Seeds per gram	605	3.000	110	440	Vegetative	Vegetative
Days to germination 30°C	30	10-20	10-20	7-21	Vegetative	Vegetative
Recommended planting dates	Summer	Summer	Late spring-Summer	Summer	Vegetative	Vegetative
Color	Medium	Medium	Medium	Medium	Dark green	Light green
Establishment	Very slow	Moderate	Moderate	Moderate	Slow	Very slow (1-2 years)
Growth	Very slow	Moderate	Moderate	Fast	Slow	Very slow
Leaf texture	Fine	Fine	Medium	Coarse	Very coarse	Very fine
Spreading activity	No	Rhizomes	Stolons	Short rhizomes	Stolons	Rhizomes
Maintenance	Very low	Very low	Very low	Low	Low	Very low
Fertilizing needs	Very low	Low	Moderate	Moderate	Moderate	Very low
Mowing frequency	Very low	Low	Low	Low	Very low	No mowing
Mowing height	Tolerates 50 mm	20-50 mm	30-50 mm	30-50 mm	10-30 mm	-
Shade tolerance	Very low	Very low	Very low	Very low	Moderate	Moderate
Winter dormancy	Below 12°C	Below 12°C	Below 12°C	Below 12°C	Below 5°C	Below 0°C
Disease resistance	-	-	Brown patch	-	-	-
Recovery capacity	Very low	High	Very high	Low	High	Very low
Traffic tolerance	Very low	Moderate	Moderate	Moderate	High	Moderate
Heat tolerance	Very high	Very high	Very high	High	High	Very high
Drought tolerance	Very high	Very high	Very high	Very high	Moderate	Very high
Salt tolerance	Moderate	Excellent	Excellent	Moderate to high	Moderate	Very high



# SPARRING mixture



## >> Compact and persistent

- Our most popular blend for the field, with the best performance, providing endurance and excellent recovery.
- Medium to low cultivation needs. Low mowing and fungicide needs.
- High tolerance to heat, drought and salinity.
- Water savings of up to 30% compared to standard cool-season mixtures.

Mixture with **Tall Fescue** as a dominant species. (medium leaf texture)

Composition	% weight	% seed count
Festuca arundinacea FIRACES	30%	25%
Festuca arund. GOLDEN GATE	30%	23%
Festuca arundinacea TURBO RZ	25%	19%
Poa pratensis RUGBY 2	5%	22%
Lolium perenne RINOVO	10%	11%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

- Public and private lawns, football, soccer, racetracks, polo fields, roughs, pitch&putt fairways. Sod production.

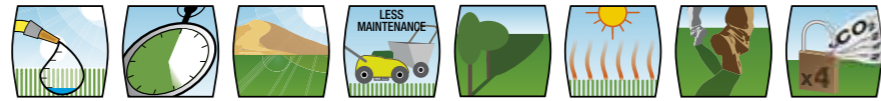


TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	35
Overseeding rate g/m <sup>2</sup>	40-50
Seeds per gram	730
Days to germination	7-12
Recommended planting dates	Spring, end of summer, fall
Color	Dark green
Establishment rate	Medium
Growth	Slow
Leaf texture	Medium
Spreading activity	Yes
Maintenance	Low
Fertilizing needs	Low
Shade tolerance	Moderate
Winter dormancy	No
Disease resistance	Excellent
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	20-30 mm
Mowing frequency	Low
Irrigation needs	Low
Salinity tolerance	High





# RESISTENTE mixture



## >> Resistant

- Popular blend for the field, requiring low maintenance but still one of the best in performance and uniformity.
- 30% less water is needed and 50% of mowing compared to standard cool-season grass.
- With the incorporation of bluegrass for better recovery and the higher density of a well-knitted turf look, dark green in both sun and shade uses.

Mixture with **Tall Fescue** as a dominant species. (medium leaf texture)

Composition	% weight	% seed count
Festuca arundinacea TURBO RZ	30%	21%
Festuca arundinacea MERIDA	30%	22%
Festuca arundinacea PATRON	30%	22%
Poa pratensis PRAFIN	10%	35%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

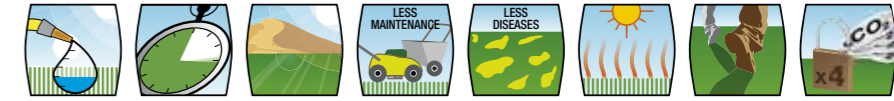
- Golf rough, racetracks, polo fields, rugby, sustainable turf with low input and best endurance. The most popular sod mixture.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	40
Overseeding rate g/m <sup>2</sup>	50
Seeds per gram	719
Days to germination	10-15
Recommended planting dates	Spring, end of summer, fall
Color	Very dark
Establishment rate	Slow
Growth	Very slow
Leaf texture	Medium
Spreading activity	Yes
Maintenance	Low
Fertilizing needs	Very low
Shade tolerance	High
Winter dormancy	No
Disease resistance	Excellent
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	Tolerates 25 mm
Mowing frequency	Very low
Irrigation needs	Low
Salinity tolerance	High



# STRONG mixture



## >> Outstanding generation of tall fescues for sport

- Low maintenance and with regenerating ability.
- Fine leaf texture and dark green color.
- Excellent recovery under traffic stress.
- 30% water use savings.
- Extreme shade and heat tolerant.
- Good winter activity.
- Mowing height down to 10 mm.

Mixture with **Tall Fescue** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Festuca arundinacea PATRON	50%	49%
Festuca arundinacea GOLDEN GATE	25%	26%
Festuca arundinacea TERRANO (Rhizomatous)	25%	24%

Packaging: 25 kg

### Uses:

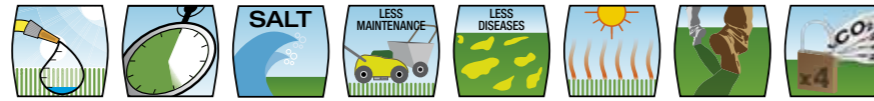
- Soccer fields, fairways and rough, racetrack, polo fields, public and private lawns.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	45
Overseeding rate g/m <sup>2</sup>	50
Seeds per gram	495
Days to germination	7-12
Recommended planting dates	Spring - Fall
Color	Dark green
Establishment rate	Medium
Growth	Slow
Leaf texture	Fine
Spreading activity	Yes
Maintenance	Low
Fertilizing needs	Low
Shade tolerance	High
Winter dormancy	No
Disease resistance	Excellent
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	Down to 10 mm
Mowing frequency	Low
Irrigation needs	Low
Salinity tolerance	High



# COSTA mixture



## >> For drought and salinity

- Specific blend for the Mediterranean coast or warm inland areas.
- 50% less irrigation needed compared to traditional cool-season grasses. The Mediterranean tall fescues and cold-tolerant bermuda grass ensure good winter activity.
- Able to recover 100% after gaps with no irrigation at all.
- Excellent in sunny areas, partial shade, heat, drought and salinity conditions.

Mixture with **Tall Fescue** as a dominant species. (medium leaf texture)

Composition	% weight	% seed count
Festuca arundinacea TURBO RZ	35%	19%
Festuca arundinacea MERIDA	35%	19%
Poa pratensis RUGBY 2	10%	30%
Lolium perenne SUN	10%	7%
Cynodon dactylon GOBI	10%	25%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

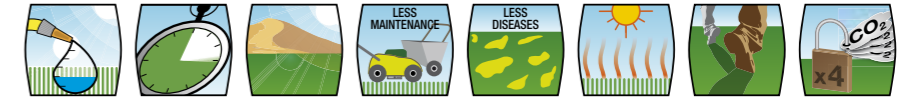
- Public and private lawns, football, soccer, racetracks, polo fields, roughs, pitch&putt fairways. Sod production.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25-35
Overseeding rate g/m <sup>2</sup>	50
Seeds per gram	906
Days to germination	7-15
Recommended planting dates	Spring, end of summer, fall
Color	Dark green
Establishment rate	Medium
Growth	Slow
Leaf texture	Medium
Spreading activity	Yes
Maintenance	Low
Fertilizing needs	Very low
Shade tolerance	Moderate
Winter dormancy	No
Disease resistance	Excellent
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Excellent
Mowing height	From 25 mm
Mowing frequency	Low
Irrigation needs	Very low
Salinity tolerance	Excellent



# SPORT mixture



## >> Traffic-resistant

- An excellent mixture designed for fast establishment including new-generation persistent varieties.
- Varieties adapted to low mowing heights and very stressful climatic and traffic situations.
- The result is a high-density bluegrass stand with the advantages of ryegrass.

Mixture with **Lolium Perenne** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Lolium perenne SILVER DOLLAR	30%	14%
Lolium perenne RINGLES	20%	9%
Lolium perenne RINOVO	20%	11%
Poa pratensis NUGLADE	10%	21%
Poa pratensis RUGBY 2	20%	45%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

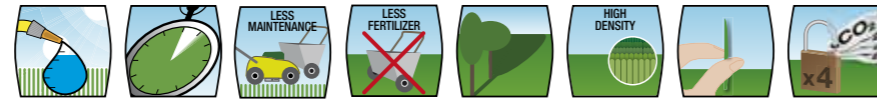
- High-end athletic fields, fairways, tees, soccer fields, polo, rugby, tennis courts, parks and recreational areas with medium to high maintenance.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25-35
Overseeding rate g/m <sup>2</sup>	40-50
Seeds per gram	1.189
Days to germination	5-10
Recommended planting dates	Spring - Fall
Color	Bright green
Establishment rate	Fast
Growth	Moderate
Leaf texture	Fine
Spreading activity	Yes
Maintenance	Moderate
Fertilizing needs	High
Shade tolerance	Low
Winter dormancy	No
Disease resistance	High
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Good
Mowing height	From 10 mm
Mowing frequency	Moderate
Irrigation needs	Moderate
Salinity tolerance	High



# ORNAMENTAL mixture



## >> Fine-textured

- Aesthetic, fine-textured mixture with medium to low maintenance needs.
- Quick laying on the field.
- Wear and shade-tolerant. Easy recovery.
- Prefers temperate to cold climate though the advanced varieties are also heat-tolerant.

Mixture with **Lolium Perenne** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Lolium perenne RINGLES	25%	15%
Lolium perenne SUN	25%	17%
Festuca rubra trichophylla LIBANO	20%	22%
Festuca rubra rubra RUF1	20%	17%
Poa pratensis RUGBY 2	10%	29%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

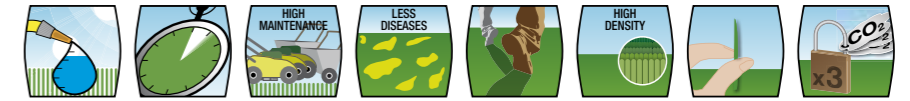
- Public and private lawns, golf fairways, tees.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25-35
Overseeding rate g/m <sup>2</sup>	40-50
Seeds per gram	918
Days to germination	5-8
Recommended planting dates	Spring - Fall
Color	Bright green
Establishment rate	Fast
Growth	Moderate
Leaf texture	Very fine
Spreading activity	Yes
Maintenance	Moderate
Fertilizing needs	Moderate
Shade tolerance	Moderate
Winter dormancy	No
Disease resistance	Moderate
Recovery capacity	Good
Traffic tolerance	Good
Heat tolerance	Moderate
Mowing height	Tolerates 15 mm
Mowing frequency	Moderate
Irrigation needs	Moderate
Salinity tolerance	Moderate



# REPOBLADOR mixture



## >> Quick and easy

- Great mix that offers the benefits of quick germination with a latest-generation ryegrass that withstands tough wear throughout the playing season.
- Excellent for filling in damaged areas in any mixture or situation.
- Can be used to regenerate any turfgrass seed mixture.

Mixture with **Lolium Perenne** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Lolium perenne LOVER	30%	30%
Lolium perenne RINGLES	40%	38%
Lolium perenne SUN	30%	32%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

- Overseeding of warm-season grasses, interseeding on any turfgrass mixture. Basic mixture for soccer fields, athletics fields, tennis courts, fairways, tees and quick-establishment lawns.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25
Overseeding rate g/m <sup>2</sup>	50
Seeds per gram	573
Days to germination	3-7
Recommended planting dates	All year
Color	Dark green
Establishment rate	Very fast
Growth	Fast
Leaf texture	Fine
Spreading activity	No
Maintenance	Moderate
Fertilizing needs	High
Shade tolerance	Low
Winter dormancy	No
Disease resistance	High
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Good
Mowing height	8-20 mm
Mowing frequency	High
Irrigation needs	High
Salinity tolerance	High



# CREEPING RYE mixture



## >> 100% Regenerating Perennial ryegrass blend

- Unique tough, traffic tolerant, regenerating perennial rye blend.
- The mixture of 3 unique varieties with stoloniferous characteristics with outstanding persistence, dark green color and diseases tolerance.
- Excellent for filling in worn areas in any mixture or situation.
- Can be used for regenerating any turfgrass mixture.

Mixture with **Lolium Perenne** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Lolium perenne NEW ORLEANS	50%	50%
Lolium perenne RINOVO	25%	28%
Lolium perenne FIESTA 4	25%	22%

Packaging: 25 kg

### Uses:

- Overseeding of warm-season grasses, interseeding on any turfgrass mixture. Basic mixture for soccer fields, athletics fields, tennis courts, fairways, tees and quick-establishment lawns.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	20
Overseeding rate g/m <sup>2</sup>	30
Seeds per gram	513
Days to germination	3-7
Recommended planting dates	All year
Color	Dark green
Establishment rate	Very fast
Growth	Fast
Leaf texture	Fine
Spreading activity	No
Maintenance	Moderate to high
Fertilizing needs	High
Shade tolerance	Low
Winter dormancy	No
Disease resistance	High
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	High
Mowing height	8-20 mm
Mowing frequency	High
Irrigation needs	High
Salinity tolerance	High



# RESIEMBRA mixture



## >> Quick

- Single-species mixture based on advanced perennial ryegrass varieties. It is able to germinate without being covered.
- Excellent for filling in poor areas at any time and location.
- Easy to apply. Seed coated, heavy, colored and treated against fungi, ants and birds. Fewer wind problems.

Mixture with **Lolium Perenne** as a dominant species. (fine leaf texture)

Composition	% weight	% seed count
Lolium perenne LOVER	30%	30%
Lolium perenne RINGLES	40%	38%
Lolium perenne SUN	30%	32%

Packaging: 1 kg

### Uses:

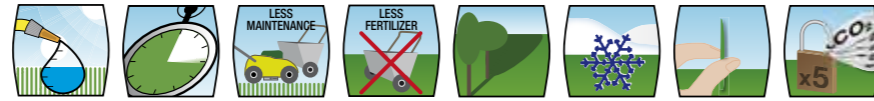
- Overseedings, interseedings.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25
Overseeding rate g/m <sup>2</sup>	50
Seeds per gram	534
Days to germination	3-7
Recommended planting dates	All year
Color	Dark green
Establishment rate	Very fast
Growth	Fast
Leaf texture	Fine
Spreading activity	No
Maintenance	Moderate
Fertilizing needs	High
Shade tolerance	Low
Winter dormancy	No
Disease resistance	High
Recovery capacity	Excellent
Traffic tolerance	Excellent
Heat tolerance	Good
Mowing height	8-20 mm
Mowing frequency	High
Irrigation needs	High
Salinity tolerance	High



# SOMBRA mixture



## >> Aesthetic for shade

- Fine-textured mixture specially designed for shaded areas.
- Moderate mowing and fertilizing needs.
- Fair wear tolerance.
- Prefers temperate climate though it can be used in warm areas.

Mixture with **Fine Fescue** as a dominant species. (very fine leaf texture)

Composition	% weight	% seed count
Lolium perenne RINGLES	20%	13%
Festuca rubra rubra RUF1	40%	37%
Festuca rubra rubra JASPERINA	20%	26%
Festuca rubra commutata ZODIAC	20%	24%

Packaging: 1 kg, 5 kg and 25 kg

### Uses:

- Public and private lawns in shady location. Golf fairways.



TURF PERFORMANCE SCORES	
Seeding rate g/m <sup>2</sup>	25
Overseeding rate g/m <sup>2</sup>	35
Seeds per gram	786
Days to germination	5-8
Recommended planting dates	Spring - Fall
Color	Bright green
Establishment rate	Medium
Growth	Slow
Leaf texture	Very fine
Spreading activity	Yes
Maintenance	Moderate
Fertilizing needs	Moderate
Shade tolerance	High
Winter dormancy	No
Disease resistance	High
Recovery capacity	Low
Traffic tolerance	Moderate
Heat tolerance	Moderate
Mowing height	From 15 mm
Mowing frequency	Low
Irrigation needs	Moderate
Salinity tolerance	Moderate



# Mixtures

CHARACTERISTICS	SPARRING	RESISTENTE	STRONG	COSTA	SPORT	ORNAMENTAL	REPOBLADOR	CREEPING RYE	RESIEMBRA	SOMBRA
Seeding rate g/m <sup>2</sup>	35	40	45	25-35	25-35	25-35	25	20	25	25
Overseeding rate g/m <sup>2</sup>	40-50	50	50	50	40-50	40-50	50	30	50	35
Seeds per gram	730	719	495	906	1.189	918	573	513	534	786
Days to germination	7-12	10-15	7-12	7-15	5-10	5-8	3-7	3-7	3-7	5-8
Recommended planting dates	Spring, end of Summer, Fall	Spring, end of Summer, Fall	Spring - Fall	Spring, end of Summer, Fall	Spring - Fall	Spring - Fall	All year	All year	All year	Spring - Fall
Color	Dark green	Very dark	Dark green	Dark green	Dark green	Bright green	Dark green	Dark green	Dark green	Bright green
Establishment rate	Medium	Slow	Medium	Medium	Fast	Fast	Very fast	Very fast	Very fast	Medium
Growth	Slow	Very slow	Slow	Slow	Moderate	Moderate	Fast	Fast	Fast	Slow
Leaf texture	Medium	Medium	Fine	Medium	Fine	Very fine	Fine	Fine	Fine	Very fine
Spreading activity	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Maintenance	Low	Low	Low	Low	Moderate	Moderate	Moderate	Moderate to high	Moderate to high	Moderate
Fertilizing needs	Low	Very low	Low	Very low	High	Moderate	High	High	High	Moderate
Shade tolerance	Moderate	High	High	Moderate	Low	Moderate	Low	Low	Low	High
Winter dormancy	No	No	No	No	No	No	No	No	No	No
Disease resistance	Excellent	Excellent	Excellent	Excellent	High	Moderate	High	High	High	High
Recovery capacity	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Low
Traffic tolerance	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Moderate
Heat tolerance	Excellent	Excellent	Excellent	Excellent	Good	Moderate	Good	High	Good	Moderate
Mowing height	20-30 mm	Tolerates 25 mm	Down to 10 mm	From 25 mm	From 10 mm	From 15 mm	8-20 mm	8-20 mm	8-20 mm	From 15 mm
Mowing frequency	Low	Very low	Low	Low	Moderate	Moderate	High	High	High	Low
Irrigation needs	Low	Low	Low	Very low	Moderate	Moderate	High	High	High	Moderate
Salinity tolerance	High	High	High	Excellent	High	Moderate	High	High	High	Moderate

MIXTURES

# Jardín Florido (Wild Flowers)



>> **Explosion of color**

## Jardín Florido USO GENERAL

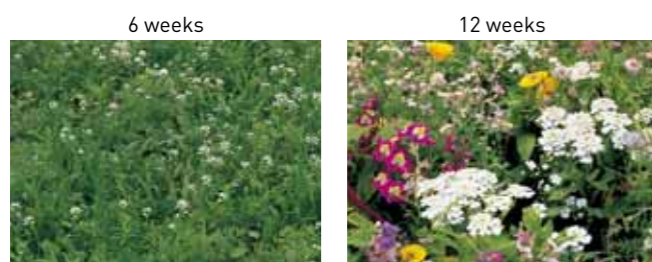
- Wild flowers.
- 60-80 cm height.

**Composition:**  
 Iberis umbellata, Delphinium ajacis, Centaurea cyanus, Calendula arvensis, Linum perenne, Lavatera maritima, Dianthus barbatus, Malcomia maritima, Papaver rhoeas, Chysanthemum coronarium, Hesperis matronalis, Alyssum saxatile, Lobularia maritima, Festuca ovina...

**Packaging:**  
 10 g (4 m<sup>2</sup>), 100 g (40 m<sup>2</sup>), 1 kg (400 m<sup>2</sup>)

**Uses:**

- Flower spots.



## Jardín Florido ENANO

- Wild flowers.
- 20-30 cm height.

**Composition:**  
 Nemophila maculata, Iberis umbellata, Cheiranthus allioni, Eschscholtzia californica, Bellis perennis, Silene pendula, Viola cornuta, Alyssum saxatile, Lasthenia glabrata, Malcomia maritima, Sanvitalia procumbens, Wedelia trilobata, Arctoctis stoechadifolis, Dianthus deltoides, Lobularia maritima, Saponaria pumilla, Festuca ovina...

**Packaging:**  
 10 g (4 m<sup>2</sup>), 100 g (40 m<sup>2</sup>), 1 kg (400 m<sup>2</sup>)

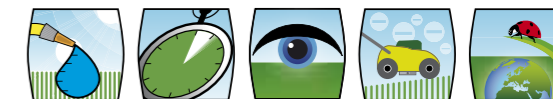
**Uses:**

- Dwarf flower spots.



JARDÍN FLORIDO	Seeding rate g/m <sup>2</sup>	Days to germination	Recommended planting dates	Color	Maintenance	Fertilizing needs	Shade tolerance	Drought tolerance	Salt tolerance	Mowing height	Mowing frequency	Traffic tolerance	Plant height	Pollinator mixture
USO GENERAL	2-3 g	15-20	Mainly spring and fall	Yellow, blue, white, red, purple, rose	Low	Low	Moderate	Low	Low	-	Twice a year after blooming	No	60 cm	Excellent
ENANO	2-3 g	15-20		Yellow, blue, white	Low	Low	Moderate	Low	High	-	No	10-30 cm	Excellent	

# Césped Florido (Meadow Mix)



>> **Turf and flower harmony**

## Césped Florido USO GENERAL

- Wild flowers with low-maintenance grasses.
- 60-80 cm maximum height without traffic.

**Composition:**  
 Adonis aestivalis, Cynoglossum amabile, Gypsophila elegans, Cheiranthus cheiri, Linum perenne, Aquilegia vulgaris, Calendula officinalis, Centaurea cyanus, Iberis amara, Malcomia maritima, Papaver rhoeas, Dianthus chinensis, Linaria maroccana, Papaver nudicaule, Alyssum saxatile, Glebionis coronarium, Rudbeckia hirta, Leucanthemum vulgare, Festuca rubra trichophylla LIBANO, Festuca ovina duriuscula PASHMINA.

**Packaging:**  
 500 g (20 m<sup>2</sup>), 10 kg

**Uses:**

- Areas with grass scattered with flowers.



## Césped Florido ENANO

- Wild flowers with low-maintenance grasses.
- 20 cm maximum height with light traffic.

**Composition:**  
 Lobularia maritima, Saponaria ocymoides, Verbena tenuisecta, Viola cornuta, Cerastium biebersteinii, Bellis perennis, Thymus serpyllum, Festuca rubra trichophylla LIBANO, Festuca ovina duriuscula PASHMINA.

**Packaging:**  
 500 g (20 m<sup>2</sup>), 10 kg

**Uses:**

- Grass scattered with flowers with low-maintenance needs, outcrops, low-maintenance gardens where a wide range of colors is desired.



CÉSPED FLORIDO	Seeding rate g/m <sup>2</sup>	Days to germination	Recommended planting dates	Color	Maintenance	Fertilizing needs	Shade tolerance	Tolerance a la sequia	Salt tolerance	Mowing height	Mowing frequency	Traffic tolerance	Plant height	Pollinator mixture
USO GENERAL	25 g	15-20	Spring and fall	Yellow, blue, white, red, rose, violet	Low	Low	Moderate	High	High	No mowing	1-2 times a year after end of blooming	No	60 cm	Excellent
ENANO	25 g	15-20		Yellow, white, rose, violet	Low	Low	High	High	High	Since 10 cm	1-2 times a year	Moderate to high	20 cm	Yes



## Hydroseeding and revegetation

### Sparring eco

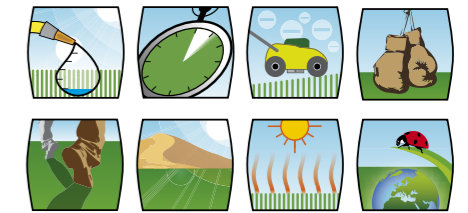
- The advantages of Sparring mixture without nitrogen needs.

#### Composition:

80% Festuca arundinacea MERIDA  
 5% Poa pratensis EUROPA  
 10% Lolium perenne RINGLES  
 5% Trifolium repens PIPOLINA

**Seeding rate:** 40 g/m<sup>2</sup>

**Seeding time:** Spring and fall.



### Natural meadow

- Low-maintenance mixture with clover that catches nitrogen from the atmosphere.
- For any soil and climate.
- Minimal mowing and irrigation needs.
- Natural meadow appearance.

#### Composition:

15% Lolium perenne SUN  
 45% Festuca arundinacea ARABIA  
 25% Festuca ovina SPARTAN 2  
 5% Cynodon dactylon GOBI  
 10% Trifolium repens HUIA

**Seeding rate:** 15 g/m<sup>2</sup>

**Seeding time:** Spring and fall.



## Hydroseeding-revegetation

### Mediterranean mixture

#### Composition:

20%	<i>Lolium perenne</i>
15%	<i>Agropyrum cristatum</i>
20%	<i>Festuca arundinacea</i>
15%	<i>Dactylis glomerata</i>
5%	<i>Cynodon dactylon</i>
5%	<i>Eragrostis curvula</i>
10%	<i>Paspalum notatum</i>
5%	<i>Medicago sativa</i>
5%	<i>Onobrychis viciaefolia</i>

**Seeding rate:** 25-30 g/m<sup>2</sup>

**Seeding time:** Spring - Fall.

- Native species to be added: *Antyllis cytisoides*, *Cistus albidus*, *Lygeum spartium*, *Piptatherum Milliaceum*, *Psoralea bituminosa*, *Retama sphaerocarpa*, *Stipa tenacissima*.



### Continental mixture

#### Composition:

20%	<i>Lolium perenne</i>
15%	<i>Agropyrum cristatum</i>
20%	<i>Festuca arundinacea</i>
10%	<i>Dactylis glomerata</i>
15%	<i>Festuca rubra rubra</i>
5%	<i>Medicago lupulina</i>
5%	<i>Trifolium subterraneum</i>
5%	<i>Melilotus officinalis</i>
5%	<i>Onobrychis viciaefolia</i>

**Seeding rate:** 25-30 g/m<sup>2</sup>

**Seeding time:** Spring - Fall.

- Native species to be added: *Cistus clusii*, *Lavandula officinalis*, *Rosmarinus officinalis*, *Spartium junceum*, *Thymus vulgaris*.

### Oceanic mixture

#### Composition:

20%	<i>Lolium perenne</i>
25%	<i>Dactylis glomerata</i>
25%	<i>Festuca rubra rubra</i>
10%	<i>Festuca ovina</i>
5%	<i>Sanguisorba minor</i>
5%	<i>Agrostis tenuis</i>
5%	<i>Trifolium repens</i>
5%	<i>Melilotus officinalis</i>

**Seeding rate:** 25-30 g/m<sup>2</sup>

**Seeding time:** Spring - Fall.

- Native species to be added: *Cytissus scoparius*, *Genista scorpius*, *Spartium junceum*, *Ulex europaeus*.

### High mountains

#### Composition:

20%	<i>Lolium perenne</i>
25%	<i>Dactylis glomerata</i>
25%	<i>Festuca rubra rubra</i>
15%	<i>Fleo pratensis</i>
5%	<i>Agrostis tenuis</i>
5%	<i>Trifolium repens</i>
5%	<i>Melilotus officinalis</i>

**Seeding rate:** 25-30 g/m<sup>2</sup>

**Seeding time:** Spring - Summer - Fall.



### Ski resorts

Ski resort mixture purposes:

- Fixing the soil to prevent erosion.
- Keeping the white blanket as long as possible.
- Preventing avalanches.
- Covering the soil to give an aesthetic appearance during summer season.

#### Composition:

24%	<i>Lolium perenne</i>
25%	<i>Dactylis glomerata</i>
25%	<i>Festuca rubra rubra</i>
15%	<i>Fleo pratensis</i>
5%	<i>Agrostis tenuis</i>
5%	<i>Trifolium repens</i>
1%	<i>Achillea millefolium</i>

**Seeding rate:** 25-30 g/m<sup>2</sup>

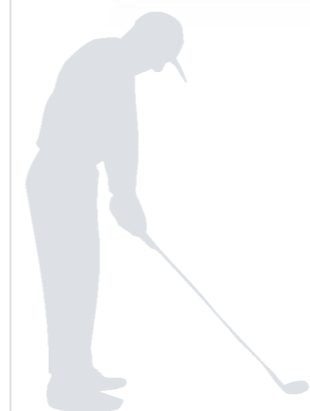
**Seeding time:** Summer.





## Golf

### USES MEDITERRANEAN COAST



GREENS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, PENN A-1+PENN A-4, T-1, 13 M</b></li> <li>&gt; Paspalum vaginatum <b>SEA SPRAY</b></li> </ul>
COLLARS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, T-1</b></li> <li>&gt; <b>CREEPING RYE, REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Lolium perenne <b>FIESTA 4, RINOVO</b></li> </ul>
TEES, FAIRWAYS	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, ORNAMENTAL, REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, 13 M</b></li> <li>&gt; Cynodon dactylon <b>RIVIERA</b>, Paspalum vaginatum <b>SEA SPRAY</b></li> </ul>
ROUGH	<ul style="list-style-type: none"> <li>&gt; <b>COSTA, RESISTENTE, SPARRING, STRONG</b> mixtures</li> <li>&gt; Cynodon <b>GOBI, RIVIERA</b>, Paspalum vaginatum <b>SEA SPRAY</b></li> </ul>
OUT ROUGH	<ul style="list-style-type: none"> <li>&gt; Cynodon dactylon <b>GOBI</b>, Eragrostis curvula <b>ERMELO</b></li> </ul>
OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> <li>&gt; Poa trivialis <b>QUASAR</b></li> </ul>

### USES CONTINENTAL CLIMATE



GREENS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, PENN A-1+PENN A-4, T-1, 13 M</b></li> </ul>
COLLARS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, T-1</b></li> <li>&gt; <b>REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Lolium perenne <b>FIESTA 4, RINOVO</b></li> </ul>
TEES, FAIRWAYS	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, ORNAMENTAL, REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, 13 M</b></li> <li>&gt; Cynodon dactylon <b>RIVIERA</b></li> </ul>
ROUGH	<ul style="list-style-type: none"> <li>&gt; <b>ORNAMENTAL, RESISTENTE, STRONG, SPARRING</b> mixtures</li> <li>&gt; Cynodon dactylon <b>GOBI, RIVIERA</b></li> </ul>
OUT ROUGH	<ul style="list-style-type: none"> <li>&gt; Festuca longifolia <b>PASHMINA, SPARTAN 2</b></li> <li>&gt; Cynodon dactylon <b>GOBI</b>, Buchloe dactyloides <b>TEXOKA</b></li> </ul>

### USES OCEANIC CLIMATE



GREENS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, PENN A-1+PENN A-4, T-1, 13 M</b></li> </ul>
COLLARS	<ul style="list-style-type: none"> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, T-1</b></li> <li>&gt; <b>REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Lolium perenne <b>FIESTA 4, RINOVO</b></li> </ul>
TEES, FAIRWAYS	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, ORNAMENTAL, REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Agrostis stolonifera <b>007 DSB, MARINER, SEASIDE 2, 13 M</b></li> </ul>
ROUGH	<ul style="list-style-type: none"> <li>&gt; <b>ORNAMENTAL, RESISTENTE, SPARRING, STRONG</b> mixtures</li> </ul>
OUT ROUGH	<ul style="list-style-type: none"> <li>&gt; Festuca longifolia <b>PASHMINA, SPARTAN 2</b></li> </ul>



Sports, soccer, racetracks, polo

USES MEDITERRANEAN COAST

	SCANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; Cynodon dactylon <b>GOBI, RIVIERA</b></li> <li>&gt; Pennisetum clandestinum <b>AZ-1</b></li> <li>&gt; <b>COSTA</b> mixture</li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; Paspalum vaginatum <b>SEA SPRAY</b></li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>
	ABUNDANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>RESISTENTE, SPARRING, STRONG</b> mixtures</li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR, SPORT</b> mixtures</li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>

USES CONTINENTAL CLIMATE

	SCANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; Cynodon dactylon <b>GOBI, RIVIERA</b></li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>RESISTENTE, SPARRING</b> mixtures</li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>
	ABUNDANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>RESISTENTE, SPARRING, STRONG</b> mixtures</li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR, SPORT</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>



USES OCEANIC CLIMATE

	SCANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>RESISTENTE</b> mixture</li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>SPARRING</b> mixture</li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>
	ABUNDANT WATER	LOW MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>SPARRING</b> mixture</li> </ul>
		HIGH MAINTENANCE	<ul style="list-style-type: none"> <li>&gt; <b>CREEPING RYE, REPOBLADOR, SPORT</b> mixtures</li> </ul>
		OVERSEEDING	<ul style="list-style-type: none"> <li>&gt; <b>REPOBLADOR, RESIEMBRA</b> mixtures</li> <li>&gt; Lolium perenne <b>CADDIESHACK, FIESTA 4, ZURICH, LOVER, RINGLES, RINOVO, ROSEMARY, SILVER DOLLAR, SUN, VANTAGE</b></li> </ul>



## Sod production

For sod production we supply only elite varieties tested many times in a wide range of areas.

Our world-class research laboratories take a sample of each lot.

The samples are 10 times bigger than necessary following OECD rules in order to find the best-quality lots, which must be free of any weed and also of any other crop such as *Lolium multiflorum*.

### SOD QUALITY rules followed by SEMILLAS FITO

1. We only choose seed lots produced in specific fields without weed or other crop contamination right from the start and under SOD QUALITY criteria.
2. Our sample size is 50 gr/lot of 5 MT showing 0% weeds and 0% other crops.
3. The germination test must be largely above the minimum required for the species.
4. We do fluorescence tests to find any evidence of *Lolium multiflorum*.
5. DNA control test.

### USES MIXTURES



MEDIUM-LEAF TEXTURE (C3)

- > SPARRING mixture
- > RESISTENTE mixture

FINE-LEAF TEXTURE (C3)

- > CREEPING RYE, SPORT mixture

GREENS (C3)

- > Agrostis stolonifera T-1

GRASS FOR AREAS WITH SALT PROBLEMS (C4)

- > Paspalum vaginatum SEA SPRAY

GRASS FOR WATER SAVINGS (C4)


- > Zoysia japonica
- > Bermuda






## Landscape, public and private lawns

### USES MEDITERRANEAN COAST



SUN	SCANT WATER	<ul style="list-style-type: none"> <li>&gt; Cynodon dactylon <b>GObI, RIVIERA</b></li> <li>&gt; Pennisetum clandestinum <b>AZ-1</b></li> <li>&gt; Zoysia Japonica <b>ZENITH</b></li> <li>&gt; Paspalum vaginatum <b>SEA SPRAY</b></li> <li>&gt; <b>COSTA</b> mixture</li> </ul>
	ABUNDANT WATER	> <b>RESISTENTE, SPARRING, SPORT, STRONG</b> mixtures
SUN / SHADE	SCANT WATER	> <b>RESISTENTE</b> mixture
	ABUNDANT WATER	> Dichondra

### USES CONTINENTAL CLIMATE



SUN	SCANT WATER	<ul style="list-style-type: none"> <li>&gt; <b>RESISTENTE, SPARRING, STRONG</b> mixtures</li> <li>&gt; Cynodon dactylon <b>RIVIERA</b></li> </ul>
	ABUNDANT WATER	> <b>ORNAMENTAL, RESISTENTE, SPARRING, SPORT, STRONG</b> mixtures
SUN / SHADE	SCANT WATER	> <b>RESISTENTE</b> mixture
	ABUNDANT WATER	<ul style="list-style-type: none"> <li>&gt; <b>SOMBRA</b> mixture</li> <li>&gt; Dichondra</li> </ul>

### USES OCEANIC CLIMATE



SUN	SCANT WATER	> <b>RESISTENTE, SPARRING</b> mixtures
	ABUNDANT WATER	> <b>ORNAMENTAL, SPARRING, SPORT</b> mixtures
SUN / SHADE	SCANT WATER	<ul style="list-style-type: none"> <li>&gt; Festuca longifolia <b>PASHMINA, SPARTAN 2</b></li> <li>&gt; <b>RESISTENTE, STRONG</b> mixtures</li> </ul>
	ABUNDANT WATER	<ul style="list-style-type: none"> <li>&gt; Dichondra</li> <li>&gt; <b>SOMBRA</b> mixture</li> </ul>

### USES OVERSEEDING



WITHOUT SOIL PREPARATION	> <b>RESIEMBRA</b> mixture
WITH SOIL PREPARATION	> <b>CREEPING RYE, REPOBLADOR</b> mixtures



## Eco turf

### USES TURFGRASS OPTION



MEDITERRANEAN CLIMATE

- > **COSTA, RESISTENTE, STRONG** mixtures
- > Cynodon dactylon **GObI**, Paspalum notatum **PENSACOLA**, Pennisetum clandestinum **AZ-1**, Zoysia japonica **ZENITH**

CONTINENTAL CLIMATE

- > **RESISTENTE, STRONG** mixtures
- > Cynodon dactylon **GObI**, **RIVIERA**, Zoysia japonica **ZENITH**

OCEANIC CLIMATE

- > **ORNAMENTAL, SOMBRA** mixtures
- > Festuca ovina duriuscula **PASHMINA**, **SPARTAN 2**

### USES WILD FLOWERS COVER



WILD FLOWERS

- > **JARDÍN FLORIDO**
- > **USO GENERAL**
- > **ENANO**

MEADOW MIXTURE

- > **CÉSPED FLORIDO**
- > **USO GENERAL**
- > **ENANO**

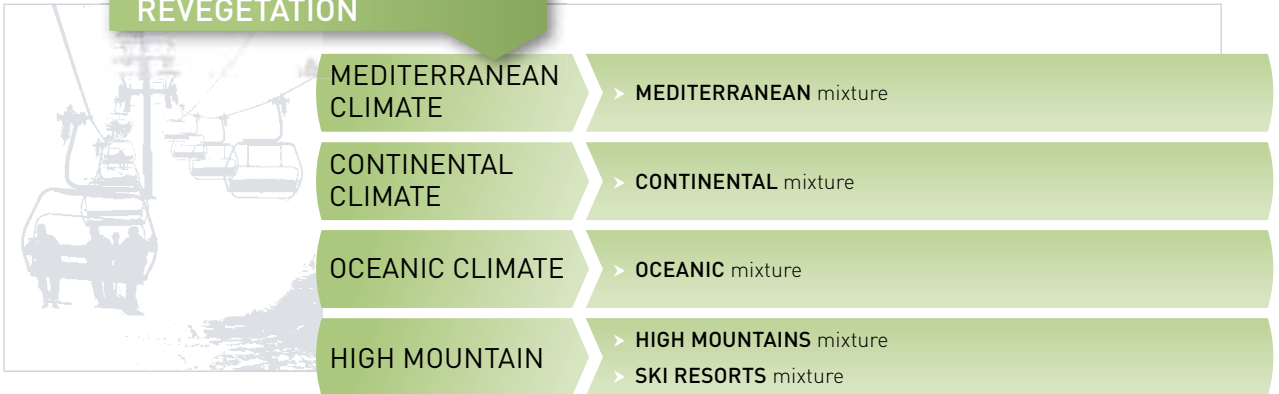
### USES MINIMUM MAINTENANCE



**SPARRING ECO NATURAL MEADOW**

# Hydroseeding and revegetation

## USES REVEGETATION



## USES COVER CROPS Vineyards, fruit trees, orchards



# Glossary of terms

## A

**Athletics field** Grounds devoted to athletic and recreational activities; usually outdoors and turfed.

**Auricle** Clawlike appendages occurring in pairs at the base of the leaf blade or at the apex of the leaf sheath.

## B

**Ball mark** A depression and/or tear in the surface of a turf, usually a putting green, made by the impact of a ball.

**Ball roll** The distance a ball moves (a) after striking the ground upon termination of its aerial flight, (b) as the result of a putting stroke, or (c) as a result of hand-imparted motion. As in lawn bowling.

**Blend** A combination of two or more cultivars of a single turfgrass species.

**Bunch-type growth** Plant development by intravaginal tillering at or near the soil surface without production of rhizomes or stolons.

## C

**Cool-season turfgrass** Turfgrass species adapted to favorable growth during cool portions (15°C to 24°C) of the growing season; many become dormant or injured during hot weather. Includes species of the festucoid subfamily.

**Coring** A method of turf cultivation by which soil cores are removed using hollow tines or spoons.

**Creeping growth habit** Plant development by extravaginal stem growth at or near the soil surface with lateral spreading by rhizomes and/or stolons.

**Cultipacker seeder** A mechanical seeder designed to place turfgrass seeds in a prepared seedbed at a shallow soil depth, followed by firming of the soil around the seed. It usually consists of a pull-type or rear-mounted unit having a seed box positioned between the larger front, ridged roller and an offset smaller rear roller.

**Cultivar** An assemblage of cultivated plants distinguished by any character (morphological, physiological, cytological, and the like) that when reproduced sexually or asexually retain their distinguishing features.

**Cultivation** Applied to turf, cultivation refers to working of the soil and/or thatch without destruction of the turf; for example, coring, slicing, spiking, or other means.

**Cutting height** On a mower, the distance between the plane of travel and the parallel plane of cut.

## D

**Dethatch** To remove an excessive thatch accumulation, usually by a mechanical practice such as vertical mowing.

**Divot** A small opening in the turf from which the sod has been removed as a result of being struck with a golf club or twisted by a cleated shoe.

**Dormant seeding** Planting seed during late fall or early winter after temperatures become too low for seed germination to occur until the following spring.

## E

**Endophyte** An organism that lives at least part of its life cycle within a host plant, as a parasite or symbiot, eg. a fungus in a higher plant, such as grass.

**Evapotranspiration** Total loss of moisture through the processes of evaporation and transpiration.

## G

**Grain** The undesirable procumbently oriented growth of grass leaves, shoots and stolons of green; a rolling ball tends to be deflected from a true course in direction of orientation.

**Grass** Any plant of the family poaceae.

## H

**Hybrid** Product of a cross between individuals of unlike genetic constitution.

**Hydroseed** To seed in a water mixture by pumping through a nozzle that sprays the mixture onto a seedbed

## I

**Internode** Portion of the stem between two successive nodes.

**Interseed** To seed between lugs, sod strips, rows, or sprigs, or into turf to improve a stand or to alter its composition.

## L

**Lateral shoot** A shoot originating from a vegetative bud in the axil of a leaf or from the node of a stem, rhizome, or stolon.

**Ligule** Membranous or hairy appendage on the adaxial side of a grass leaf at the junction of the sheaf and blade.

**Low-temperature discoloration** The loss of chlorophyll and associated green color that occurs in turfgrasses under low-temperature stress.

## M

**Mixture** A combination of two or more species.

**Mowing frequency** The number of times a turfgrass community is mowed per week, month, or growing season. (The reciprocal of mowing frequency is mowing interval—the number of days, weeks, or the like between successive mowings.)

**Mowing height** The distance above the ground surface at which the turfgrass is cut during mowing.

## O

**Overseed** To seed onto an existing turf, usually with temporary cool-season turfgrasses, to provide green active grass growth during dormancy of the original turf, usually a warm-season turfgrass.

## P

**Panicle** Type of inflorescence in which the spikelets are not directly attached to main axis.

**Pregerminated seed** The partial germination of seed prior to planting, by placing it in a moist oxygenated environment at favorable temperatures.

## R

**Recuperative capacity** The capacity of turfgrasses to recover from injury; usually through vegetative growth from axillary buds.

**Reel mower** A mower that cuts turf by means of a rotating reel of helical blades that passes across a stationary blade (bedknife) fixed to the mower frame; this action gives a shearing type of cut.

**Renovation, turf** Turf improvement involving replanting into existing live and/or dead vegetation.

**Rhizome** An underground elongated stem (or shoot) with scale leaves and adventitious roots arising from the nodes.

**Rotary mower** A mower that cuts turf by high-speed impact of a blade rotating in a cutting plane parallel and incident to the turf surface.

## S

**Seed** A ripened ovule.

**Semi-arid turfgrass** Turfgrasses adapted to growth in semi-arid regions without irrigation. Includes buffalograss, blue grama, and sideoats grama.

**Shoot density** The relative number of shoots per unit area.

**Sod** Plugs, squares, or strips of turfgrass with the adhering soil; can be used in vegetative planting.

**Sod production** The culture of turf to a level of maturity and quality that allows harvesting and transplanting.

**Spiking** A method of turf cultivation in which solid tines or flat pointed blades penetrate the turf and soil surface.

**Sprig** A stolon, rhizome, or tiller used to establish a turf by planting in furrows or small holes.

**Spring green-up** The initial seasonal appearance of green shoots as spring temperature and moisture conditions become favorable for chlorophyll synthesis, thus breaking winter dormancy.

**Stand** The number of established individual shoots per unit area.

**Stolon** An elongated stem (or shoot) that grows along the surface of the ground and from which leaves and adventitious roots develop at the nodes.

**Summer dormancy** The cessation of growth and subsequent death of shoots of perennial plants due to heat and/or moisture stress.

## T

**Texture, leaf** Texture imparted to turf by leaf width, taper, and arrangement.

**Thatch** A layer of undecomposed or partially decomposed organic residues situated above the soil surface and constituting the upper stratum of the medium that supports turfgrass growth.

**Tiller** A lateral shoot, usually erect, that develops intravaginally from axillary buds.

**Topdressing** A prepared soil mix added to the surface of a turf and worked in by brooming, matting, raking, and/or irrigating to smooth a green surface, firm a turf by working soil in among stolons and thatch-forming materials, enhance thatch decomposition, and cover stolons or sprigs during vegetative planting. Also the act of applying topdressing materials to turf.

**Turf** A covering of mowed vegetation, usually a turfgrass, growing intimately with an upper soil stratum of intermingled roots and stems.

**Turfgrass** A species or cultivar of grass, usually of spreading habit, which is maintained as a mowed turf.

## V

**Variety** See Cultivar.

**Vegetative propagation** Asexual propagation using pieces of vegetation (sprigs or sod pieces).

**Vertical mower** A mechanical device with vertically rotating blades that cut into the face of a turf for the purpose of reducing thatch, grain, and surface compaction.

## W

**Warm-season turfgrass** Turfgrass species adapted to favorable growth during warm portions (27°C to 35°C) of the growing season; includes species of the eragrostoid and panicoid subfamilies.

**Wear** The collective injurious effects of traffic on a turf.

**Winter overseeding** Seeding cool-season turfgrasses over warm-season turfgrasses at or near their start of winter dormancy; practiced in subtropical climates to provide green growing turf during the winter period when the warm-season species are brown and dormant.

**Winterkill** Any injury to turfgrass plants that occurs during the winter period.

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