



Euro Grass Turfgrass Seed Mixtures

EURO GRASS *Join the Green Evolution*



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Euro Grass

Join the Green Evolution

With this slogan we have committed ourselves to research and development within all facets of the grass seed business, from breeding to seed multiplication and sales.

The Euro Grass Organisation

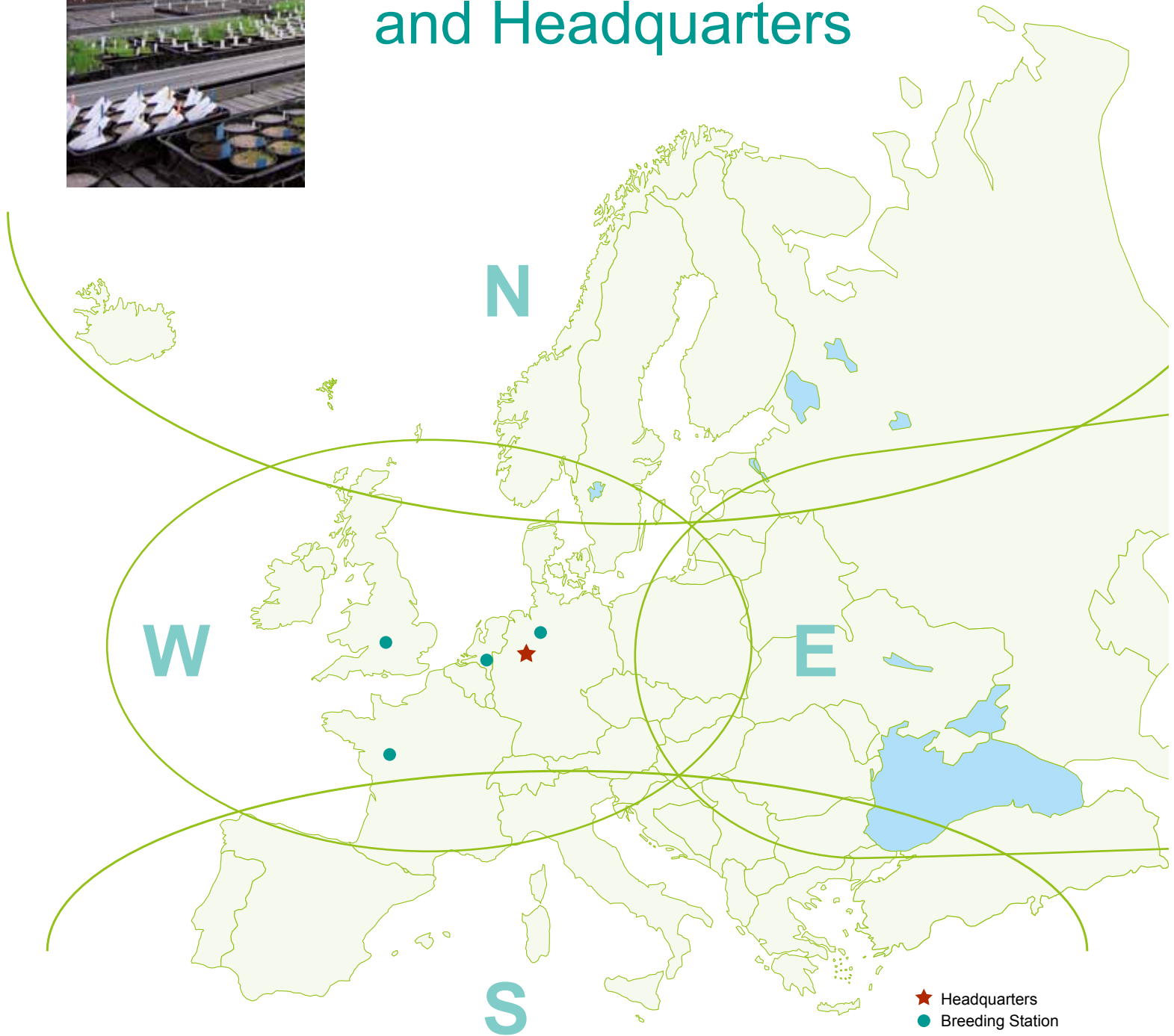
Euro Grass is a relatively new company with old traditions. The structure of the Euro Grass organisation was established in 2002. At that time the shares of the Dutch breeding and production company, Zelder B.V., were acquired by Deutsche Saatveredelung AG (DSV) Germany and Hunsballe Frø A/S Denmark, who had already been in close co-operation for almost three decades.

By combining the strengths of these partners, a powerful breeding and multiplication network was created. Euro Grass stands for efficiency in breeding, field production of seeds, sales, logistics and service to meet the customer's requirements on a worldwide scale.



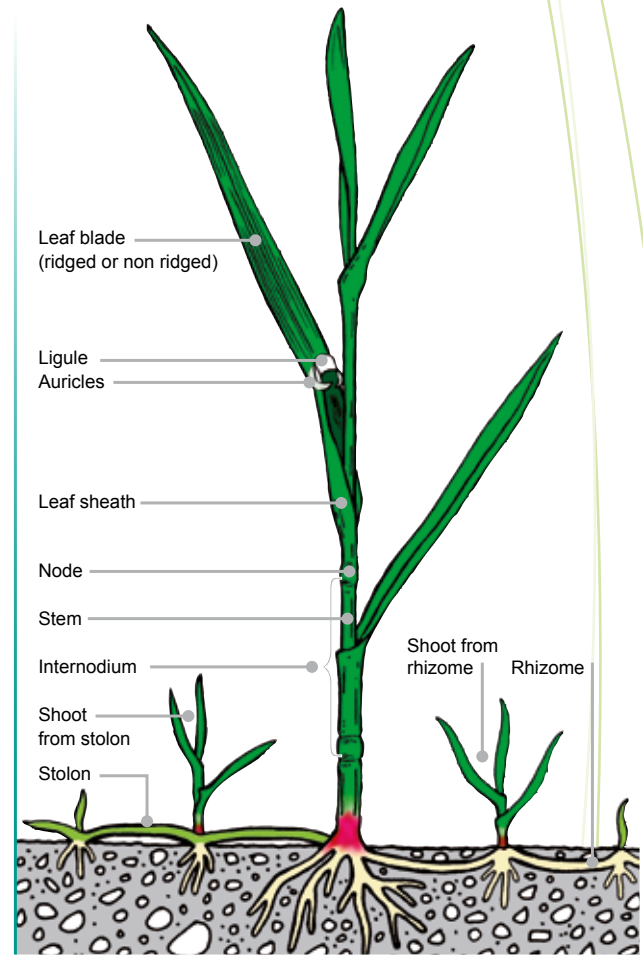


Climatic Zones, Breeding Stations and Headquarters



Botanical Characteristics

In Europe *Lolium perenne* (perennial ryegrass), *Festuca rubra* (red fescue), *Poa pratensis* (smooth-stalked meadow-grass) and *Festuca arundinacea* (tall fescue) are the most important turf species. The botanical characteristics of these species, plus a number of other important species, can be found in the tables “Botanical Characteristics of Grass Species for Turf Use” and “Overview of Botanical Characteristics”.



Overview of Botanical Characteristics

First leaf folded		First leaf rolled		
With auricles	Without auricles	With auricles		Without auricles
Leaf Sheath Smooth	Leaf Sheath Smooth/rough	Leaf Sheath Smooth	Leaf Sheath Rough/hairy	Leaf Sheath Smooth
<i>Lolium perenne</i> * ³	<i>Festuca rubra</i> * ³ <i>Festuca ovina</i> * ³ <i>Poa annua</i> <i>Poa pratensis</i> * <i>Poa trivialis (Rough)</i> * <i>Deschampsia caespitosa</i> * ³	<i>Lolium multiflorum</i> * ²	<i>Festuca arundinacea</i> * ² <i>Agropyron repens</i> · ²	<i>Agrostis</i> · ² <i>Phleum pratensis</i> · ²

¹ Leaf blade slightly ridged

² Leaf blade medium ridged

³ Leaf blade very ridged

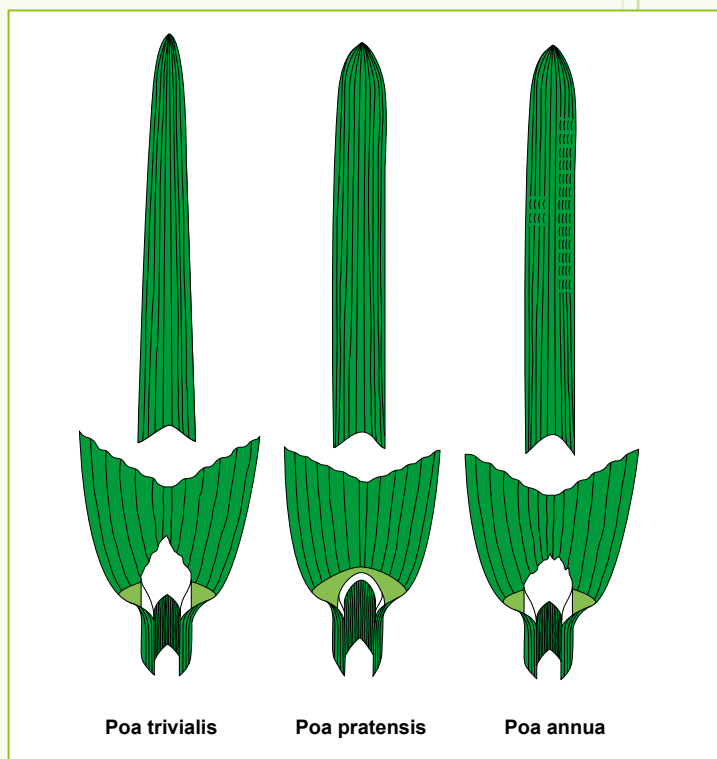
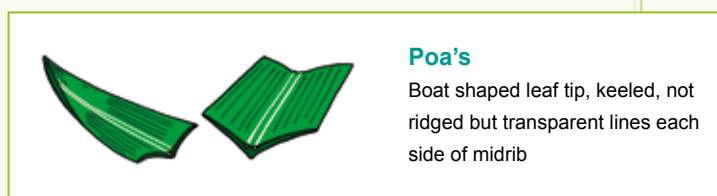
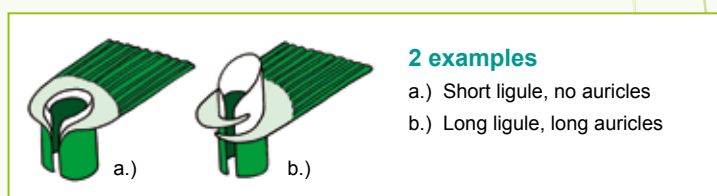
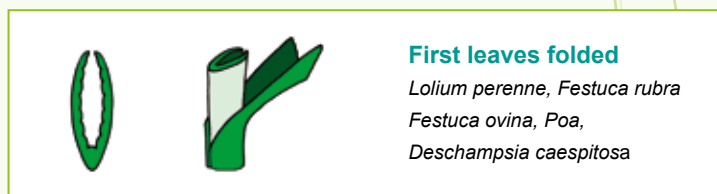
* Leaf blade glossy on under surface, *Poa pratensis* and *Festuca rubra* only slightly glossy

· Leaf blade not glossy

Botanical Characteristics of Grass Species for Turf Use

Abbr.	Species (Latin)	English	1. leaf	Leaf blade	Leaf sheath
Acan	<i>Agrostis canina</i>	Velvet bent	Rolled	Ridged on upper surface, not glossy, 1–3 mm wide	Split, smooth
Acap	<i>Agrostis capillaris</i>	Browntop bent	Rolled	Ridged on upper surface, not glossy, 2–4 mm wide	Split, smooth
As	<i>Agrostis stolonifera</i>	Creeping bent	Rolled	Ridged on upper surface, not glossy, 2–4 mm wide	Split, smooth
Dc	<i>Deschampsia caespitosa</i>	Tufted hair-grass	Folded	Long, stiff, rough, prominently ridged with light stripes, glossy under surface	Split, often slightly keeled, mainly smooth
Fa	<i>Festuca arundinacea</i>	Tall fescue	Rolled	Long, wide, stiff, prominently ridged on upper surface, glossy below, rough edges	Split, often reddish/purple at base, lower sheaths often rough
Frc	<i>Festuca rubra commutata</i>	Chewings fescue	Folded	Very fine and bristle-like, rather stiff, distinctly ridged	Partly split, smooth or slightly hairy, whitish
Frr	<i>Festuca rubra rubra</i>	Strong creeping red fescue	Folded	Bristle-like, rather stiff, distinctly ridged	Partly split, smooth or slightly hairy, whitish
Frt	<i>Festuca rubra trichophylla</i>	Slender creeping red fescue	Folded	Very fine and bristle-like, rather stiff, distinctly ridged	Partly split, smooth or slightly hairy, whitish
Ft	<i>Festuca trachyphylla</i>	Hard fescue	Folded	Very fine and bristle like, deeply ridged, grey green or blue green	Split and smooth
Lp	<i>Lolium perenne</i>	Perennial ryegrass	Folded	Bright green, prominently ridged upper surface, very glossy under surface	Split, smooth, reddish at base
Php	<i>Phleum pratensis</i>	Timothy	Rolled	Only slightly ridged, light green	Split, smooth
Pa	<i>Poa annua</i>	Annual meadow-grass	Folded	Parallel sided with boat shaped tip, keeled, not glossy, not ridged but transparent lines each side of midrib, often wrinkled cross wards, light green	Flattened, keeled
Pp	<i>Poa pratensis</i>	Smooth-stalked meadow-grass	Folded	Parallel sided with boat shaped tip, keeled, under surface glossy, not ridged but transparent lines each side of midrib, dark green or blue green	Flattened, more or less keeled, smooth, split
Pt	<i>Poa trivialis</i>	Rough-stalked meadow-grass	Folded	Slightly tapering to boat shaped tip, keeled, under surface glossy, not ridged but transparent lines each side of midrib, light green	Flattened, more or less keeled, rough, partly split, purple below

Ligule	Auricles	Growth habit	Abbr.
Membranous, 1 to 3 mm, rounded to acute	Absent	Stolons, develops an extremely dense turf	Acan
Membranous, very short, straight cut	Absent	Mainly with short rhizomes, produces a very dense turf	Acap
Membranous, long, up to 5 mm, rounded	Absent	Mainly with stolons, develops a very dense turf	As
Membranous, pointed, long, up to 15 mm	Absent	Bunch grass	Dc
Short, stiff and greenish	Distinct, hairy	Bunch grass	Fa
Very short, truncate, hard to distinguish	Absent	Bunch grass	Frc
Very short, truncate, hard to distinguish	Absent	Long rhizomes	Frr
Very short, truncate, hard to distinguish	Absent	Bunch grass with short rhizomes	Frt
Very short, truncate, hard to distinguish	Absent	Bunch grass	Ft
Short, up to 2 mm	Distinct but rather small, 1–3 mm, transparent	Bunch grass	Lp
White, up to 5 mm, distinct notch at either side	Absent	Bunch grass	Php
White, 2–5 mm, rounded and slightly toothed	Absent	Bunch grass (mainly)	Pa
Short, 1–3 mm, rounded	Absent	With short or long rhizomes	Pp
Long, 4–10 mm, pointed	Absent	Bunch grass with stolons	Pt





1 Possesses a certain characteristic to a: **Very low degree**
 3 Possesses a certain characteristic to a: **Low degree**
 5 Possesses a certain characteristic to a: **Medium degree**
 7 Possesses a certain characteristic to a: **High degree**
 9 Possesses a certain characteristic to a: **Very high degree**

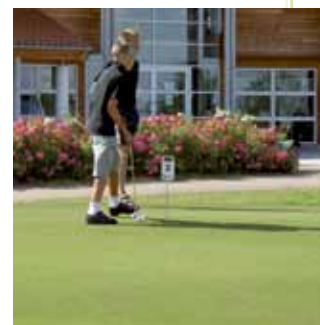
Abbr.	Species (Latin)	English	1000 kernel weight	Kernels per kg (x 1000)	Optimal sowing depth, cm	Fast establishment
Acan	<i>Agrostis canina</i>	Velvet bent	0,09	11.000	0-0,5	5
Acap	<i>Agrostis capillaris</i>	Browntop bent	0,09	11.000	0-0,5	5
As	<i>Agrostis stolonifera</i>	Creeping bent	0,09	11.000	0-0,5	5
Dc	<i>Deschampsia caespitosa</i>	Tufted hair-grass	0,30	3.333	0,5	6
Fa	<i>Festuca arundinacea</i>	Tall fescue	1,90	525	2,0	6
Frc	<i>Festuca rubra commutata</i>	Chewings fescue	1,00	1.000	1,0-2,0	5
Frr	<i>Festuca rubra rubra</i>	Strong creeping red fescue	1,00	1.000	1,0-2,0	6
Frt	<i>Festuca rubra trichophylla</i>	Slender creeping red fescue	1,00	1.000	1,0-2,0	5
Ft	<i>Festuca trachyphylla</i>	Hard fescue	1,00	1.000	1,0-2,0	4
Lp	<i>Lolium perenne</i>	Perennial ryegrass	1,70	590	2,0	9
Php	<i>Phleum pratensis</i>	Timothy	0,50	2.000	0,5-1,0	6
Pa	<i>Poa annua</i>	Annual meadow-grass	0,30	3.333	0,5	5
Pp	<i>Poa pratensis</i>	Smooth-stalked meadow-grass	0,30	3.333	0,5	3
Pt	<i>Poa trivialis</i>	Rough-stalked meadow-grass	0,25	4.000	0,5	5

Characteristics of Grass Species for Turf Use



Growth	Shoot density	De-mand of fertilizer	Tolerance to							Abbr.
			Wear	Close mowing	Drought	Wet conditions	Shade*	Cold conditions	Salt	
4	9	5	3	8	4	6	5	7	-	Acan
4	8	5	4	8	4	6	5	7	5	Acap
4	8	8	4	9	3	8	5	9	8	As
4	6	5	5	6	5	7	8	7	5	Dc
7	3	7	6	4	9	7	6	7	7	Fa
4	8	3	4	7	7	4	7	8	6	Frc
5	6	4	3	5	7	4	7	8	6	Frr
4	8	3	4	7	7	4	7	7	8	Frt
3	7	2	3	6	8	3	7	8	6	Ft
8	6	8	9	6	6	6	5	5	6	Lp
6	4	6	5	4	5	8	6	8	-	Php
3	5	6	3	9	2	8	6	2	3	Pa
4	6	7	7	6	5	7	5	9	4	Pp
4	6	6	4	5	3	9	8	6	3	Pt

* Lawns in shade should never be mown too close.



The table is only intended as a guide, because there will be some differences between varieties within the species. Furthermore, the different characteristics can influence each other. For instance, *Festuca arundinacea* could be a better choice for shady conditions than *Deschampsia caespitosa* if shade is combined with dry conditions.

A man with glasses and a blue polo shirt is leaning over a long, narrow metal tray filled with green turfgrass. He is holding a small, dark-colored turf sample in his right hand, examining it closely. The background shows more trays of turfgrass in a greenhouse or nursery setting.

Development of Turfgrass Varieties

The development of turf varieties is a long term, costly and highly sophisticated business. Plant breeding (crossing, selecting and conducting trials) often takes a decade or more before varieties are ready for release into official registration. Subsequently, investment in field production, stockholding and marketing is expensive.

Euro Grass has at their disposal 100 high quality and listed turf grass varieties widely spread across the Species. For more information on our varieties please consult www.eurograss.com, from where variety sheets etc. can be downloaded. Various national variety lists will provide additional and comparable information.



Turfgrass Seed Mixtures from Euro Grass

Species and varieties are carefully selected for their different characteristics to formulate seed mixtures for a wide range of applications. The important considerations when compiling mixtures are:

- Time of year (seasonal temperatures and rainfall)
- Local conditions (sun, shade, irrigation)
- Soil conditions (soils texture and structure, fertility)
- Purpose of use (sport, lawns, landscaping etc.)
- Maintenance (level desired or possible by end user)



The Mixture Range

The Euro Grass standard mixtures are divided into 7 groups: "Classic", "Ornamental", "Shade", "Sport", "Renovation", "Golf" and "Special use". We are also able to provide a special mixture service along with professional advice on the most appropriate combinations of species and varieties.





Climatic Zone Adapted Selection Guide

EGT no.	Mixtures	Gram seed per m ²	Cutting height, mm	Box, kg		Paper bag, 10/20 kg	Zones								
				1	2,5		North	West	South	East	Hot & dry	Multi	Orna-mental	Sport	Reno-vation
EGT 110	Classic	30	20–50	x	x	x	•	•••	••	•	•	•	•	••	••
EGT 120	Classic	30	20–50	x	x	x	••	••	••	••	•	•	•	••	••
EGT 130	Classic	30	20–50	x	x	x	•••	••	•••	•••	••	••	••	•	•
EGT 140	Classic	30	20–50	x	x	x	••	••	••	••	••	•	•	•	•
EGT 150	Classic	30	20–50	x	x	x	•••	••	••	••	••	••	••	••	••
EGT 160	Classic	30	20–50	x	x	x	•	•••	••	•	•	••	•	••	••
EGT 210	Ornamental	30	15–30	x	x	x	••	•••	••	••	••	•••	•••	••	••
EGT 220	Ornamental	25	15–25	x	x	x	•••	•••	••	•••	••	••	•••	•	•
EGT 230	Ornamental	25	15–25	x	x	x	•••	•••	••	•••	••	••	•••	••	••
EGT 240	Ornamental	25	15–25	x	x	x	••	••	••	••	••	•	•••		••
EGT 250	Ornamental	20	15–30	x	x	x	•••	•••	•••	•••	•••	•	••	•	••
EGT 260	Ornamental	25	15–25	x	x	x	•••	•••	••	•••	••	•	•••		•
EGT 270	Ornamental	25	15–30	x	x	x	••	•••	••	••	••	••	••		••
EGT 310	Shade	25	40–80	x		x	••	•••	••	••		•••	•	••	••
EGT 320	Shade	30	40–100	x		x	••	••	•••	•••	•••	•	•	••	•
EGT 410	Sport	25	15–35	x	x	x	••	•••	••	••	••	••	••	•••	••
EGT 420	Sport	25	15–35	x	x	x	••	•••	••	••	••	•••	••	•••	••
EGT 430	Sport	30	20–40	x	x	x	•••	•	•••	•••	•••	•	•	••	••
EGT 440	Sport	30	25–40	x	x	x	••	•	•••	•••	••	•	•	••	••
EGT 450	Sport	25	15–35	x	x	x	••	•••	••	••	••	••	••	•••	••
EGT 460	Sport	30	20–35	x	x	x	•	•••	••	•	•	••	••	•••	••
EGT 470	Sport	30	20–35	x	x	x	••	•••	••	••	••	••	••	••	•
EGT 510	Renovation	10–50	15–30	x		x	••	•••	••	••	••	••	••	•••	•••
EGT 520	Renovation	10–50	15–35	x		x	••	•••	••	••	•	••	••	•••	•••
EGT 530	Renovation	10–50	20–40	x		x	••	•••	••	••	•	•	•	•••	•••
EGT 540	Renovation	50	20–50	x		x	•	•••	•••	•	•			••	•••
EGT 610	Golf-Turf	25	5–20			x	•••	•••	•••	•••	••	•	•••		
EGT 620	Green-Turf	20	5–20			x	•••	•••	•••	•••	••	•	••		
EGT 720	Special Turf	20	20–80			x	•••	•••	•••	•••	•••				
EGT 740	Timoturf Mix	25	20–40			x	•••	•	•	•••	•	•		••	••
EGT 750	Dark-Turf	25	15–35			x	••	•••	••	••	•	••	••	••	•
EGT 760	Road Verge & Reclamation	25	20–50			x	••	•••	••	••	•	•			
EGT 770	Flower Meadow	10				x	•••	•••	•••	•••	••				

Not all package sizes are available in all countries.



Golf											
Fairway	Tees	Green	Rough	Nature	Erosion control	Camping	Shade	Park	Sod production	Auto mowing	EGT no.
•	••		•	•	••	•		•		••	110
•	•		•	••	••	••	•	•		••	120
•			••	••	••	••	••	••		•	130
			••	••	•	•	•	•		•	140
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•			•	••	••	••				•	160
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•••		•	••	••	••	••	••	••	••		240
•			•••	•••	•	•	••	••	•		250
•••			•••	••		•	••	•••	••		260
•			•	•••	••	••	••	••	••	••	270
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••	•••			•	•	•••	•	•	•••	••	420
•	•		•	•		•	••	••	••	••	430
•	•		•	•	•	••	•	•	••	•	440
				•	•				••	•••	450
•	••			•	••	••			••	••	460
••				••	••	••			•••	•	470
•	•••			••	•	••				••	510
•	•••			•	•	••				•••	520
	••			•	••	•				•••	530
	•			•	••					••	540
•••		•••	•	••		•		••	••		610
•		•••		••		•		••	••		620
			•	•••	•••		•				720
			•	••	••	•	••	•			740
	•••				•	••	•	•	•••	••	750
				•••	••						760
				••							770



2,5 kg × 16 × 4 = 160 kg
2,5 kg × 16 × 5 = 200 kg



1 kg × 36 × 4 = 144 kg
1 kg × 36 × 5 = 180 kg



10 kg × 50 = 500 kg
10 kg × 75 = 750 kg

••• = very suitable, •• = suitable, • = partly suitable

Classic

“Classic” is designed for general purpose lawns and landscaping where an economy option is required. The mixtures are quick to establish but offer a reduced mowing input. Classic is suitable for a broad spectrum of use and the wear tolerance is average.



EGT 110 Classic

70%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- Rapid establishment
- Good ground cover
- Attractive and wear tolerant sward

EGT 120 Classic

50%	<i>Lolium perenne</i> (Perennial ryegrass)
50%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- Fast establishment
- Good ground cover
- Good soil binding capacities

EGT 130 Classic

25%	<i>Lolium perenne</i> (Perennial ryegrass)
70%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
5%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Good ground cover
- Drought tolerant
- Suitable for reduced mowing and for grasscrete systems

EGT 140 Classic

35%	<i>Lolium perenne</i> (Perennial ryegrass)
65%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- Good ground cover
- Fast establishment
- Suitable for roughs and expansive areas

EGT 150 Classic

25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
25%	<i>Festuca rubra commutata</i> (Chewings fescue)
25%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- A multi purpose mixture with good wear tolerance
- Relatively fast establishment
- Good ground cover
- Good sward density

EGT 160 Classic

60%	<i>Lolium perenne</i> (Perennial ryegrass)
35%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
5%	<i>Agrostis capillaris</i>

- Slow re-growth
- Good wear tolerance
- Fast establishment





Ornamental

“Ornamental” is suitable when a very fine textured finish is required and where only the best will do. Quick establishment and reduced mowing maintenance are key characteristics of these mixtures. Ornamental is suitable for all professional lawn building on a wide range of soil types.

EGT 210 Ornamental

20%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Lolium perenne</i> (Perennial ryegrass)
15%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
25%	<i>Festuca rubra commutata</i> (Chewings fescue)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Hard wearing
- Fast establishment
- Quick recovery from damages
- Very suitable for golf tees, lawns, campsites etc.

EGT 220 Ornamental

30%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
20%	<i>Festuca rubra commutata</i> (Chewings fescue)
10%	<i>Festuca rubra commutata</i> (Chewings fescue)
10%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
30%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Winter hardy
- Drought tolerant
- Attractive sward
- Very suitable for lawns, fairways, parks and reduced mowing

EGT 230 Ornamental

10%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
30%	<i>Festuca rubra commutata</i> (Chewings fescue)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Fine textured
- Nice appearance
- Good ground cover
- Very suitable for fairways, ornamental lawns, parks, grasscrete systems, sod production, etc.

EGT 240 Ornamental

40%	<i>Festuca rubra commutata</i> (Chewings fescue)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
30%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)

- Fine Textured
- Low biomass production
- Very suitable for fairways and ornamental lawns

EGT 250 Ornamental

30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
30%	<i>Festuca rubra commutata</i> (Chewings fescue)
30%	<i>Festuca trachyphylla</i> (Hard fescue)
10%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Drought tolerant
- Natural appearance
- Low nutrient requirement
- Very suitable golf roughs and conservation areas

EGT 260 Ornamental

30%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
20%	<i>Festuca rubra commutata</i> (Chewings fescue)
10%	<i>Festuca rubra commutata</i> (Chewings fescue)
10%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- High density
- Healthy sward
- Drought tolerant
- Very suitable for lawns, fairways, parks, golf roughs etc.

EGT 270 Ornamental

30%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
20%	<i>Festuca rubra commutata</i> (Chewings fescue)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- Wear tolerant
- Easy to establish
- Broad spectrum use
- Suitable for quality landscaping projects

Shade

“Shade” is specifically designed for shaded areas, but will also perform well in open conditions. Shade mixtures are ideal for areas around buildings and under and around trees on varying soil types.



EGT 310 Shade

10%	<i>Deschampsia caespitosa</i> (Tufted hair-grass)
20%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
20%	<i>Festuca rubra commutata</i> (Chewings fescue)
15%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
15%	<i>Poa trivialis</i> (Rough-stalked meadow-grass)

- Shade tolerant multi purpose mixture
- Easy to establish
- Very suitable in parks etc.
- Very suitable where shade is combined with moist (not dry) conditions

EGT 320 Shade

10%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
70%	<i>Festuca arundinacea</i> (Tall fescue)

- Shade tolerant
- Drought tolerant
- Suitable under trees and building shade
- Very suitable where shade is combined with dry conditions



Sport

“Sport” mixtures are extremely wear tolerant and designed for tough sports conditions. They are suitable for premier sport pitches to municipal sports grounds. They offer outstanding performance and visual appeal.



EGT 410 Sport

25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
25%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Extremely wear tolerant
- Fast recovery
- Fast establishment
- Very suitable for all areas under intense wear

EGT 420 Sport

20%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Lolium perenne</i> (Perennial ryegrass)
10%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
10%	<i>Festuca rubra commutata</i> (Chewings fescue)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Wear tolerant all-round mixture
- Fast recovery
- Drought tolerant
- Very suitable for all areas incurring wear

EGT 430 Sport

10%	<i>Lolium perenne</i> (Perennial ryegrass)
70%	<i>Festuca arundinacea</i> (Tall fescue)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Wear tolerant mixture for hot and dry conditions
- Drought tolerant
- Winter hardy

EGT 440 Sport

30%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Festuca arundinacea</i> (Tall fescue)
25%	<i>Festuca arundinacea</i> (Tall fescue)
20%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- Wear tolerant mixture for hot and dry conditions
- Drought tolerant
- Fast recovery

EGT 450 Sport

24%	<i>Lolium perenne</i> (Perennial ryegrass)
24%	<i>Lolium perenne</i> (Perennial ryegrass)
24%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
24%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
4%	<i>Trifolium repens</i> (White clover)

- Similar to EGT 410, but with 4 percent *Trifolium repens* (TurfClover) included
- Extremely wear tolerant
- Fast recovery
- Fast establishment
- Very suitable for all areas under wear

EGT 460 Sport

30%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Lolium perenne</i> (Perennial ryegrass)
20%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Wear tolerant
- Fast recovery
- Nice appearance
- Durable all-round mixture

EGT 470 Sport

30%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
10%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)

- High density
- Drought tolerant
- Durable all-round mixture
- Reduced fertilizer requirements



Renovation

“Renovation” mainly consists of fast germinating, wear tolerant grasses. These mixtures are designed for over-seeding where a quick result is required. Once established, they will provide a dense ground cover that is quick to recover.

EGT 510 Renovation

25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)
15%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
10%	<i>Festuca rubra commutata</i> (Chewings fescue)

- Fast establishment
- Very hard wearing
- Quick recovery from damages
- Suitable for soccer, golf tees, tennis courts etc.

EGT 520 Renovation

25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)
25%	<i>Lolium perenne</i> (Perennial ryegrass)

- Fast establishment
- Extremely hard wearing
- Quick Recovery from damages
- Ideal for renovation programmes

EGT 530 Renovation

30%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Lolium perenne</i> (Perennial ryegrass)
40%	<i>Lolium perenne</i> (Perennial ryegrass)

- Fast establishment
- Very hard wearing
- Penetrating root system

EGT 540 Renovation

20%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Lolium perenne</i> (Perennial ryegrass)
50%	<i>Lolium westerwoldicum</i> (Annual ryegrass)

- Extremely fast establishment
- Germinates at low temperatures
- Ideal for certain renovation programmes





Golf Mixtures

“Golf” is focused on the requirements of golf greens, but they will perform equally well under very fine lawn conditions. These mixtures are adaptable to a wide range of environmental and management inputs. In the selection guide on page 12 you will find mixtures for tees, fairways and roughs.

EGT 610 Golf-Turf

25%	<i>Festuca rubra commutata</i> (Chewings fescue)
25%	<i>Festuca rubra commutata</i> (Chewings fescue)
25%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
25%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)

- Very fine textured
- Tolerant to close mowing
- High shoot density
- Low nutrient requirement

EGT 620 Green-Turf

21%	<i>Festuca rubra commutata</i> (Chewings fescue)
21%	<i>Festuca rubra commutata</i> (Chewings fescue)
21%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
21%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
16%	<i>Agrostis capillaris</i> (Browntop bent grass)

- Fine textured
- Tolerant to close mowing
- Very dense ground cover
- Moderate nutrient demand
- Uniform putting surface





Special Use Mixtures

“Special Use” consists of species and varieties that offer unique characteristics for very specific purposes. If you have additional specific requirements we can offer a special mixture service, along with professional advice, on the most appropriate combinations of species and varieties.

EGT 720 Special Turf

40%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
25%	<i>Festuca rubra commutata</i> (Chewings fescue)
20%	<i>Festuca trachyphylla</i> (Hard fescue)
3%	<i>Agrostis capillaris</i> (Browntop bent grass)
2%	<i>Agrostis stolonifera</i> (Creeping bent grass)
10%	<i>Lolium multiflorum</i> (Italian ryegrass)

- Quick establishment due to *Lolium multiflorum*
- Ideal for erosion control
- No or very low fertiliser demand
- Very low cutting frequency

EGT 740 Timoturf Mix

50%	<i>Festuca arundinacea</i> (Tall fescue)
30%	<i>Phleum pratensis</i> (Timothy)
20%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Wear tolerant mixture for tough winter conditions

EGT 750 Dark-Turf

30%	<i>Lolium perenne</i> (Perennial ryegrass)
35%	<i>Festuca rubra commutata</i> (Chewings fescue)
35%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)

- Dark green appearance
- Stabilising root structure
- Dense ground cover
- Universal use

EGT 760 Road Verge & Reclamation

25%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
20%	<i>Festuca trachyphylla</i> (Hard fescue)
18%	<i>Festuca rubra trichophylla</i> (Slender creeping red fescue)
5%	<i>Agrostis capillaris</i> (Browntop bent grass)
2%	<i>Trifolium repens</i> (White clover)

- Suppresses weed growth
- Stabilising root structure
- Low frequency cutting
- Self fertilising

EGT 770 Flower Meadow

10%	<i>Lolium perenne</i> (Perennial ryegrass)
30%	<i>Festuca rubra rubra</i> (Strong creeping red fescue)
10%	<i>Festuca rubra commutata</i> (Chewings fescue)
10%	<i>Phleum pratensis</i> (Timothy)
10%	<i>Poa pratensis</i> (Smooth-stalked meadow-grass)
16%	<i>Festuca trachyphylla</i> (Hard fescue)
1%	<i>Trifolium pratensis</i> (Red clover)
1%	<i>Trifolium repens</i> (White clover)
1%	<i>Medicago lupulina</i> (Black Medic)
1%	<i>Trifolium incarnatum</i> (Crimson clover)
10%	(Flowers and herbs)

- Broadly composed flower and herb mixture with grasses
- Full range of colours
- High esthetical values
- Self fertilising

How to Establish the Perfect Lawn

First and foremost is to choose the right mixture for your lawn. This brochure, and particularly the selection guide on page 12, will hopefully provide sufficient information for making the right decision – a decision that can be taken on a rainy day or during winter time.

Preparing the seed bed (A)

Cut old vegetation as deep as possible and/or remove old vegetation. Aggressive grass weeds such as Quack grass and particularly aggressive broad leaved weed should be controlled prior to seeding a new lawn. If necessary remove building materials, stones, branches etc. Dig, plough or cultivate the soil to a depth of 20 cm. If necessary compress the soil slightly by walking foot by foot or by using a roller. Be cautious not to make a heavy soil too compact and consequently unable to drain properly. Harrow or rake the area until you have no holes or dips in the lawn. Use an old pallet or other leveling tool crosswise to achieve a nice and level result. Before sowing don't forget to remove the last stones, building materials and roots.

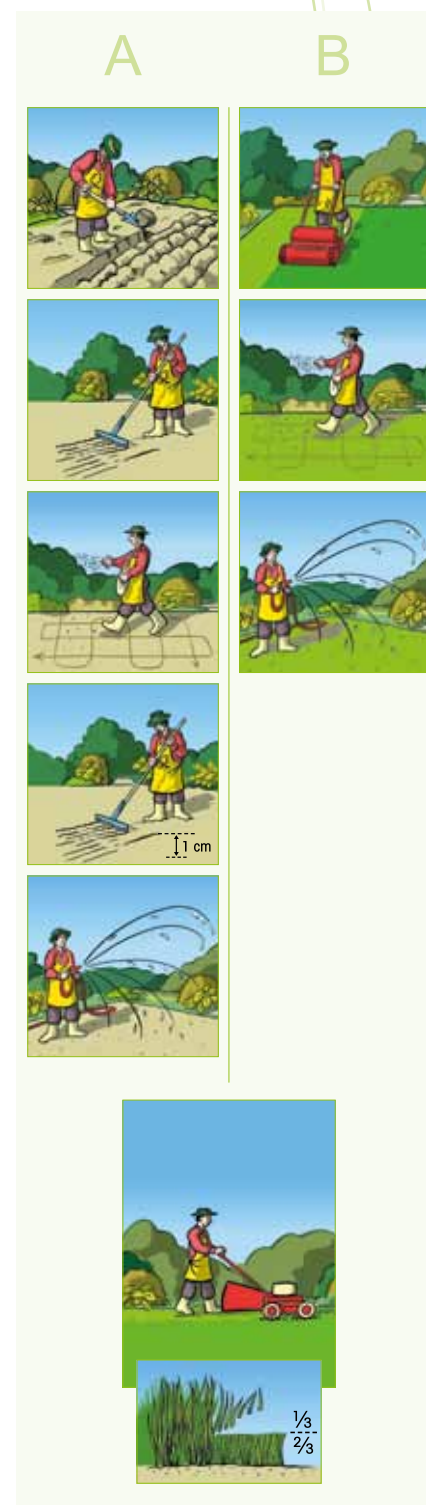
Sowing

In the professional world there will be modern machinery for establishing sports fields, golf courses etc. However, it is possible to achieve a perfect result on a smaller scale by using hand held tools. Prior to sowing we suggest re-mixing the seed mixture. Whether using a sowing machine or sowing by hand, we recommend seeding the area twice to secure an even distribution of seed. Together with seeding and in accordance with soil analyses, the new lawn should be fertilized for the first time. Lime could also be added according to soil analyses. After sowing and fertilizing, the seeds should be raked gently to a depth of approximately 1 cm. The area should, under dry conditions, be rolled to secure good contact between seed and soil. Irrigate if necessary.

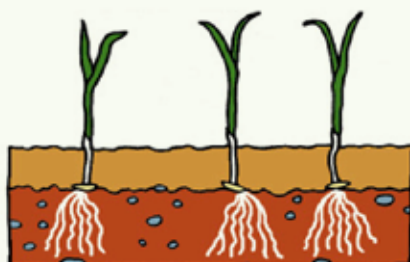
Please see the graphic "Seedbed and germination". In a well prepared seedbed the soil is porous enough to allow water penetration (drainable) and firm enough to ensure moisture supply (capillary effect).

A seed must never dry out once it has started its germination processes and, consequently, the "capillary" water is far more important than an occasional shower and irrigation.

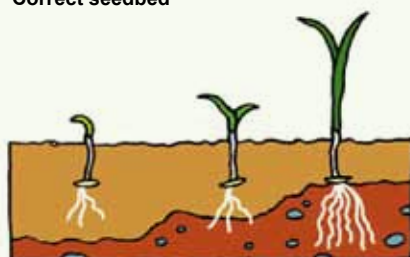
Too deep and intense harrowing or raking can destroy the soils capacity of providing capillary water to the seed. Course of nature will, over time, recreate the soils capillary effect. Capillary water is also important after emergence of the seedlings.



Seedbed and germination



Correct seedbed



Uneven seedbed



Seedbed to deep

The first months

Depending on soil temperature, moisture and seed mixture, the first seedlings will emerge within a few weeks. In fact *Lolium perenne* will emerge within one week under good conditions, whereas *Festuca rubra* and *Poa pratensis* will need almost 2 weeks and almost 3 weeks respectively under optimal conditions. When the grass is approximately 4 to 8 cm high, it should be mown for the first time. It is important not to cut more than 1/3 of the leaf length per mowing, and to reduce mowing height gradually until desired mowing height is reached, which could take some months. The correct mowing height depends on different circumstances and personal preference. Golf greens are often mown as close as 5 mm or even closer. Sports fields are often mown at 25–35 mm. More extensive lawns are only mown a few times per year. Very shaded and very dry lawns should never be mown too close (no less than 4–8 cm).

Renovation and reseeding (B)

If the density of a lawn becomes too poor, renovation and reseeding are required. Mow the lawn relatively close and remove the clippings and thatch. Add grass seed (preferably the same mixture of species as initially sown or a special renovation mixture) and, when possible, a few mm of top soil. Holes can be repaired by filling with top soil mixed with grass seed. A good result depends on plenty of rainfall after renovation. By reseeding frequently, you will always have an “updated” lawn with the newest and most sophisticated varieties.

When renovating a lawn, it can be difficult to make a proper seed bed. Always keep the seeding and germination diagrams in mind. In the professional grass world there will be machinery for seeding and reseeding, but machinery cannot guarantee water supply. Sometimes it simply makes sense to wait for better conditions.

Broad leaved weeds and moss

In the top 20 cm of a soil there will often be hundreds of thousands of weed seeds per square meter. Some of these weed seeds will always emerge ahead of the newly sown grass seed because they have already absorbed moisture, which is the first step of the germination process. Others will wait, maybe for years, for better conditions.

A newly established lawn can look rather weed infected, but by nursing the lawn correctly, grass growth will be stimulated and, as a result, weeds will suffer. If absolutely necessary, approved herbicides can be used some months after sowing. In established lawns, weeds should not be a big problem. Some weeds do not like to be mown frequently and some will die during winter. The rest can often be controlled by hand weeding. Moss is not the cause of a poor lawn. Moss occurs when grass growth conditions are not at their optimum, i.e. lack of fertilizer, lack of light, low pH level, too close mowing and too moist soil. Moss can only be controlled efficiently, in the longer term, by securing good grass growth conditions.

Prioritized list; how to control weeds and moss:

- Always use a high quality turf mixture (able of “pushing” weeds out)
- Optimize seed bed preparation
- Follow the recommended seeding rate
- Optimize germination and growth conditions of the sown mixture
- Frequent reseeding
- Mechanical or chemical weed control

Fertilization

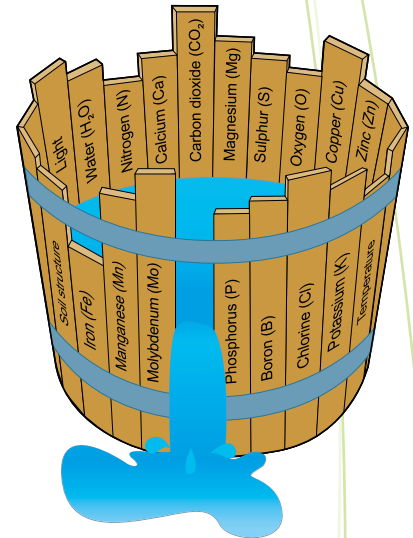
In order to maintain a nice looking and high performing lawn, it is necessary to add fertilizers. Impacts of fertilizers:

- Grass growth
- Shoot density
- Ability of the grass to push out broad leaved weeds and moss
- Composition of species
- Wear tolerance
- Recovery
- Colour
- Winter hardiness
- Ability of resisting diseases

Grass depends on approximately 13 different nutrients, where Nitrogen (N), Phosphorous (P) and Potassium (K) are the most important. On the contrary, if one of the other 10 nutrients is missing it doesn't help for example to add more Nitrogen. In 1840 Justus von Liebig (a German agriculturalist) wrote that for plants to grow to their best potential, no single factor can be deficient or it will affect growth. In Europe there are hundreds of different fertilizers available. Here are a few practical tips:

- NPK 7-1-7 is often, on a yearly bases, right for sandy soils
- Add fertilizers often, but in small quantities or
- Use slow release fertilizers
- Add more fertilizer if your lawn is yellow-green and not performing to your satisfaction
- Add less fertilizer if your lawn is too green and you spend too much time on mowing
- Young lawns with excessive wear need a higher amount of fertilizer
- Do not add fertilizers (especially N) during periods of drought and dormancy
- If the clippings are left on the lawn, fertilizer can be saved
- Fertilization should be adjusted to individual conditions

We would like to take this opportunity to wish you good luck with your new lawn. For further information about selecting the right mixture for your lawn and for establishing and maintaining the lawn please consult www.eurograss.com



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