



TURF

FLOWER MIXTURES AND COVER CROPS

MADE IN GERMANY



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Dear Reader,

Feldsaaten Freudenberger has been a family-run business since our company was founded in 1948, and is now led by the second and third generations. Our company culture has been one of horizontal hierarchies, allowing decisions to be made quickly and without red tape. This has given us the enormous advantage of being able to react swiftly to customers' needs and individual requests, not to mention the ability to adapt to market conditions as quickly as possible. The deep bonds our employees have with our company means that we don't just have long-term employees, but rather that there are families in which multiple generations have worked for Feldsaaten Freudenberger. We are very proud of the loyalty our employees have shown us, which gives us a bright outlook for the future.

A good team is the foundation of a company's success, and there's nothing that can replace it!

If you'd like to get to know us better, please pay us a visit.

We would be delighted to welcome you here in Krefeld!

Manfred Freudenberger

Stefan te Neues

René Freudenberger

FELDSAATEN FREUDENBERGER

A family business with tradition

In 1948, Feldsaaten Freudenberger was founded in Krefeld by Siegfried Freudenberger as a one-man operation. He was able to acquire his first seeds from the military government of the British Army. His own bedroom served as the company's first office and storeroom. Its space requirements grew as the company enjoyed growing success, and in 1949 the operations had to be moved to a former restaurant, which became the company's headquarters. The business grew steadily, and so did the number of employees, along with offices and vehicles – all in order to fulfil the growing demand for seed.

Following additional growth and another move in the 1950s into a larger premises, construction began in 1968 on the first building of the current headquarters, located in Krefeld Gartenstadt (North Rhine-Westphalia, Germany). Since that move, the headquarters have been expanded through the construction or acquisition of new buildings, but the site remains to this day.

Further expansion is definitely on the cards!



FACTS & FIGURES

■ Founding:	1948
■ Employees:	> 210
■ Storage and production facilities:	80,000 m ²
■ Annual sales volume:	> 60.000 t
■ Own varieties:	> 200
■ Annual turnover:	> €150 million
■ Customers:	> 7,000 in over 70 countries
■ Mixing machines:	17
■ Cleaning plants:	3
■ Small packaging plants:	10
■ Bagging plants:	12
■ Laboratories:	2
■ Experimental and demonstration farm:	1

Today, Feldsaaten Freudenberger is one of the largest retailers of lawn grasses in Europe, offering an extremely broad product portfolio. It takes a particularly complex company structure to develop, produce and store a product, and then to deliver it to the customer. Some of these divisions are presented below:

PRODUCTION

Numerous filling stations allow us to satisfy our customers' needs, filling packages in a variety of sizes and types, ranging from 250 grams up to 1 tonne. The types of packaging available include collapsible boxes, stand-up bags, pouches, flat foil bags, plastic bags, paper bags and big bags. The large fleet of machinery, along with highly motivated employees, ensures considerable flexibility when producing premium products.

STORAGE

The 80,000 m² of storage space is divided between five warehouses on the company's land as well as additional external warehouses. This is the only way that large enough amounts of seed can be kept on hand so that customers can always get just what they need. The warehouses contain both incoming raw product as well as fully processed items that are stored under optimal conditions until they are delivered. The smooth operation of the storage facilities is in the hands of an efficient team and a modern fleet of gas and electric forklifts, along with additional goods transport equipment.





LOGISTICS

Especially in the spring months, effective logistics are indispensable when it comes to making sure that customers get their deliveries on time. As soon as the temperatures begin to rise and the first signs of spring emerge, there is a spike in the demand for seeds. Throngs of gardeners and farmers want to restore their fields as quickly as possible and bring life back to their garden with a timely planting. During this period, logistics runs at full tilt, using 20 loading bays to get orders onto trucks from early in the morning until late in the evening. This makes it possible to deliver massive quantities of seed to customers in a short timeframe.



ADMINISTRATION

In order to look after such a large number of products and customers as effectively as possible, Feldsaaten Freudenberger has an administration division with a large number of offices and meeting rooms. Individual departments communicate with one another over various channels in order to ensure customers receive outstanding service.





SHOW GARDEN

Not far from the company grounds is the 8,000 m² show garden, which was created as a demonstration site as well as an experimental facility. Agricultural species, flowering plants and lawn grasses are cultivated in large quantities on hundreds of individual plots. The lawn grass plots are used for trials of different varieties and mixtures, making it possible for visitors to see and feel the differences between different varieties of a single species and come away with their own impression based on real-world conditions. A team of specialists helps keep the site in tip-top condition 365 days a year.



RESEARCH AND DEVELOPMENT

The importance and scope of research and development at Feldsaaten Freudenberger have grown steadily in recent years. Seed-specific processes like rhizobia treatment and coating technology are researched in depth, and suitable solutions are perfected to market readiness. Seedlings of individual species and mixtures are also cultivated in a laboratory setting and exposed to various conditions. This helps to elucidate which candidates are best suited to difficult conditions like salt content, drought, standing water or certain temperature ranges. The research laboratory, with its modern and extensive facilities, is ideal for carrying out these studies.

A QUALITY ASSURANCE LAB ALSO OPERATES SEPARATELY FROM THE RESEARCH LAB. SEE PAGE 74 FOR MORE INFORMATION ON QUALITY ASSURANCE AND THE WORK OF THE QA LAB.



LAWNS NEW PLANTING

Seven steps
when planting
new lawns

1. The soil should be dug up to one spade depth, which will bury any existing plant growth as green manure, resulting in increased soil humus content and providing organic fertiliser. As additional soil improvement, 4-5 bags of garden compost can be added per 100 m². Apply compost evenly and work it in well. This step will also break up the soil into smaller particles.

2. Rake the seedbed in order to clear out any plant remains, large stones, etc. and level the surface.

3. The soil should now rest for two to three weeks, so that it can settle down and any weeds remaining in the topsoil can germinate and emerge.

4. After the rest period, loosen the surface to a depth of 2-3 cm with a rake in order to remove the weed growth and even out any bumps. The soil can then be rolled or tamped down using a wooden board.

5. If the surface isn't too wet, evenly sow the desired lawn mixture at the recommended sowing rate, either by hand or using a broadcast seeder. Grass can be sown from spring to late autumn, with the best months being April, May, June, September and October. Ideally, sowing should take place on a day with no rain or wind and light cloud cover. In order to

provide optimal conditions for seeding the lawn, spread a special fertiliser (starter fertiliser) over the new seeds. Gently rake the grass seeds and fertiliser, roll or tamp and, if necessary, water moderately to keep the seeds from drying out.

6. In the following three to four weeks, the newly planted surface must be kept from drying out. If necessary, water using a sprinkler. It is important that the sprinkler uses fine nozzles, so that the water doesn't wash the seeds away and the soil does not become muddy and hard. The best time to water is in the early morning or late evening.

7. Once the grass has grown to around 8-10 cm (hand height), the young lawn will be mowed for the first time. The lawnmower blades should be as sharp as possible, since the grass plants are still very delicate. Furthermore, only the tips (1-2 cm) should be cut in the first mowing. Subsequent cuts can be made at the desired height. Frequent mowing, especially during early development, will lead to a thick, vigorous sward in a very short timeframe.



Lawn care:

After sowing has been successfully completed, proper maintenance is essential for preserving the lawn. The right lawn care is the only way to ensure that the lawn can last for several years with a uniform, attractive appearance. Mowing, fertilising, aerating (dethatching) and watering are the most important elements of lawn care. Weeding and treating plant diseases are also part of maintaining the lawn.

Mowing:

Mowing the lawn is one of the most time-consuming and vital elements of lawn care. Frequent cutting, along with proper fertiliser application, encourages the development of a thick, carpet-like sward, since mowing stimulates growth in a horizontal direction. In addition, it will make your lawn stronger and more resilient. When choosing the right time to cut the grass, it is important to remember that no more than one third to one half of the plant's growth should be taken off at a time. If considerably more of the growth is taken off in a single cut (radical cut), the plants lose too much of their green matter to regrow very fast. In a home garden, the grass height should be between 3 and 5 cm. Accordingly, the lawn should be mowed when the growth reaches a height of 6 to 10 cm. Aside from this, you should try to cut the grass, when possible, once to twice per week in spring.

Fertilisation:

Since lawns constantly have to regrow and remain dense, and since mowing constantly removes nutrients from the lawn, applying the right amount of fertiliser is important for the formation of a dense, green sward. Grass is constantly in the process of growing, and the nutrients it needs have to be provided using targeted fertilisation. This involves providing the lawn with more than just nitrogen – it needs a balanced ratio of nitrogen, phosphorous, potassium, magnesium and trace elements. These nutrients play a variety of roles in the formation of plant tissues and controlling the plant's metabolism. As such, the most suitable option for lawns is a multi-nutrient fertiliser with a composition that provides the necessary ratio of nutrients.

Watering:

Make sure that your lawn always has enough moisture. Normally, natural precipitation should be sufficient. Should it become necessary to water the lawn during long periods of drought, the following aspects should be considered: New lawns or recently sown grass should be watered at a rate of about 1-2 L/m² every two days, while older lawns should receive a thorough watering of up to 20 L/m² once per week. Water your lawn early in the morning or late in the evening, and never under direct sunlight.



Lawn care throughout the year: Necessary measures

Measures	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
New planting										
Reseeding										
Starter/spring fertiliser										
Summer fertiliser										
Autumn fertiliser										
Aeration (dethatching)										
Watering										
Mowing										
Weeding										

LAWN CARE

Preservation and
regeneration
techniques



Dethatching:

Your grass needs air and light to grow. Over time, especially when grass clippings are left on the lawn, a lawn thatch made up of living and dead plant matter forms. This should be removed every spring. Dethatching tears the lawn thatch away from the surface of the lawn and removes it, decimating broadleaf weeds and moss. This also improves the air and water balance and the activity of soil biota, which in turn promotes the breakdown of the remaining thatch. Sports fields should be dethatched at least once per year during the main growth period in April and May. Before dethatching, cut the grass short. The dethatching residue should be removed, after which the surface should be sanded and, if necessary, reseeded.

Aerification:

Aerification helps to reduce the effects of surface compaction and provide air to the rhizosphere. A plug aerator cuts cores from the soil to a depth of 10 cm, which must then be removed. The surface is then sanded and fertilised. For aeration to be effective, at least 200 holes/m² should be made.

Sanding:

Sanding with washed sand (particle size 0/2 or 0/3), either on its own or in combination with dethatching or aerification, has the following advantages:

- Evens out irregularities in the surface
- Improves soil texture via soil mixing or replacement
- Increases soil permeability
- Raises shear strength

Sand is brought in and applied; application rates can be as high as 5 L/m².

Reseeding:

Reseeding becomes necessary when gaps in a lawn surface become too large and can no longer be covered through regeneration. It can also be used to refresh the existing grass with more valuable species and varieties. Reseeding should ideally be carried out after measures such as dethatching, aerification and sanding. However, methods do exist to sow seeds in existing lawn surfaces with no preliminary work needed (e.g. perforation) When reseeded, it is recommended to use an appropriate seed mixture. The Coated Seed products have shown very good results in reseeded, with significantly higher rates of emergence.

Topdressing:

Topdressing involves spreading a mixture of sand, peat, soil and fertiliser to even out surfaces and improve the nutrient supply. The practice is especially popular on golf courses (greens and pre-greens). The sand must be lime-free and match the particle size of the existing base layer. The best time for topdressing is in autumn, up to the end of September. Prior to topdressing, the ground should be aerated as appropriate.

If none of these measures are successful, larger-scale interventions will be needed to restore the lawn. These can include:

- Slicing
- Slit drainage
- Deep soil loosening

Slicing:

Slicing involves using a machine that digs around 100 slits/m², at a distance of about 8 cm, measuring up to 10 cm deep, 10-15 cm long, and 1 cm wide. Cracks emerge around the slits, which help to even out the surface, as well as loosen and aerate the soil. This process also leads to uneven patches that can be eliminated using sanding and added soil.

Slit drainage:

Slit drainage uses special equipment to mill slits into the soil, which reach down to the drainage system or more permeable layers. At the same time, the slits are filled with a permeable material (sand, lava rocks, expanded clay). The excavated material must be removed. The width, depth and spacing of the slits can vary. The goal is to improve the soil's aeration and allow water to flow away more quickly.

Deep soil loosening:

Deep soil loosening makes it possible to eliminate soil compaction and impermeable layers at depths of 6-15 cm or even deeper (up to 25 cm!). Special equipment is used to bore trenches or holes and loosen the surrounding area at the same time. The resulting openings are then filled with permeable building material.



Where, when and which measures are necessary or appropriate can only be determined in the field based on an analysis of the site and soil. This requires specialist advice, which you can get by using our consulting service.



“
!
THE MOST IMPORTANT
GRASSES
GRASS SPECIES
AT A GLANCE
”



Perennial ryegrass



Creeping bentgrass



Hard fescue



Red fescue



**Smooth-stalked
meadow grass**



Common bent



Tall fescue

PERENNIAL RYEGRASS

LOLIUM PERENNE

Perennial ryegrass is one of the most important grass species for establishing lawns. It prefers moist, nutrient-rich soils and is characterised by quick germination and very fast early development, forming thick swards. It is very durable and grows back quickly after being worn down. Perennial ryegrass is an excellent candidate for heavily worn surfaces such as football pitches, playgrounds and sunbathing lawns. In addition to site characteristics, its growth is dependent on having a very good supply of fertiliser and water.

SMOOTH-STALKED MEADOW GRASS

POA PRATENSIS

Smooth-stalked meadow grass is the second representative of the hard-wearing lawn grasses. It is an important component of sports fields and playground lawns and prefers moist soils. Since smooth-stalked meadow grass forms underground runners, also called rhizomes, swards with a high percentage of the species exhibit high shear strength. In terms of germination and early growth, however, smooth-stalked meadow grass is slower than perennial ryegrass and thus only begins to represent a high proportion of the sward in the year after sowing.

CHEWING'S FESCUE

FESTUCA RUBRA COMMUTATA

Chewing's fescue forms low-lying, thick clumps with very fine leaves, which form thick and fine swards. It is undemanding in terms of its nutrient supply and can withstand lengthy dry periods without suffering damage. Chewing's fescue is mainly used in ornamental lawns, recreational lawns and golf courses, though it is also found in landscape lawns.

CREEPING RED FESCUE

FESTUCA RUBRA RUBRA

Creeping red fescue spreads using underground runners (rhizomes), making it effective at closing gaps in the sward. It thrives in high, cool sites and on lighter soils. Unlike Chewing's fescue, the leaves have a darker colour. It is used in the same mixtures as Chewing's fescue.

SLENDER CREEPING RED FESCUE

FESTUCA RUBRA TRICHOPHYLLA

Slender creeping red fescue is an intermediate form between Chewing's fescue and creeping red fescue. It also forms underground runners (rhizomes) that allow it to close gaps in the sward. The leaves of slender creeping red fescue are dark green and very fine. It is the most hard-wearing and persistent of the fescues and is also relatively tolerant of salt. Slender creeping red fescue is primarily used in ornamental lawns and golf courses.

HARD FESCUE

FESTUCA TRACHYPHYLLA

Hard fescue belongs to the group of undemanding tuft-forming grasses and has grey to blue-green, bristly leaves that form a relatively loose sward. A persistent species, it prefers light, dry and nutrient-poor soils. Hard fescue is somewhat tolerant of partial shade and moderate intensity of care, with infrequent cutting. It is the most important species for extensive greening sites like landscape lawns, roadside planting, embankments, etc.

COMMON BENT

AGROSTIS CAPILLARIS

Common bent forms thick to loose tufts with short aboveground and belowground runners. It is a persistent species with fine leaves and is at home in nutrient-poor, acidic soils and pastures, but also in high-altitude sites and partially shaded areas. Common bent forms hard-wearing, homogeneous swards that can tolerate deep cutting very well as long as they receive sufficient water and nutrients. Golf courses and recreational lawns are the main areas where common bent is used.

CREEPING BENTGRASS

AGROSTIS STOLONIFERA

Creeping bentgrass spreads through short or long aboveground runners called stolons, which form roots at their nodes, forming sister plants. This allows it to close gaps very effectively; indeed, under ideal conditions, the species is quite aggressive. It forms thick, homogeneous swards, which can tolerate deep cutting very well. Creeping bentgrass is primarily used in golf courses and very fine ornamental lawns.

TALL FESCUE

FESTUCA ARUNDINACEA

Tall fescue forms strong, persistent clumps, some with underground shoots. It has a relatively broad leaf and is not considered to be an ornamental grass. Tall fescue is well-suited for use on very dry sites, though it can also adapt quite well to wet and shaded areas. Tall fescue is very robust, which makes it well-suited to hard-wearing areas (e.g. race-tracks). In such areas, however, it should not be cut too short.

OUR NEW COATED SEED

ENRICHED SEED

Individual, safe, high performance

The in-house production of Coated Seed at Freudenberger now represents a key element of modern seed technology. At the dawn of this era, more than 40 years ago, current Managing Director Manfred Freudenberger conducted the first trials, developing a product that enabled improvements in seed flow and storage. Since then, Coated Seed has been steadily enhanced and refined to meet a wide variety of challenges, especially those related to climate change. This is done through an ongoing process of choosing and integrating beneficial coating compounds

with a constant view to improving the overall end product without having to give up on any of the existing benefits. The year 2020 brought yet another breakthrough in the development of the formulation. This time, the use of biostimulants was one of the main drivers of innovation. The innovative Coated Seed composition considerably improves water use efficiency, total germination rate, germination speed and plant vitality at germination. Numerous greenhouse and field trials show significantly faster germination across crops, as well as a 5-10% increase in the total germination rate compared to

uncoated seeds. Germination speed varies by species: for example, germination and early development tend to be extremely slow and challenging in smooth-stalked meadow grass, lasting around 21 days. With the new Coated Seed formulation, this rather lengthy phase can be shortened by up to six days. These innovations make the difference in terms of competitive vigour when planting seed mixtures.

Whether it's individual colouration, variation in the coating thickness or the addition of different supplements, the sky is the limit when it comes to meeting customer requirements. With ongoing product development, new ideas and new challenges, we'll find a solution for every intended application.

Our Coated Seed Bio and Coated Seed Classic are approved for organic cultivation.

HISTORY OF COATED SEED

2010

Organic certification for Coated Seed and the production of the first organic seeds as Coated Seed Bio

2014

Introduction of Coated Seed Vital with natural microorganisms to prevent fungal growth on seeds

2015

Breakthrough with the use of germination accelerators in Coated Seed for various species

2017

Successful combination of the components of different Coated Seed varieties



WHAT'S NEW WITH COATED SEED?



COMPONENTS & CLIMATE STRESS

Every new generation of Coated Seed aims to find potential areas for improvement in the product itself while also tackling new challenges. In recent years, these challenges have predominantly been due to climate stress caused by lengthy periods of extreme heat. Consequently, one of the main areas of focus has been the search for coating components that have a positive effect on water use efficiency. Naturally, any change to the Coated Seed formula must retain all of the benefits of earlier iterations.



SAVE WATER RESOURCES

Using Coated Seed during increasingly prolonged dry periods should help ensure that the extremely limited water supply, often only available for short periods, is absorbed quickly and efficiently and passed along to the seedling as needed. This makes it possible to continually and sustainably improve existing stands or to sow new crops in spite of prolonged droughts.



BALANCE WATER RESOURCES

Periods of warm weather in recent years have led to a spike in the use of irrigation on private land. At times, uneven or compacted soil can result in the formation of small puddles, resulting in improper alignment of the irrigation systems. Coated Seed can also protect against the effect of standing water in these conditions, serving as a buffer and ensuring reliable germination in spite of the saturated soil. The use of Coated Seed has advantages for new plantings (e.g. lawns) as well as for re-seeding.

ADVANTAGES OF COATED SEED OVER UNCOATED SEEDS

- Efficient water use
- Improved protection against biotic and abiotic environmental hazards
- Uniform distribution pattern
- Homogeneous field emergence
- Higher emergence rates through improved soil contact
- Optimal early development of seedling
- Improved germination capacity compared to uncoated seeds
- Faster germination through the use of biostimulants
- Improved clay-humus complex formation
- After breaking down, the material can be fully absorbed by plant roots
- Adjusted pH value
- Controlled release effect
- Long-lasting improvement to soil structure
- Harmless to humans and animals
- Low susceptibility to diseases
- Activated chlorophyll formation (lush, deep green)
- Increased resilience



2018

Entry
of Coated Seed
on the FiBL list;
expansion of the
supplements used

2020

Improved base
formulation for all
Coated Seed varie-
ties with advances in
germination rate and
speed

2021

Expansion of the
Covered Seed
range to over
50 species

2022

New colourants
with organic certi-
fication can
be used

COATED SEED CLASSIC



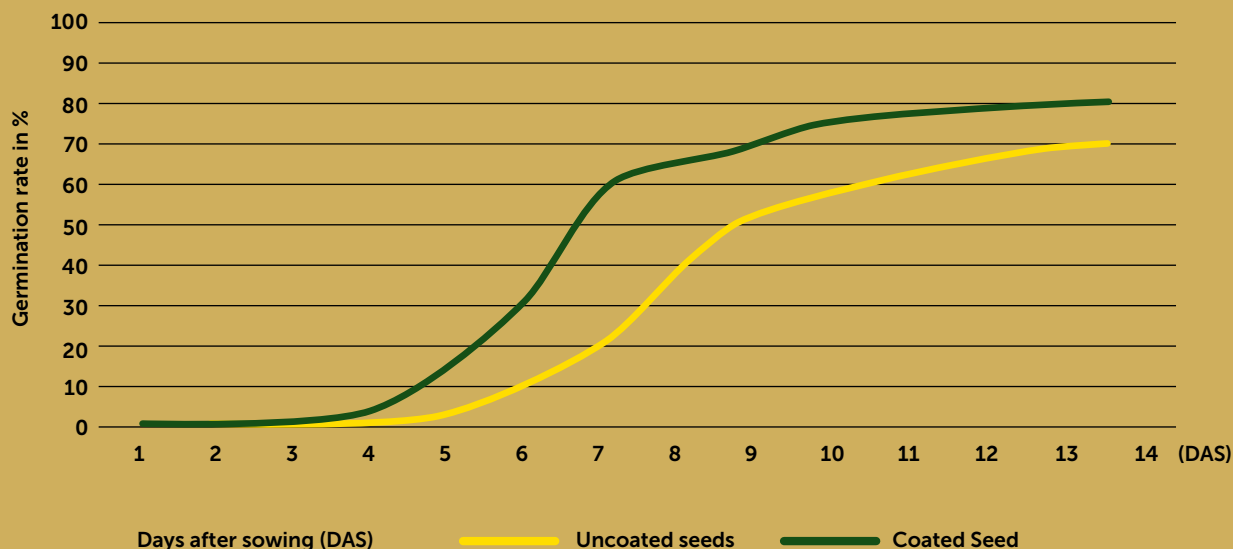
The classic Coated Seed aims to ensure improved emergence rates even under difficult sowing conditions and to enable sowing to occur without intensive tillage. To this end, the seeds are coated with essential substances that strengthen the plants. The coat thickness can also be varied to meet crop-specific requirements, to adjust the thousand grain weight (TGW) of seed mixtures, or to encourage an even distribution when sowing.



ADVANTAGES

- Higher emergence rates thanks to better soil contact
- The coating can quickly absorb available water and provide it to the seedling when needed
- Improved establishment on challenging sites
- Excellent development of young plants through an optimal supply of nutrients to the seedling
- Easy sowing and even distribution pattern thanks to improved seed flow
- Lower feeding damage by birds and rodents
- Uniform seeds allow for precise placement
- The plant health booster promotes health and increases the resilience of young plants
- Coated Seed remains securely in place – protection from drift
- Enhanced visibility simplifies visual control
- Coating can be individually coloured
- Easier reseeding since the smooth surface of the coated seed allows it to slide down to the ground

Germination speed of *Poa pratensis* up to 14 days after sowing



The advantages of Coated Seed apply to both individual seeds and seed mixtures, regardless of whether they are sown manually or mechanically. On surfaces in extreme locations where cultivation is difficult or impossible (e.g. embankments or hill-

sides), preparatory tillage measures can be omitted. The increased thousand grain weight (TGW) will facilitate sowing. Coated Seed uses natural materials, making it suitable for organic farming!

UNCOATED SEEDS VS. COATED SEED

EVAPORATION VS. WATER ABSORPTION





LORETTA

LAWN SEED



Loretta

- Premium seed for private users
- Uses top-performing varieties
- Mixtures with finely balanced compositions
- Excellent germination capacity and growth
- 5 products for a broad spectrum of applications

PREMIUM QUALITY FOR YOUR GARDEN

The Loretta brand of lawn mixtures brings you premium quality lawn seeds for your garden. These high-quality mixtures offer a composition of specially chosen top-performing varieties, allowing them to adapt fully to different site conditions. Whether it is shaded and dry locations or patchy and worn areas, Loretta products meet the highest demands and create the perfect-looking lawn quickly. LORETTA

- Your reliable premium partner for the perfect lawn you always wanted, all year round in your own garden.



Super-Rasen (Super lawn)

PREMIUM LAWN SEEDS FOR THE PERFECT APPEARANCE

Loretta Super lawn (Super-Rasen) is a high-quality lawn mixture for all areas in your garden. Whether it is for ornamental lawns with a premium lush look or for robust and dense hard-wearing lawns, Super lawn is composed of an optimal mixture that can be used for any purpose.

The top varieties of lawn seed contained in the mixture ensure quick regeneration of the area that has been subjected to excessive wear and tear. Your all-rounder premium lawn seed mix to meet the highest demands and create the perfect-looking lawn.

- Thick sward
- Self-regenerating



Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.6 kg folding carton	30 m ²	4011239577177	8	57718	40
1.1 kg folding carton	55 m ²	4011239577153	6	57714	40
10 kg bag	500 m ²	4011239577115	1	57710	65

Schatten-Rasen (Shade lawn)

PREMIUM LAWN SEEDS FOR SHADED AND SEMI-SHADED AREAS

Loretta Shade lawn mixture mixture is the perfect solution for semi-shaded and shaded areas in your garden. The use of supina bluegrass in the mix ensures dense and lush green cover even in these unfavourable conditions.

Shade lawn mixture is composed of a high-quality mixture that makes it particularly resilient and self-regenerating despite the challenging light conditions in shade. Your adaptable premium lawn seed mix that keeps your lawn shining in lush green splendour all year round.

- Very resilient
- Extremely shade-tolerant



Coated Seed Vital – growth-promoting



Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.6 kg folding carton	35 m ²	4011239577993	8	57798	40

Trocken-Rasen (Dry lawn)

PREMIUM LAWN SEEDS FOR DRY AND SUNNY SITES

The Dry lawn (Trockenrasen) mixture from Loretta is your ideal partner for sunny and dry areas in your garden. Particularly deep-rooted and robust lawn seed varieties of the highest quality have been selected for this lawn mix, which are extraordinarily hard-wearing and waterwise.

These varieties possess the ideal properties to easily cope with prolonged heat and drought conditions. Your drought and heat-resistant premium lawn seed mix that creates a dense and lush green zone in your garden even under difficult conditions.

- Saves water
- Very robust



Coated Seed Vital –
growth-promoting



Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.6 kg folding carton	20 m ²	4011239577474	8	57748	40
1.1 kg folding carton	35 m ²	4011239577450	6	57744	40
10 kg bag	330 m ²	4011239577412	1	57740	65

Rasen-Reparatur (Lawn repair)

PREMIUM LAWN SEEDS FOR DAMAGED AND PATCHY AREAS

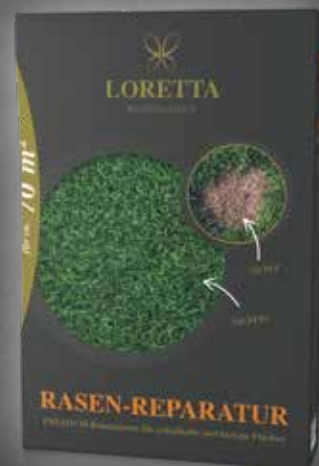
The Lawn repair (Rasen-Reparatur) seed mixture from Loretta is an efficient product that can quickly and reliably repair damaged and patchy areas in your garden. This high-quality mixture helps cover gaps and damages within a short period of time without the need for turning the soil over, leaving your lawn shining in lush green splendour.

The specially selected, top-performing varieties and the use of Coated Seed ensure quick and reliable germination. Loretta Lawn repair seed mix is suitable for all areas and very easy to handle. Your reliable premium lawn seed mix that covers gaps quickly and replenishes your lawn.

- For all lawn areas
- Full use of Coated Seed Vital



Coated Seed Vital –
growth-promoting



Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.6 kg folding carton	40 m ²	4011239577696	12	57768	63
1.1 kg folding carton	70 m ²	4011239577634	8	57764	40
2.2 kg folding carton	140 m ²	4011239577672	6	57766	40
10 kg bag	625 m ²	4011239577610	1	57760	65

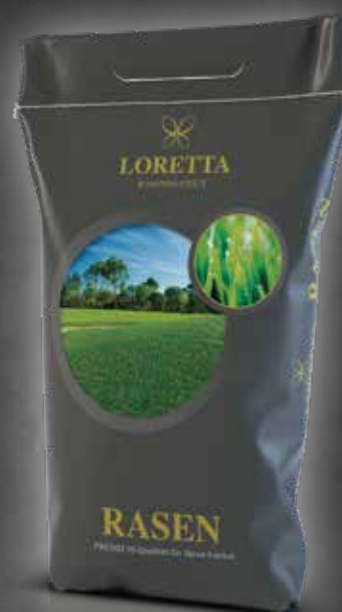
Sport

PREMIUM LAWN SEEDS FOR FIRST-CLASS SPORTS FIELDS

Loretta Sport is the professional mixture for all lawn sports facilities, as well as for producing or reseeding turf. The selection of the varieties used in the mixture (under DIN 18035-4) allow you to obtain the best possible results in terms of durability, regeneration, winter hardiness and sward formation.

There are no limitations related to either climate or site conditions. The varieties selected have even been thoroughly balanced for colour compatibility, ensuring a harmonious, deep green.

- Extreme durability
- High regeneration capacity



Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
10 kg bag	500 m ²	4011239577801	1	57780	65



GREENFIELD SMALL PACKAGES

New lawns, lawn reseeding, repair mixtures, flower meadow

The new Greenfield series offers all the products you need to successfully establish, care for and restore your lawn. The new seeding category contains eight different lawn mixtures, offering you something for every kind of garden and location. Whether your site is dry or shaded, intensive or unused, Greenfield has the right mixture for you. If you're looking to beautify your existing lawn or repair unsightly patches, five different products are available, ensuring that you always have the right tool for lawn repairs large and small. Just using these mixtures will allow you to make the tattered remains of your lawn into the most beautiful patch of grass on the block. And if you decide that you don't really want a football pitch in your garden, but would rather do something for the bees and butterflies, the Greenfield flower meadow mixture is just the product you need. You will be rewarded with the sight of colourful flowers and happy insects.

Greenfield

- Quality seeds for private users
- A broad product range for all applications
- Use of high-quality varieties
- Coated Seed Vital used in many products
- Package sizes of 275 g to 10 kg





American Green

DARK GREEN QUALITY LAWN

A lawn mixture similar to those commonly used in gardens in dry areas. The high proportion of tall fescue ensures that the mixture has high drought resistance, meaning that less watering is necessary during the summer months compared to conventional lawn mixtures. American Green grows very well in shaded areas. This lawn should, in general, not be cut too short.

- Rapid establishment
- Hardwearing
- Fine texture
- Spreads widely
- Dense and durable turf
- For shady and sun



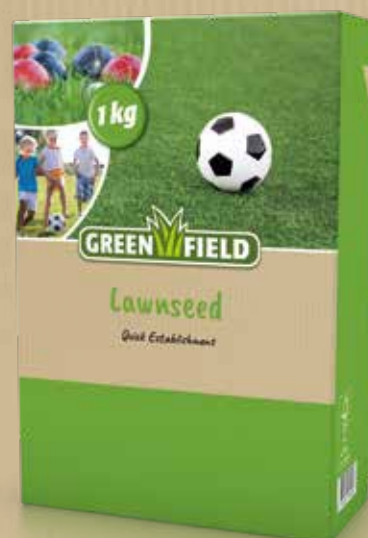
Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	40 m ²	4011239237910	6	70442	40
5 kg	Bag	200 m ²	4011239613370	1	70445	100

Lawnseed

QUICK ESTABLISHMENT

Greenfield Lawnseed produces a thick, green lawn that is ideal for both heavy-use areas and for decorative purposes. Sunny sites with sufficient water supply are preferred. In addition to its use as a new seeding option, this mixture is also very well suited for use in reseeding damaged lawn areas.

- Spreads widely
- Forms a dense turf
- Healthy and durable
- Rich green colour
- Repairs itself even after heavy usage
- Good regeneration



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	40 m ²	4011239237903	6	70182	40
5 kg	Bag	200 m ²	4011239613479	1	70185	100
10 kg	Bag	400 m ²	4011239613462	1	70180	65

Trockenrasen (Dry Lawn)

**WHEN YOUR LAWN HAS TO
WITHSTAND LENGTHY DRY PERIODS**

Is your lawn dry and yellowing? Is watering not doing the trick? Then it's time for a lawn that can do more. The deep-rooted Dry Lawn (Trockenrasen) from Greenfield can tolerate plenty of sun exposure and can also withstand lengthy periods of heat. It is also self-regenerating, hard-wearing and needs less water.

- Tolerates heat
- Saves water
- Self-regenerating
- Forms deep roots
- Hard-wearing



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	30 m ²	4011239625618	8	62560	40
2 kg	Folding carton	60 m ²	4011239625649	6	62563	40
5 kg	Bag	150 m ²	4011239625670	3	62566	16
10 kg	Bag	300 m ²	4011239625687	1	62569	65

Schattenrasen (Shade Lawn)

**WHEN YOUR LAWN DOESN'T
GET ALL-DAY-LONG SUN**

Does your lawn not receive very much sunlight? Greenfield Shade Lawn (Schattenrasen) shade lawn mix is your partner for semi-shaded and shaded lawn areas. A mixture of high-performance grasses ensures that even shaded areas grow nice and green. The lawn is fine-leaved and grows deep roots, allowing you to save water.

- Shade-tolerant
- Fine leaves
- Forms deep roots
- For difficult locations
- Self-regenerating



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.5 kg	Folding carton	25 m ²	4011239625458	8	62544	40
1 kg	Folding carton	50 m ²	4011239625441	6	62541	40

Zier- und Strapazierrasen (Ornamental and Hard-Wearing Lawn)

**FOR YOUR NEIGHBOURHOOD'S
BEST-KEPT LAWN**

Is having a beautiful lawn important to you? Greenfield's Ornamental and Hard-Wearing Lawn (Zier- und Strapazierrasen) is the queen of lawn mixtures. Its attractive appearance with fine, dark green leaves allow it to stand out from the rest, while also remaining resilient. The perfect partner for the lawn of your dreams.

- Fine leaves
- Dark green
- Resilient
- Tolerates low cutting
- Self-regenerating



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	50 m ²	4011239625434	8	62542	40
2 kg	Folding carton	100 m ²	4011239625496	6	62547	40

Sport- und Spielrasen (Sports and Playground Lawn)

**MAKE YOUR GARDEN INTO AN ARENA
FOR SPORTS AND GAMES**

Is your garden the place where things really come to life? Foot-races, frolicking, football matches? Then your grass will need to tolerate the wear and tear. Greenfield Sports and Playground Lawn (Sport- und Spielrasen) is the right one for the job. It can also fill in any bare patches on its own and requires little maintenance.

- Hard-wearing
- Self-regenerating
- Less clippings
- Easy to maintain
- Fine leaves



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	50 m ²	4011239625113	6	62510	40
2 kg	Folding carton	100 m ²	4011239625144	5	62512	24
5 kg	Bag	250 m ²	4011239625175	3	62515	65
10 kg	Bag	500 m ²	4011239625205	1	62519	65

Strapazierrasen (Hard-Wearing Lawn)

THE GRASS YOU NEED
WHEN THERE'S EXTREME WEAR AND TEAR

Are you looking for the last word in resilient lawns? Greenfield Hard-Wearing Lawn (Strapazierrasen) is just what you need. Its strength becomes clear when subjected to heavy stress: nothing is too much for it. Suitable for use anywhere, thrives on all locations. A real solid pal, who's with you through thick and thin.

- Extremely resilient
- Thick sward
- For all locations



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
5 kg	Bag	200 m ²	4011239625236	1	62525	100
10 kg	Bag	400 m ²	4011239625335	1	62530	65

Express-Rasen (Express Lawn)

YOUR SHORTCUT
TO A GREAT LAWN

In a rush? You need a great-looking lawn, and you need it yesterday? Greenfield's Express Lawn (Express-Rasen) mix mix can't do magic (yet), but it can hit the ground running and just keep going. This mixture is made from select fast-germinating grass varieties that turn your garden green in a flash. Ready, set...

- Fast germinating
- Displaces weeds
- Fast results
- Easy to use
- Self-regenerating
- Robust



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	60 m ²	4011239625366	8	62535	40

Klee-Rasen (Clover Lawn)

LET YOUR LAWN
BE ITS OWN FERTILISER

Did you know clover and grass make a darn good team? Clover can take nitrogen from the air and make it available in the soil, forming a natural fertiliser. And just to make sure that your lawn looks as good as possible, we've looked for a clover with extra-fine leaves that will give your lawn a deep green colour all year round.

- Fine-leaved clover
- Self-fertilising
- Suppresses weeds
- Dark green
- Winter hardy



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	50 m ²	4011239626431	6	62642	40

Komplettsaat-Neuansaat (Complete New Seeding)

EVERYTHING YOU NEED FOR A NEW LAWN:
SEED + LAWN ACTIVATOR + STARTER FERTILISER

Are you looking to plant a new lawn? The Complete New Seeding (Komplettsaat-Neuansaat) from Greenfield offers you everything you need in a single product. Its high-quality seed has been perfectly balanced and comes pre-mixed with starter fertiliser and a lawn activator. You can save yourself the extra work and apply everything in a single step.

- 3in1
- Ready to use
- Single application
- Contains starter fertiliser
- Contains lawn activator



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
10 kg	Bag	50 m ²	4011239625786	1	62579	65

Nachsaat-Mantelsaat® (Reseeding with Coated Seed)

**OUR RESEEDING MIX MAKES YOUR
OLD GRASS INTO A NEW LAWN**

Is your lawn looking a bit tired? Do you want to close gaps in the grass? Reseeding with Coated Seed (Nachsaat-Mantelsaat®) is suitable for use on any lawn, with stellar results in the blink of an eye. Your lawn will shine in its new green. The complete seed mix also has an extra coating.

- Fast results
- Rejuvenates
- Simple application
- For all surfaces
- Self-regenerating



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.275 kg	Pouch	15 m ²	4011239625946	21	62590	80
0.5 kg	Folding carton	30 m ²	4011239625984	12	62593	63
1 kg	Folding carton	60 m ²	4011239625977	8	62594	40
2 kg	Folding carton	120 m ²	4011239625885	6	62595	40
5 kg	Bag	300 m ²	4011239625267	3	62596	16
10 kg	Bag	600 m ²	4011239625892	1	62599	65

Vertikutiermix (Dethatching Mix)

**GET YOUR LAWN BACK IN SHAPE AFTER
DETHATCHING**

Dethatching... then what? Well, the lawn usually looks a little grim afterwards, in need of a pick-me-up. Not to worry, the Greenfield Dethatching Mix (Vertikutiermix) for dethatching provides a quick, gap-free result. This 4-in-1 product gives you the perfect mixture for your dethatched sward and puts you on the path to your dream lawn.

- Closes gaps in dethatched lawns
- Rapid regeneration
- For all surfaces
- Self-regenerating
- Contains lawn activator



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
2.5 kg	Pouch	120 m ²	4011239626219	6	62620	40

Rasenregeneration (Lawn Regeneration)

OUR RESEEDING MIX WITH AN EXTRA FERTILISER BOOST FOR AUTUMN AND SPRING

Is your lawn looking a bit tired? In spring and autumn, lawns can really use a bit of replenishing and some extra care. Our Lawn Regeneration (Rasenregeneration) mixture offers both in a single product: reseeding with Cool Season Active (CSA) grasses, a lawn activator and calcified seaweed. What's more, you can use it on all lawn surfaces with no issues.

- Fast results
- For all surfaces
- Self-regenerating
- Contains fertiliser
- Contains lawn activator



For soil temperatures of 5°C and up

Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
2 kg	Folding carton	60 m ²	4011239626035	6	62602	40
5 kg	Bag	150 m ²	4011239626066	3	62605	16

RasenFix® (Patch Repair)

FOR THE BARE PATCHES IN YOUR GARDEN

Are there gaps in your lawn? Do you want them gone quickly? Patch Repair (RasenFix®) offers a convenient solution for you: four components in a single product. Seeds with fertiliser to provide nutrients, calcified seaweed to neutralise soil pH, and coir granules as a substrate. You'll get good results in no time, because you've thought of everything. Nice and simple.

- Covers bare patches
- Fast germinating
- Easy to use
- Contains fertiliser
- Contains coir granules



Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1.5 kg	Pouch	10 m ²	4011239626110	6	62610	40

Blumenwiese (Flower Meadow)

FOR A MEADOW THAT BLOOMS IN VIBRANT COLOUR

Would you rather your garden be more of a flower patch than a lawn? Greenfield Flower Meadow (Blumenwiese) mix offers you a species-rich mixture of flowers, herbs and grasses. Not only does it look beautiful, it's also good for the environment: the lush, nourishing vegetation is a delight for insects like butterflies and bees.

- Vibrant colours
- Nectar-rich
- Long-lasting blooms
- Perennial
- Insect-friendly



15% flower and herb mixture with over 40 species

85% grass mixture

Contents	Type of packaging	Area	GTIN SU	SU	Item no. SU	SU/pallet
1 kg	Folding carton	100 m ²	4011239625816	6	62580	40





Seeds for new lawns and reseedling

The Grüne Oase range of lawn seed includes six different mixtures, of which five are for new lawns and one is for reseedling. There is a new lawn seed product for every application, meaning that your lawn planting can be a success, even in extreme locations such as arid areas.

Grüne Oase Lawn Reseeding is suitable for all lawn mixtures and allows a new green lawn to grow in damaged areas.

Grüne Oase

- Tried and tested seeds
- Proven mixture composition
- Specialist quality
- Product range for a broad spectrum of applications
- Wide variety of package sizes



Grüne Oase lawn mixtures

THE PRODUCT RANGE CONSISTS OF THE FOLLOWING MIXTURES:

Product name	Description	Con- tents	Area	Packaging	SU	Item No.	SU/pallet
Sports field (Sportrasen)	The ideal mixture with very good lawn grass varieties for gardens subject to heavy wear and tear, as well as sports fields and play areas. It forms a dense, resilient sward.	10 kg	300 m ²	PP bag	1	59800	65
		2.5 kg	75 m ²	Block bottom bag	6	59832	20
		1 kg	30 m ²	Block bottom bag	15	59812	20
		0.5 kg	15 m ²	Block bottom bag	30	59802	20
Shade Lawn (Schattenrasen)	Fine, hard-wearing mixture with tried and tested lawn grass varieties for semi-shaded lawns. It can withstand direct sunlight and is ideal for problem areas in your garden.	10 kg	300 m ²	PP bag	1	59900	65
		2.5 kg	75 m ²	Block bottom bag	6	59932	20
		1 kg	30 m ²	Block bottom bag	15	59912	20
		0.5 kg	15 m ²	Block bottom bag	30	59902	20
Berliner Tiergarten	An all-purpose lawn with good sward formation, a lush green and medium-fine sward growth. The mixture is suitable for sowing sunbathing lawns and areas that need to be both decorative and resilient.	10 kg	300 m ²	PP bag	1	59600	65
		2.5 kg	75 m ²	Block bottom bag	6	59632	20
		1 kg	30 m ²	Block bottom bag	15	59612	20
		0.5 kg	15 m ²	Block bottom bag	30	59602	20
Playground Lawn (Spielrasen)	Suitable for areas subject to severe wear and tear, with a medium-fine, resilient sward. It can recover quickly and cover up unsightly damaged areas.	10 kg	300 m ²	PP bag	1	59700	65
		2.5 kg	75 m ²	Block bottom bag	6	59732	20
		1 kg	30 m ²	Block bottom bag	15	59712	20
		0.5 kg	15 m ²	Block bottom bag	30	59702	20
Lawn Reseeding (Nachsaatrasen)	This lawn seed mixture is well-suited to reseed- ing all lawns and can be used from spring to autumn. Your lawn will show off a fresh, new green not long after sowing.	10 kg	400-600 m ²	PP bag	1	59750	65
		2.5 kg	100-150 m ²	Block bottom bag	6	59756	20
		1 kg	40-60 m ²	Block bottom bag	15	59753	20
		0.5 kg	20-30 m ²	Block bottom bag	30	59752	20
Dry Lawn (Trockenrasen)	This dry lawn mix is just the right thing for dry and sunny areas in your garden. The deep-rooted lawn grass varieties it contains significantly reduce the lawn's water requirements.	10 kg	300 m ²	PP bag	1	59960	65
		2.5 kg	75 m ²	Block bottom bag	6	59966	20
		1 kg	30 m ²	Block bottom bag	15	59963	20

**Additional packaging sizes and sales kiosks available on request.
Please contact us for a precise breakdown of the mixtures!**

Greenline

Reasonably priced lawn mixtures for new planting

The Greenline lawn family consists of three products that can be used effectively for new plantings on any location. The simple Greenline mixtures are a cost-effective way to establish a dense lawn and maintain it for years, especially on relatively extensive sites.

The packaging sizes range from 1 to 10 kg, with the right size for any area. The practical flat foil bags and plastic bags are extremely robust and easy to transport.

For customised Greenline mixtures, please contact us.

Greenline

- Reasonably priced seed mixtures
- Practical flat foil bags
- Simple mixture composition
- Solid growth
- Small product line for the most important applications

► Spiel + Sport (Family + Fun)

The Greenline Family + Fun (Spiel + Sport) lawn mixture is ideal for creating a new, resilient lawn in your garden. Sowing the Greenline Family + Fun mixture is your first step to the ideal family lawn: robust, regenerates easily, and ideal for playing, frolicking and relaxing. Naturally, you can also use Greenline Family + Fun to quickly and easily repair existing lawns.



Package size	GTIN SU	Item no. SU	Item no. 1/4 sales kiosk	Item no. 1/2 sales kiosk	SU/pallet
10 kg for 300 m ²	4011239433343	58900 = 65 bags			65
5 kg for 150 m ²	4011239433640	58931 = 3 bags	58932 = 15 bags	58933 = 30 bags	16
2.5 kg for 75 m ²	4011239433527	58921 = 6 bags	58922 = 30 bags	58923 = 60 bags	24
1 kg for 30 m ²	4011239433404	58911 = 15 bags	58912 = 75 bags	58913 = 150 bags	24



Berliner Tiergarten

The Greenline Berliner Tiergarten lawn mixture is ideal for creating a new, decorative lawn in your garden. Transform your garden into a place of rest and relaxation and create your own lawn for sunbathing and recreation. Reseeding with Greenline Berliner Tiergarten also quickly and easily repairs existing lawns.



Package size	GTIN SU	Item no. SU	Item no. 1/4 sales kiosk	Item no. 1/2 sales kiosk	SU/pallet
10 kg for 300 m ²	4011239433749	58950 = 65 bags			65
5 kg for 150 m ²	4011239434043	58971 = 3 bags	58972 = 15 bags	58973 = 30 bags	16
2.5 kg for 75 m ²	4011239433923	58961 = 6 bags	58962 = 30 bags	58963 = 60 bags	24
1 kg for 30 m ²	4011239433800	58951 = 15 bags	58952 = 75 bags	58953 = 150 bags	24

Schattenrasen (Shade Lawn)

The Greenline Shade Lawn (Schattenrasen) mixture is ideal for creating a new, adaptable lawn in the shaded and partially shaded areas of your garden. When you sow Greenline Shade Lawn, you can look forward to a resilient, dense green lawn in spite of difficult conditions in the shade. Existing lawns can also be repaired quickly and easily with Shade Lawn.



Package size	GTIN SU	Item no. SU	Item no. 1/4 sales kiosk	Item no. 1/2 sales kiosk	SU/pallet
10 kg for 300 m ²	4011239589408	58940 = 65 bags			65
2.5 kg for 75 m ²	4011239589477	58945 = 6 bags	58895 = 30 bags	58897 = 60 bags	24
1 kg for 30 m ²	4011239589439	58942 = 15 bags	58890 = 75 bags	58892 = 150 bags	24

“



LAWN DISEASES

Symptoms, causes,
and what can be done.

”

SNOW MOULD (FUSARIUM PATCH)

Microdochium nivale (syn.: *Fusarium nivale*)

Importance: The most widespread lawn disease, causes significant damage.

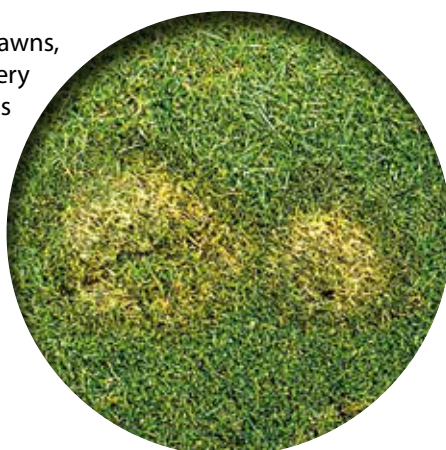
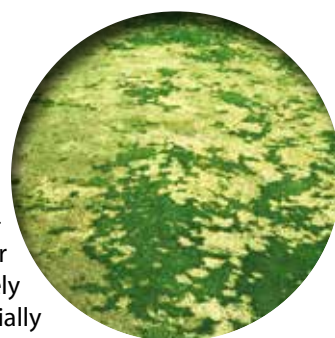
Season: Any season under unfavourable conditions, generally in spring and autumn.

Symptoms: Initial appearance of small, dark-brown or orange circular points, which quickly increase in both size and number. Patches of dead grass appear. Affected grass can become wet and slimy. The patches tend to have a dark-brown ring and a lighter centre. The fungal mycelia (white to pink) is sometimes visible around the patches; the dead leaves often stick together.

Where? On very fine and thick lawns, sometimes ones that receive very intensive maintenance. All grass species are affected, though partially variety-dependent.

Causes: The disease is exacerbated by wet weather and wet surfaces; extremely high nitrogen levels, especially in autumn; topdressing with excessively high doses; and alkaline conditions.

Preventative measures: Measures to reduce long-lasting surface moisture, e.g. drainage; increasing air circulation by not placing trees, hedges, fences and walls too close on the lawn; aerification and sanding; eliminating water-retaining lawn thatch; limiting irrigation; not applying nitrogen or lime in periods that favour disease emergence; always removing clippings.



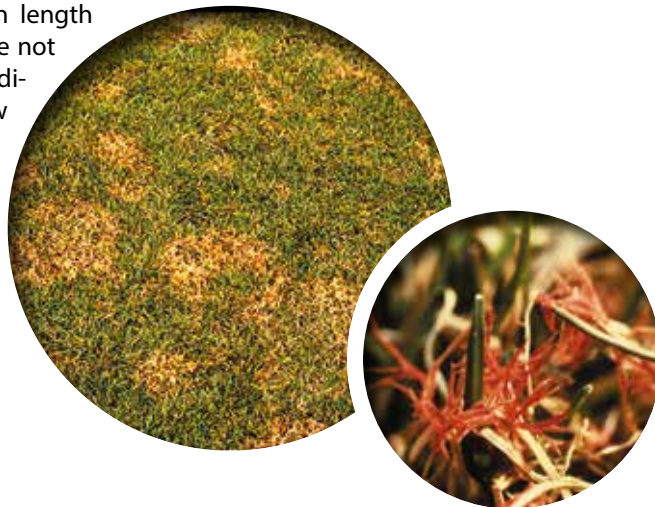
RED THREAD DISEASE

Laetisaria fuciformis
(syn.: *Corticium fuciformis*)

Importance: Extremely widespread; in severe cases the grass can die off entirely. Affected lawns generally recover.

Season: In summer and autumn, up to winter under mild conditions.

Symptoms: Spot-like damage on grass, often with a pink or reddish appearance (caused by needle-like fungal hyphae protruding from diseased leaves, which can grow up to 25 mm in length and are often branched). Spots are not clearly delimited and can vary in diameter from 20-50 mm on the low end up to 350 mm. In mild cases, necrosis only occurs in leaf tips.



Where? All turf grasses can be affected. Most common in *Lolium perenne* and *Festuca rubra*, especially in slow-growing varieties that require significant care.

Causes: Insufficient supply of nutrients, especially nitrogen.

Preventative measures: Nitrogen fertiliser should also be applied in the summer months in order to promote growth. Caution is necessary in the event of excessive nitrogen additions, which can lead to outbreaks of snow mould.

TAKE-ALL

Ophiobolus graminis

Importance: Not a widespread disease, though under unfavourable conditions it can cause significant damage.

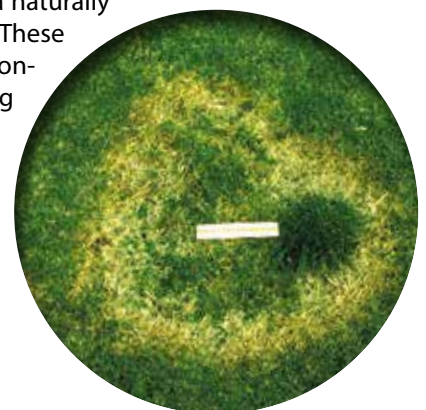
Season: Summer or autumn; affected areas can, however, persist through the entire year.

Symptoms: Rings of yellow or orange-coloured grass emerge with a diameter of 0.1-1.0 m, followed by a ring of about 0.1 m of dead grass. The change in colour is a result of the fungus attacking the roots. Inside the ring, the only species that remain are those not susceptible to the disease and weeds.

Where? Take-all can emerge in any type of turf grass, but is especially prevalent in *Agrostis*-dominated stands.

Causes: Standing water and alkaline soil pH strengthen the infection. The disease emerges when wet, acidic soils are treated with lime, for example on fairways. It can also emerge in new plantings, when the soil was previously disinfected or when foreign material such as sand or lava rocks are applied to the plant layer (in these cases, the lack of antagonistic fungi is probably the cause).

Preventative measures: Once the disease has become established, it is difficult to bring it under control. Preventing it through proper care is much more advantageous. Standing water can be avoided through a well-functioning drainage system. Under an ideal lawn care scenario, no lime needs to be applied. However, if lime is applied in the autumn, it should be followed by a spring application of acidifying fertiliser, such as ammonium sulphate nitrate. The soil reaction can also be improved through the use of alkaline sand for topdressing and irrigation water which often contains a naturally high amount of lime. These factors should be considered when planning lawn care measures.



HELMINTHOSPORIUM LEAF SPOT

Helminthosporium vagans

Importance: Very widespread, but rarely causes notable damage.

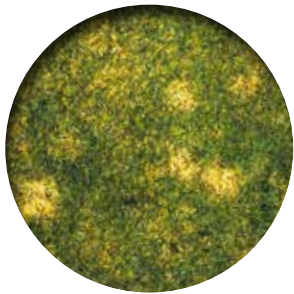
Season: Can occur at any time of the year.

Symptoms: Spots on the leaf with varying colours, though they can be brown, black, olive-green or purple.

Where? Affects almost all grass species and lawn types.

Causes: The spread of leaf spots spread increases under warm and humid conditions. Stressed plants or old tissue is most vulnerable.

Preventative measures: Remove cuttings and old, dead plant matter; avoid creating unnecessary moisture (through overwatering); increase air circulation by removing obstacles (hedges, walls, fences, trees).



DOLLAR SPOT

Sclerotinia homoeocarpa

Importance: Widespread in certain regions, especially on intensively maintained lawn types. Otherwise seldom observed.

Season: Summer and autumn.

Symptoms: Forms small, well-defined circular patches around 50 mm in diameter. Inside the patches, the grass is mostly dead, with a straw colour and dry. In severe infections, individual patches can combine into larger damaged areas. The disease can also co-occur with red thread disease.

Where? All turf grasses can be affected. Most common in *Lolium perenne* and *Festuca rubra*, especially in slow-growing varieties that require significant care.

Causes: The disease is favoured by the presence of susceptible grass species and varieties, and by a lack of nutrients, particularly nitrogen.

Preventative measures: Using resistant varieties of *Festuca rubra trichophylla* and balanced nutrient additions with nitrogen.

BROWN PATCH

Rhizoctonia solani

Importance: Infections are rare, but severe when they occur.

Season: During the entire growing season.

Symptoms: The fungus most commonly affects young grass seedlings following a new planting, thus causing seedlings to die and resulting in uneven emergence.

Where? All turf grasses are affected, especially *Agrostis* and *Festuca* species.

Causes: Seeds are most commonly infected prior to planting. Imbalanced nutrient additions, however, can favour fungal growth, especially when there is an excess of nitrogen and phosphorous with a lack of calcium and magnesium.

Preventative measures: Balanced nutrient provision, seed coating (e.g. use of Coated Seed).



TYPHULA BLIGHT

Typhula incarnata

Importance: Depending on weather patterns, severe damage can occur in some years.

Season: Infection often occurs in autumn or winter in damp and cool weather, though damage generally becomes apparent in early spring.

Symptoms: Circular spots of dead grass with a diameter of up to 40 cm, pale pink to white mycelia visible on leaves. The fungus causes root decay, leading to the death of the grass plant.

Where? In all turf grasses, especially in *Lolium perenne* (certain varieties), less commonly in *Festuca rubra*. More common on sandy soils.

Causes: Surface compaction with excessive moisture, grass allowed to grow too high.

Preventative measures: Limit nitrogen fertilisation in autumn; maintain a mowing height of 3-3.5 cm prior to winter; aerate, sand and dethatch the upper surface.

RUST

Puccinia ssp.

Importance: Minor infections are common, severe ones are very rare.

Season: Summer and autumn.

Symptoms: Orange or brown pustules are formed on the leaf surface, which can be irregularly distributed or arranged in lines.

Where? Almost all grass species can be affected. Among turf grasses, infections are most likely to occur in *Lolium perenne* and *Poa pratensis*.

Causes: Warm weather; most frequently occurs on long, unmown lawns. Regular cutting can prevent infections.

Preventative measures: The risk can be minimised by selecting resistant varieties.

FAIRY RING (TYPE 1)

Marasmius oreades

Importance: Relatively common on fairways and similar areas, where they can cause significant damage. Less frequently observed on golf greens or tees.

Season: Rings can last for several years, but the symptoms are most clearly visible during dry summer weather conditions.

Symptoms: Type 1 fairy rings kill or severely damage the grass. Two rings are visible, in the shape of an arc or circle, and consisting of grass with vigorous growth and dark green colouration. Between these rings is a ring of bare ground with dead grass. The fungi create extremely hydrophobic soil conditions, which lead to the turf drying up. Underneath the ring, there is a thick, white net of mycelia that gives off a typical mouldy smell. Between summer and autumn, small yellow-brown mushrooms can be seen in the outer ring.

Where? All turf grasses.

Causes: The conditions are not yet completely understood, but surface waterlogging may play a role. Fairy rings are found in all soil types, but are most common on light, sandy soils.

Preventative measures: It is hard to fully eliminate fairy rings; often the most that can be done is to prevent further spreading. Rings rarely grow through obstacles that surround the soil, such as lawn edges or borders. Cutting across the infected zones is also frequently effective, as it allows antagonistic fungi to enter the ring area and prevent further expansion. Removal of the affected soil is also highly effective, though very costly. Prior to the use of fungicides, the hydrophobic zone must first be softened through aeration and the administration of a wetting agent.



FAIRY RING (TYPE 2)

Scleroderma ssp.

Importance: Commonly occurs on very fine lawns (ornamental lawns, greens); however, serious damage only rarely occurs.

Season: Symptoms are most commonly visible in summer and autumn, but the fungi are present all year round.

Symptoms: Rings, bands or arcs are visible, around which grass grows more quickly and has a darker green colour. Significant damage does not occur. As a side effect, the fruiting bodies of the fungi are occasionally visible (standing or gill fungi).

Where? Nearly all turf grasses can be affected. Type 2 fairy rings are most commonly observed on golf greens.

Causes: Unknown; the symptoms are clearest under conditions of low nitrogen.

Preventative measures: When grass is not damaged, the symptoms are often tolerated. However, it can become unsightly. Fairy rings can be hidden by administering extra nitrogen during the growing season or by using ferrous sulphate on the surrounding area to give it a darker green appearance.



FAIRY RING (TYPE 3)

Scleroderma ssp.

Importance: Very widespread, generally no damage to the grass.

Season: The fungus is present year-round, but the ring is only visible for a short period, generally in autumn.

Symptoms: Fungal activity is apparent due to the formation of a ring with grass showing vigorous growth and dark green colouration, as well as the irregular emergence of fruiting bodies.

Where? Observed on most types of lawns, though less frequently on hard-wearing lawns.

Causes: Unknown.

Preventative measures: Not necessary, since no real damage is caused. In order to prevent additional spread, the fruiting bodies can be removed before they release their spores.



MODERN LAWNS

MODERN VARIETIES!

On the role of plant breeding and variety selection for lawn quality

As an internationally active company, Feldsaaten Freudenberger relies on varieties with a large capacity for adaptation to various local environmental conditions. Considerations of heat and drought tolerance have increased in importance, especially in recent years, and now are at the centre of our plant breeding efforts. Like agricultural crops, garden plants must adapt to the changes in climate conditions.



Perennial ryegrass



Tall fescue



Smooth-stalked meadow grass



Red fescue

In collaboration with over 50 plant breeders, varieties are filed for registration and upon approval recommended for use in many countries. Feldsaaten Freudenberger has developed over 60 lawn grasses, covering all areas of lawn applications. All of the varieties bred by Feldsaaten Freudenberger were created using classical plant breeding methods, meaning that they have not been genetically modified. This classical approach to plant breeding has long proven to be effective and is constantly being perfected. It takes at least 10 years for a breeding line to be developed to the point that it can be registered as a new variety.

In order to nonetheless react quickly to changing conditions, it is necessary to think and act proactively, and to have a diversified spectrum of varieties.

Additional requirements are placed on grasses for use in lawns. On the one hand, there is a demand for varieties with differently coloured leaves, and on the other, new varieties must be increasingly able to tolerate stress. Different aspects are also required, such as even finer leaves to improve the appearance of ornamental lawns. Feldsaaten Freudenberger has its own internal team for varieties and trials, which takes stock of these requirements and works to ensure the constant development of the product range. Promising breeding lines are cultivated in the in-house laboratory and on trial plots, after which they are tested and selected. This allows new varieties to be registered every year, while constantly improving the quality of the varieties available. Applications are currently pending on 15 grass varieties, meaning that new varieties will find their way into the product range in the coming years.



Field trials for new breeding lines are examined in the show garden

**A SELECTION OF SPECIAL
LAWN GRASS VARIETIES IS
SHOWN ON PAGE 44**



Variety trials under field conditions in the show garden



The growth of potential new varieties is also regularly examined under laboratory conditions by a team of experts

NEW FREUDENBERGER VARIETIES

Breeding the next generation

In addition to a large assortment of proven and conventional varieties, Feldsaaten Freudenberger also has novel varieties that exhibit properties never before seen, placing them amongst the top varieties worldwide. These varieties have been developed over the years by select partner companies in the breeding industry and brought to market readiness. These top varieties have recently become available from Feldsaaten Freudenberger.



CORSICA

(LOLIUM PERENNE)

CORSICA is a runner-forming variety of perennial ryegrass with excellent quality characteristics. It is well-suited for use in ornamental and recreational lawns, as well as hard-wearing lawns. The variety forms vigorous runners after the first winter, enabling it to regenerate itself independently and repair any areas that have become damaged. At the same time, the variety's outstanding qualities are underscored by its BSA rating (of 8!) in the categories of sward colour and leaf fineness. This makes CORSICA an excellent component of high-performance quality mixtures.

- Forms runners
- Regenerative
- Universal use
- Received top ratings
- Dark green



VERMILLION

(LOLIUM PERENNE)

VERMILLION is a French lawn grass variety of the highest grade. VERMILLION is tested in France and classified as having excellent characteristics. In particular, it stands out for its quick establishment and outstanding hardiness. In 2021, VERMILLION was successfully inducted into the German RSM Recommendation List. VERMILLION is best suited for hard-wearing and recreational lawns. At the same time, it also shows low susceptibility to diseases and is a perfect component in mixtures owing to its medium green leaf colouration.

- Medium green
- Rapid establishment
- Best suitability for hard-wearing lawns
- High sward density
- Robust



FIREBIRD

(LOLIUM PERENNE)

The newly approved variety FIREBIRD belongs to the absolute peak of perennial ryegrasses. Its very fine leaves and slow growth are two impressive factors of the variety, which can be used in applications of all kinds. The new variety can even be used in RSM mixtures for ornamental lawns. Because of its good ability to withstand wear and tear, FIREBIRD is a top variety for recreational lawns, especially ones classed as hard-wearing. FIREBIRD forms an extremely thick sward, which allows it to suppress weeds very effectively (rating of 8 in weed elimination!).

- Fine leaves
- Slow growth
- Extremely thick sward
- Strong competitive vigour, high weed elimination
- Best suitability for hard-wearing lawns



SAGANE

(LOLIUM HYBRIDUM)

SAGANE is a completely new and innovative variety in the lawn grass segment. SAGANE is a special hybrid ryegrass, bred with the most important lawn grass qualities in mind. It combines the important characteristics of perennial ryegrass with the extremely quick stand establishment and rapid growth that characterise Italian ryegrass in a single variety. At the same time, SAGANE forms a uniform and compact sward, and is quite hard-wearing. SAGANE can persist for at least two years and can clearly stand out from conventional annual ryegrasses.

- Extremely rapid stand establishment
- Excellent early development
- Uniform sward density
- Medium green
- Durable



BROOKLAWN

(POA PRATENSIS)

BROOKLAWN, a smooth-stalked meadow grass variety, is among the top varieties for recreational and hard-wearing lawns. BROOKLAWN exhibits high sward density with a strong runner-forming habit, enabling it to close gaps in lawns and effectively suppress weeds. Furthermore, BROOKLAWN shows a very high disease tolerance. This variety is suitable for all kinds of recreational and hard-wearing lawns, making it an indispensable element in such lawn mixtures.

- Extremely high sward density
- Intense colour
- High disease tolerance
- Strong runner formation
- Very durable



UNITED

(POA HYBRIDUM)

The UNITED variety is a true innovation. It belongs to the hybrid bluegrasses (*Poa arachnifera* x *pratensis*), which are crosses between Kentucky bluegrass (*Poa pratensis*) and Texas bluegrass (*Poa arachnifera*). This hybrid brings together the excellent turf qualities of both species with considerably improved stress and disease tolerance. Drought tolerance is particularly pronounced in this variety. Meanwhile, the characteristics that give bluegrass its particular qualities are fully maintained. UNITED stands out for the brilliant colour of its leaves, very high sward density and excellent resilience.

- High drought resistance and stress tolerance
- Very early vegetation start
- Ideal green colouration
- For ornamental and hard-wearing lawns
- Rapid establishment



ROCKWELL

(FESTUCA ARUNDINACEA)

ROCKWELL is a new tall fescue variety, characterised in particular by its high turf quality. The variety is ideally suitable for recreational and hard-wearing lawns. ROCKWELL exhibits excellent stand formation and can form a very dense sward. One of the variety's special features is its incredibly fine leaves, which are produced year-round. This, in combination with its very fast growth at the beginning of the growing period, makes ROCKWELL an all-star variety.

- Best suitability for recreational lawns
- Tremendous disease tolerance
- Excellent quality characteristics
- Very fine leaves
- Dark leaf colour



VERLIGHT

(FESTUCA ARUNDINACEA)

VERLIGHT is a French tall fescue variety. In addition, VERLIGHT is the first variety with quality characteristics that indicate top genetic traits as well as a medium-green colouration. Many other tall fescue varieties have a considerably darker green shade, which makes their use in mixtures tricky in terms of achieving a balanced, uniform look. Not so with VERLIGHT. What is more, VERLIGHT scores extra points for its formidable hardiness, excellent sward density and high disease tolerance.

- Homogenous appearance
- Medium green
- Tremendous disease tolerance
- Very persistent
- Excellent sward density



SC1

(FESTUCA ARUNDINACEA)

SC1 a new tall fescue variety, characterised in particular by its dark green leaves. Of particular note is that this colour is maintained through the winter as well. Other noteworthy characteristics of SC1 include a rapid onset of growth in the spring and extremely high durability. Its high resistance to diseases is a further advantage of the variety.

- Universal use
- Extraordinary disease resistance
- Good tolerance of shade
- For recreational and hard-wearing lawns
- Fine, medium-green leaves



GREENFIELD GOLF MIXTURES

Greenfield professional mixtures for the discerning greenkeeper

There are hardly any other surfaces that have as many different requirements as golf courses. With their tee-offs, fairways and greens, golf courses are a symbol of perfection in grassy surfaces that cannot be found anywhere else. Every golf course, however, is also affected by numerous stresses, which can only be tolerated by the best lawn mixtures.

- Damage to swards by tee-offs
- Stress from being walked and driven over
- Effects of weathering, e.g. drought, heat, cold, etc.
- Reduced irrigation
- Intensive maintenance and fertilisation
- Frequent mowing
- Low cutting height
- Disease pressure

Greenfield lawn mixtures for golf courses can be used in any site conditions. Every variety used in these mixtures can satisfy the special requirements to the highest degree. Whether it's a fairway, green or slope, a shaded or sunny spot, Greenfield has the right professional mixture for every application. The grasses, which are specially selected for the purpose, are subject to strict guidelines and quality control. Ask about our professional programme for golf courses. We would be happy to prepare customised mixtures for you according to your specific needs.

All Greenfield golf mixtures offer the following characteristics:

- High regenerative capacity
- Resilient
- Exceptionally robust
- Water-efficient
- Optimised for the necessary mowing height
- Vigorous

Greenfield Golf

- Seed mixtures and single-species seeds for professional golf courses
- Special varieties of creeping bentgrass
- Top-rated seed
- Mixtures for all parts of the golf course
- Homogenous appearance



Did you know that the origin of golf likely goes back to shepherds, who would use sticks to sink rocks into rabbit holes? The sport is said to have originated in Scotland and the Netherlands.

Source: golfsportmagazin.de

We reserve the right to replace the varieties listed here, depending on availability, with other varieties with an equal rating.

Creeping bentgrass (*Agrostis stolonifera*)

In general, a seeding rate of about 3 g/m² is sufficient for reseeding. This depends on the state of the sward and on the particular reseeding technique used. All varieties can be prepared as mixtures (Penn blend and *Agrostis* blend) per your specifications. All of the varieties of *Agrostis stolonifera* can be delivered as Coated Seed or uncoated. In addition, all varieties of *Agrostis stolonifera* are offered as a mixture with a germination aid.

Variety	Mowing height (Growing season)	Seeding rate (New planting)	Preferred Location
CY-2	3.0-4.0 mm	7-9 g/m ²	Very good for high temperatures
PENN A-4	2.8-3.8 mm	5-8 g/m ²	Sunny sites and high altitudes
PC2	3.0-4.0 mm	7-9 g/m ²	For all locations

Additional varieties on request

Packaging unit: 10 kg or 11.35 kg



GF-430 Tee No. 1

RSM 4.3

This mixture includes a runner-forming Lolium variety. Because of its runners, this variety is able to form extremely dense and regenerative swards. This ensures that damaged areas are quickly regenerated. This feature is particularly beneficial on tees, since these areas are often subject to severe damage. GF-430 also withstands extreme wear and tear and is ideal for reseeding damaged lawns.

COMPOSITION

30% Smooth-stalked meadow grass (*Poa pratensis*)
 20% Chewing's fescue (*Festuca rubra commutata*)
 15% Perennial ryegrass (*Lolium perenne*)
 15% Perennial ryegrass (*Lolium perenne*) (runner-forming)
 10% Creeping red fescue (*Festuca rubra rubra*)
 10% Slender creeping red fescue (*Festuca rubra trichophylla*)

PROPERTIES

Used on: Tees, driving ranges, connecting paths, display lawns

Sowing rate: 25-30 g/m² (reseeding: around 15 g/m²)

Mowing height: 10-15 mm

SU: 10 kg bag **Item no.:** 69430 **GTIN:** 4011239302441 **SU/pallet:** 65

GF-442 Fairway No. 2 (ideal for reseeding)

WITH RUNNER-FORMING LOLIUM PERENNE

This mixture is ideal for reseeding. With a balanced selection of species and varieties, this is a mixture that ensures quick regreening due to the Lolium component. It also offers good drought tolerance thanks to the *Festuca* varieties. As a Cool Season Active® grass, perennial ryegrass grows under soil temperatures as low as 5°C and germinates very quickly, making it ideal for lawn regeneration. 15% of the Lolium used is from a runner-forming variety, which is also excellent for reseeding.

COMPOSITION

35% Tall fescue (*Festuca arundinacea*)
 15% Creeping red fescue (*Festuca rubra rubra*)
 15% Chewing's fescue (*Festuca rubra commutata*)
 15% Perennial ryegrass (*Lolium perenne*) (runner-forming)
 10% Perennial ryegrass (*Lolium perenne*) (Cool Season Active®)
 10% Perennial ryegrass (*Lolium perenne*)

PROPERTIES

Used on: Fairways, tees, semi-roughs, display lawns

Sowing rate: 25 g/m² (reseeding: around 15 g/m²)

Mowing height: 10-20 mm

SU: 10 kg bag **Item no.:** 69442 **GTIN:** 4011239302489 **SU/pallet:** 65

Greenfield golf mixtures

All mixtures in 10 kg bags

*Please contact us
for a precise breakdown
of the mixtures!*

THE PRODUCT RANGE CONSISTS OF THE FOLLOWING MIXTURES:

Product code	Product name	Description	Suitable for	Sowing rate	Mowing height	Item No.	SU/pallet
GF-412	Green No. 1	A green mixture with top varieties, each of which meets the quality required for this sensitive area and goes well beyond the guidelines	Golf greens, putting greens	20-30 g/m ²	3.5-4.5 mm	69417	65
GF-413	Green No. 2 ideal for reseed	A green blend with creeping bentgrass and disease-resistant Festuca species	Golf greens, putting greens	20 g/m ²	3-4 mm	69412	65
GF-414	Green No. 3 ideal for reseed	This greens mixture is particularly suitable for high-traffic greens that require considerable maintenance	Golf greens, putting greens	20 g/m ²	3.5-4.5 mm	69416	65
GF-415	Green No. 4	Only high-quality Festuca varieties that are known to be highly resistant to disease are used in this mixture	Golf greens	30 g/m ²	≥ 5 mm	69415	65
GF-430	Tee No. 1	Mixture with runner-forming Lolium, thanks to which it can form extremely dense and regenerative swards	Tees, driving range	25-30 g/m ²	10-15 mm	69430	65
GF-432	Tee No. 2	A tee mixture for extreme locations such as shaded areas or humid, high-altitude sites	Tees, display lawns	35 g/m ²	8-15 mm	69432	65
GF-433	Tee No. 3	This mixture is particularly suitable for rapid regeneration of tees that are subject to significant wear and tear	Tees, display lawns	25 g/m ²	8-15 mm	69433	65
GF-441	Fairway No. 1 (also suitable for pre-greens)	This mixture is suitable for both new planting and reseed of fairways	Fairways, tees, driving range	25 g/m ²	10-20 mm	69441	65
GF-442	Fairway No. 2 (ideal for re-seeding)	With its runner-forming Lolium, this mixture is ideal for reseed	Fairways, tees, semi-roughs	25 g/m ²	10-20 mm	69442	65
GF-450	Semi-rough No. 1	The broad spectrum of species makes GF-450 a visually appealing mixture for the semi-rough area	Semi-roughs	25 g/m ²	30-50 mm	69450	65
GF-451	Semi-rough No. 2	A highly drought-tolerant and robust mixture with two top varieties from the tall fescue range.	Semi-roughs	35 g/m ²	30-50 mm	69451	65

**We can also offer flower mixtures and individual components for use in flowering roughs.
Please get in touch.**



Seed for the experts

ProSeed® represents an entirely new product line of professional lawn seeds. These seeds are not based on conventional evaluation lists, but rather use the newest breeds available worldwide. Some of the varieties used will only be publicly available in a few years. The ProSeed® range provides you access to new mixtures in which only the top-quality seed is used. In order to ensure optimal germination rates and vigorous growth, Coated Seed Vital is used in the PS 310 and PS 320 mixtures, making your path to success even quicker. You can find more information on Coated Seed on page 14.



ProSeed®

- For planting professional sports fields
- Uses absolute top varieties with the best ratings
- Makes use of innovative varieties with special characteristics (e.g. runner-forming)
- Premium seed for the discerning greenkeeper

PS 310 Sports Field New Planting STADION+ CS*

FOR THOSE WHO WANT TO GET IT RIGHT THE FIRST TIME

Quality mixture for new plantings on professional sports fields with top-quality grass varieties. The **runner-forming perennial ryegrasses** are self-regenerating, which allows them to fill empty patches in the turf. They also improve the shear strength of the turf. The smooth-stalked meadow grass seed in the mixture is coated with Coated Seed Vital. Germination thus occurs much faster than in conventional meadow grass.

COMPOSITION

- 30% Perennial ryegrass (*Lolium perenne*)
- 20% Perennial ryegrass (*Lolium perenne*)
- 25% Smooth-stalked meadow grass (*Poa pratensis*)
- 25% Smooth-stalked meadow grass (*Poa pratensis*)

PROPERTIES

Maintenance requirements: High
Sowing rate: 25 g/m²



SU: 10 kg bag **Item no.:** 65310 **GTIN:** 4011239653109 **SU/pallet:** 65

PS 320 Sports Field Reseeding STADION+ CS*

PREMIUM QUALITY FOR THE PERFECT STADIUM

Professional mixture containing **runner-forming perennial ryegrass** for faster regeneration and improved shear strength of the turf. In combination with smooth-stalked meadow grass the mixture forms a very dense turf with high regenerative capacity. In order to ensure rapid reseeding, the seed is coated with Coated Seed Vital, which leads to faster germination and thus even faster regeneration of damaged lawn areas. PS 320 is the ideal mixture for anyone who wants to transform their lawn into a professional sports field turf in the shortest possible time.

COMPOSITION

All of the seed used has been treated with Coated Seed Vital:

70% Perennial ryegrass (*Lolium perenne*)

10% Perennial ryegrass (*Lolium perenne*)

20% Smooth-stalked meadow grass (*Poa pratensis*)

PROPERTIES

Maintenance requirements: High

Sowing rate: 20 g/m²



* CS = Coated Seed

SU: 10 kg bag **Item no.:** 65320 **GTIN:** 4011239653208 **SU/pallet:** 65

PS 321 Sports Field Reseeding STADION CSA

FOR EXTRA WEEKS OF PLAY

Regeneration mixture for use on professional sports fields, especially during the cool season. The **Cool Season Active® grass (CSA)** in the mixture grows at soil temperatures even as low as 5°C, which considerably extends the regeneration or growing period compared to normal seed. The field stays green for longer in autumn and growth starts in spring, while other fields are still dormant. The playing season for the year is considerably extended and the turf survives the winter well. The **tetraploid** varieties grow impressively deep roots and maintain their dark green colour throughout winter.

COMPOSITION

60% Perennial ryegrass (*Lolium perenne*)

30% Perennial ryegrass (*Lolium perenne*)

10% Perennial ryegrass (*Lolium perenne*)

PROPERTIES

Maintenance requirements: High

Sowing rate: 25 g/m²

SU: 10 kg bag **Item no.:** 65321 **GTIN:** 4011239653215 **SU/pallet:** 65

GREENFIELD PROFESSIONAL MIXTURES

Lawn mixtures for professional use in landscape lawns, sports fields and gardens

Greenfield professional mixtures cover the full spectrum of seed mixtures, which is a necessity for offering professional solutions in a variety of applications. In addition to the well-known standard mixtures, the product range contains additional items for specific requirements. These include mixtures that are not part of the standard product line but are absolutely necessary in order to offer a complete range of mixtures. Only high-quality and top performing varieties are used that are ideally suited to the respective area of application. The collection of varieties is constantly expanded and improved through close collaboration with renowned plant breeders around the world.

Greenfield

- Complete line of lawn mixtures for all applications
- For professional sports fields and landscaping
- The right mixture for every application
- Bulk bags for large areas
- Use of professional varieties

IMPRESSIVE FEATURES OF THE GREENFIELD PRODUCT LINE INCLUDE

- Broad range of mixtures for all requirements
- Use of high-quality varieties
- Constant optimisation of the collection of varieties used
- Continuous quality control by the in-house laboratory
- Further development of mixtures following the most recent guidelines
- Adaptation of the product line to meet current requirements
- Use of Coated Seed in mixtures as appropriate
- Use of high-germination seeds
- Robust, vigorous seed batches
- The right mixtures, even for extreme locations

With the Greenfield professional mixtures, you can always make the right choice!



THE GREENFIELD PROFESSIONAL RANGE CONTAINS THE FOLLOWING TYPES OF MIXTURES:

- Ornamental lawns
- Recreational lawns
- Sport fields
- Car park lawn
- Landscape lawns
- Special mixtures
- Flower and herb mixtures
- Golf mixtures

A few examples of these mixtures are provided on the coming pages:

GF-220 Recreational lawn – Dry sites	Page 56
GF-230 Recreational lawn – Playground lawn	Page 56
GF-311 Sports field – New sites	Page 57
GF-320 Sports field – Regeneration Coated Seed	Page 57
GF-721 Landscape lawn – Dry sites, no herbs	Page 58
GF-722 Landscape lawn – Dry sites, with herbs	Page 58
GF-894 Wildflower and herb meadow with grasses	Page 59
GF-895 Wildflower and herb mixture	Page 59

Upon request, we would be delighted to provide you with information on the composition and description of the mixtures not described in detail in this catalogue.

You can find an overview of the entire product line on pages 60 and 61!



GF-220 Recreational lawn – Dry sites

A ROBUST LAWN FOR DRY SITES

This versatile mixture can be planted anywhere and is ideal for use in home gardens, residential areas and green spaces for public use, especially under dry conditions. The species it contains are optimally suited to such conditions, mainly due to their particularly deep roots and high drought tolerance. The mixture exhibits an appearance similar to ornamental lawns and is relatively slow to germinate and grow, making it more resilient than ornamental lawn mixtures. Maintenance requirements depend to a significant degree on the level of stress, with high-stress situations requiring greater maintenance. When the lawn is subject to less stress, it requires less maintenance.

COMPOSITION

35% Chewing's fescue (*Festuca rubra commutata*)
 15% Creeping red fescue (*Festuca rubra rubra*)
 15% Hard fescue (*Festuca trachyphylla*)
 15% Smooth-stalked meadow grass (*Poa pratensis*)
 10% Smooth-stalked meadow grass (*Poa pratensis*)
 10% Slender creeping red fescue (*Festuca rubra trichophylla*)

PROPERTIES

Resilience: Low to medium
Area of application: Passable, public green spaces, residential areas, home gardens
Maintenance requirements: High
Sowing rate: 25 g/m²

SU: 10 kg bag **Item no.:** 69220 **GTIN:** 4011239301420 **SU/pallet:** 65

GF-230 Recreational lawn – Playground lawn

ROBUST LAWN WITH GOOD REGENERATIVE CAPACITY

GF-230 is a lawn mixture geared towards intensive use in areas like home gardens, playing fields and sunbathing lawns, as well as playgrounds. Maintenance requirements are average given intermediate to high stress. This lawn mixture is classed as a hard-wearing lawn under DIN 18917. Exhibiting rapid early development, it is a universal lawn mixture that is suitable for all sites. This lawn mixture has a high regeneration capacity, meaning that the sward can cover small damaged areas quickly, even following a period of high stress.

COMPOSITION

25% Perennial ryegrass (*Lolium perenne*)
 25% Chewing's fescue (*Festuca rubra commutata*)
 15% Creeping red fescue (*Festuca rubra rubra*)
 15% Perennial ryegrass (*Lolium perenne*)
 10% Smooth-stalked meadow grass (*Poa pratensis*)
 5% Smooth-stalked meadow grass (*Poa pratensis*)
 5% Slender creeping red fescue (*Festuca rubra trichophylla*)

PROPERTIES

Resilience: Medium to high
Area of application: Home gardens, playing fields, sunbathing lawns, playgrounds
Maintenance requirements: Medium
Sowing rate: 25 g/m²

SU: 10 kg bag **Item no.:** 69230 **GTIN:** 4011239300133 **SU/pallet:** 65

GF-311 Sports field – New sites

TURF WITH A THICK SWARD AND STRONG ABILITY TO REGROW

This seed mixture is meant for new plantings on sports fields in any location that will see heavy usage, such as football or hockey pitches. Together, the perennial ryegrass and smooth-stalked meadow grass in the mixture help to make it remarkably resistant as well as exhibiting a considerable ability to regrow and quickly cover any damage to the sward. The turf has a stable, thick sward that can tolerate trampling well, enabling the creation of uniform sports fields. The attractive winter appearance allows for lengthy use of the sports field, even when temperatures are low.

COMPOSITION

30% Perennial ryegrass (*Lolium perenne*)
 20% Perennial ryegrass (*Lolium perenne*)
 20% Smooth-stalked meadow grass (*Poa pratensis*)
 15% Smooth-stalked meadow grass (*Poa pratensis*)
 15% Smooth-stalked meadow grass (*Poa pratensis*)

PROPERTIES

Resilience: High
Area of application: Sports fields
Maintenance requirements: Medium to high
Sowing rate: 25 g/m²

SU: 10 kg bag **Item no.:** 69311 **GTIN:** 4011239300218 **SU/pallet:** 65

Greenfield 320 Sports field - Regeneration Coated Seed

IDEAL RESEEDING FOR ALL SPORTS FIELDS

A reseeding and regeneration mixture for all sports fields and playground turf applications, with the original Coated Seed. With its very rapid germination and high competitive vigour over undesirable grasses and outside species, this grass mixture ensures the success of any regeneration project and is a simple, quick and reliable option for rejuvenating any lawn surface. Using Coated Seed offers many advantages over conventional uncoated seeds. You can find more detailed information on Coated Seed on page 14 of this catalogue. Its exceptional seed flow means that GF-320 is also an excellent option for machine reseeding.

COMPOSITION

40% Perennial ryegrass (*Lolium perenne*) Coated Seed
 40% Perennial ryegrass (*Lolium perenne*) Coated Seed
 20% Perennial ryegrass (*Lolium perenne*) Coated Seed

PROPERTIES

Resilience: High
Area of application: Reseeding of sports fields, etc.
Maintenance requirements: Medium to high
Sowing rate: 30 g/m²



SU: 10 kg bag **Item no.:** 69320 **GTIN:** 4011239301536 **SU/pallet:** 100

GF-721 Landscape lawn – Dry sites, no herbs

GRASS MIXTURE FOR DRY SITES

A lawn mixture for extensively planted surfaces in extremely dry locations and alkaline soils such as south-facing slopes, high slopes, steep slopes or exposed soil. The mixture is mainly used for restoration sites in private and public green spaces, as well as slopes, landfills and similar surfaces that are subject to low stress and where maintenance requirements should be kept as low as possible. The species contained in the mixture deal well with difficult conditions and provide reliable ground cover.

COMPOSITION

45% Hard fescue (*Festuca trachyphylla*)
 15% Creeping red fescue (*Festuca rubra rubra*)
 15% Perennial ryegrass (*Lolium perenne*)
 15% Chewing's fescue (*Festuca rubra commutata*)
 10% Slender creeping red fescue (*Festuca rubra trichophylla*)

PROPERTIES

Resilience: Low
Area of application: Extremely dry sites with alkaline soils, e.g. south-facing slopes
Maintenance requirements: Low (0-3 cuts per year)
Sowing rate: 20 g/m²

SU: 10 kg bag Item no.: 69721 GTIN: 4011239302762 SU/pallet: 65

GF-722 Landscape lawn – Dry sites, with herbs

GRASS MIXTURE WITH OVER 17 HERB AND CLOVER SPECIES

A lawn mixture for extensively planted surfaces in extremely dry locations and alkaline soils such as south-facing slopes, high slopes, steep slopes or exposed soil. The mixture is mainly used for restoration sites in private and public green spaces, as well as slopes, landfills and similar surfaces that are subject to low stress and where maintenance requirements should be kept as low as possible. The species contained in the mixture deal well with difficult conditions and provide reliable ground cover. The flowers and herbs the mixture contains make planted surfaces into a valuable biotope for many animal species.

COMPOSITION

41.9% Hard fescue (*Festuca trachyphylla*)
 15.0% Creeping red fescue (*Festuca rubra rubra*)
 15.0% Perennial ryegrass (*Lolium perenne*)
 15.0% Chewing's fescue (*Festuca rubra commutata*)
 10.0% Slender creeping red fescue (*Festuca rubra trichophylla*)
 3.1% Herb and clover species

PROPERTIES

Resilience: Low
Area of application: Extremely dry sites with alkaline soils, e.g. south-facing slopes
Maintenance requirements: Low (0-3 cuts per year)
Sowing rate: 20 g/m²

SU: 10 kg bag Item no.: 69722 GTIN: 4011239302809 SU/pallet: 65

GF-894 Wildflower and herb meadow with grasses

FOR ESTABLISHING SPECIES-RICH FLOWER MEADOWS

This combination of meadow flowers, annual field flowers, herbs, grasses and clovers is suitable for all regions. Within a year of planting, it will grow into a perennial meadow with an eye-catching, colourful flora. In addition, this mixture offers a paradise for butterflies, bees and other beneficial insects. The flower meadow only needs to be mowed once in early spring and again in September after the blooming period.

COMPOSITION

30% Creeping red fescue (<i>Festuca rubra rubra</i>)	5% Tall oatgrass (<i>Arrhenatherum elatius</i>)
15% Hard fescue (<i>Festuca trachyphylla</i>)	5% Timothy grass (<i>Phleum pratensis</i>)
10% Chewing's fescue (<i>Festuca rubra commutata</i>)	5% Smooth-stalked meadow grass (<i>Poa pratensis</i>)
5% Erect brome (<i>Bromus erectus</i>)	2% Sainfoin (<i>Onobrychis sativa</i>)
5% Creeping bentgrass (<i>Agrostis capillaris</i>)	1% Sweet vernal grass (<i>Anthoxanthum odoratum</i>)
	1% Bird's-foot trefoil (<i>Lotus corniculatus</i>)
	1% Crimson clover (<i>Trifolium incarnatum</i>)
	15% Wildflower and herb mixture
	(See composition of GF-895, below)

PROPERTIES

Resilience:	Low
Area of application:	Flower meadows, park greening, insect protection areas
Maintenance requirements:	Low (2 cuts per year)
Sowing rate:	10 g/m ²

SU: 10 kg bag **Item no.:** 69894 **GTIN:** 4011239300508 **SU/pallet:** 65

GF-895 Wildflower and herb mixture

READY-TO-USE SEED MIXTURE AND BASIC MIXTURE FOR FLOWER MEADOWS

Versatile flower and herb mixture containing over 40 species. These versatile flowering species create a paradise for insects and other animals. Ideal as a basic mixture for flower meadows.

COMPOSITION

Pheasant's-eye	Viper's bugloss	Yarrow
Alpine forget-me-not	Common agrimony	Black cumin
Perennial flax	Soapwort	Ribwort plantain
Chamomile	California poppy	Greater knapweed
St. John's wort	Corn poppy	Thyme
Fennel	Salad burnet	Cow parsley
Knapweed	Black mullein	Hedge bedstraw
Woodland sage	Cornflower	Ox-eye daisy
Goat's rue	Sticky catchfly	Wild carrot
Common evening primrose	Common marigold	Meadow sage
Shepherd's purse	Red flax	Common evening primrose
Dandelion	Corn marigold	And others

PROPERTIES

Area of application:	Basic mixture for flower meadows, flowering fields, etc.
Maintenance requirements:	Low
Sowing rate:	1-2 g/m ²

SU: 1 kg bag **Item no.:** 69895 **GTIN:** 4011239301000

Greenfield Professional Mixtures

THE PRODUCT RANGE CONSISTS OF THE FOLLOWING MIXTURES:

Product code	Product name	Description	Resilience	Sowing rate	SU	Item No.	SU/pallet
GF-110	Ornamental lawns	Well-suited for display areas owing to fine leaves and a thick sward that tolerates being cut low.	Low to medium	25 g/m ²	10 kg	69110	65
GF-120	Ornamental lawns	Well-suited for display areas owing to fine leaves and a thick sward that tolerates being cut low.	Low	25 g/m ²	10 kg	69120	65
GF-210	Recreational lawn, standard	Universal use, ideal for home gardens, residential areas and public green spaces	Medium	25 g/m ²	10 kg	69210	65
GF-220	Recreational lawns, dry sites	Universal use, ideal for home gardens, residential areas, etc. with dry conditions	Low to medium	25 g/m ²	10 kg	69220	65
GF-222	Recreational lawn, dry sites, hard-wearing	A mixture that can be planted anywhere and is ideally suited for dry and stressed lawns	Medium to high	35 g/m ²	10 kg	69222	65
GF-230	Recreational lawn, playing field lawn	A lawn mixture geared towards intensive use in areas like home gardens, playing fields and sunbathing lawns, as well as playgrounds	Medium to high	25 g/m ²	10 kg	69230	65
GF-240	Recreational lawn, herbal lawn	For home gardens, residential areas and public green spaces with low-growing herbs and meadow flowers	Low	10-15 g/m ²	10 kg	69240	65
GF-311	Sports field, representative, new planting	For new plantings on sports fields in any location that will see heavy usage, such as football or hockey pitches.	High	25 g/m ²	10 kg	69311	65
GF-320	Sports field, regeneration, Coated Seed	A reseeding and regeneration mixture for all sports fields with the original Coated Seed.	High	30 g/m ²	10 kg	69320	100
GF-321	Sports field, representative, w/Poa pratensis	A reseeding and regeneration mixture for all sports fields and playground turf, with smooth-stalked meadow grass	High	30 g/m ²	10 kg	69321	65
GF-510	Car park lawn	Best-suited for extensive sites like gravel turf, grass pavers, car parks or edge strips	Medium to high	25 g/m ²	10 kg	69510	65
GF-511	Car park lawn, with yarrow	Best-suited for extensive sites like gravel turf, grass pavers, car parks or edge strips	Medium to high	25 g/m ²	10 kg	69511	65
GF-610	Extensive green roofs	Drought-tolerant mixture for planting roof areas with very low vegetation layers	Low	5 g/m ²	1 kg	69610	-
GF-711	Landscape lawn, standard, no herbs	Grass mixture for extensively planted surfaces in all locations	Low	20 g/m ²	10 kg	69711	65
GF-712	Landscape lawns, standard, with herbs	Grass mixture for extensively planted surfaces in all locations, contains herb and clover species	Low	20 g/m ²	10 kg	69712	65
GF-721	Landscape lawn, dry sites, no herbs	Lawn mixture for extensively planted surfaces in dry locations and alkaline soils	Low	20 g/m ²	10 kg	69721	65

Please contact us for a precise breakdown of the mixtures!

Product code	Product name	Description	Resilience	Sowing rate	SU	Item No.	SU/pallet
GF-722	Landscape lawn, dry sites, with herbs	Lawn mixture for extensive surfaces in dry locations and alkaline soils, contains herbs	Low	20 g/m ²	10 kg	69722	65
GF-730	Landscape lawn, wet sites	For all extensively planted surfaces that may be exposed to waterlogging and occasional flooding	Low	20 g/m ²	10 kg	69730	65
GF-740	Landscape lawn, semi-shaded	Often used along roadways and on extensively planted and maintained surfaces with semi-shaded areas	Low	20 g/m ²	10 kg	69740	65
GF-820	Undersowing	Grass-legume mixture that can be sown under newly planted woody plants, etc.	Medium	15 g/m ²	10 kg	69820	65
GF-830	Gravel turf	For lawns that can tolerate vehicle traffic: grass pavers, gravel turf and similar surfaces	High	15 g/m ²	10 kg	69830	65
GF-840	Extensive lawn	A wild lawn mixture for all extensively planted and maintained lawns and fallow fields	Low	15 g/m ²	10 kg	69840	65
GF-845	Schattenrasen	Suitable for challenging conditions like shaded areas with extreme soil conditions	High	20 g/m ²	10 kg	60100	65
GF-850	Airfield lawn	Easy to maintain due to low growth rate, very few clippings remain on the ground	Medium to high	25 g/m ²	10 kg	69850	65
GF-890	Trough + trench	For variable conditions (dry, moist, wet, sunlight, partial shadow), low-growing	Medium	25 g/m ²	10 kg	69890	65
GF-791	Herb mixture	Versatile herb and legume mixture, ideal supplement for grass-only mixtures	Low	0.35 g/m ²	1 kg	69791	-
GF-792	Herb mixture	Versatile herb and legume mixture, ideal supplement for grass-only mixtures for dry sites	Low	0.6 g/m ²	10 kg	69792	65
GF-894	Wildflower and herb meadow	Combination of meadow flowers, annual field flowers, herbs, grasses and clovers	Low	10 g/m ²	10 kg	69894	65
GF-895	Wildflower and herb mixture	Versatile flower and herb mixture containing over 40 diverse flowering species	Low	1-2 g/m ²	10 kg	69895	-
GL-815	Greenline sloping lawn, with clover	Fast-germinating and -growing mixture for sites threatened by erosion	Low	25 g/m ²	10 kg	58980	65
GL-817	Greenline sloping lawn, no clover	Fast-germinating and -growing mixture for sites threatened by erosion	Low	25 g/m ²	10 kg	58985	65
GL-820	Greenline greening mixture	Fast-germinating greening mixture for all sites	Low	25 g/m ²	10 kg	58990	65





ReNatura®

Seed mixtures for vibrant flower fields



Beneficial insects have been the subject of much public interest in recent years, with discussions taking place across various channels. One of the most important issues in these discussions was the lack of suitable habitat for many insects, or its total absence. Nectar-rich flowering plants are a particularly important source of sustenance for many insects. These have become scarce in the agricultural landscape, reducing the habitat available for nectar-collecting insects. The design of many gardens has also changed in comparison to previous decades, offering less habitat for insects than they used to.

Feldsaaten Freudenberger created the ReNatura® product line, which offers numerous flower mixtures for different purposes on the market. The goal of the product line is to provide the right seed mixtures for a variety of nature-like habitats. Flower mixtures are the main focus of this offering, and they are supplemented by other mixtures that are suited to the creation of valuable habitats. ReNatura® gives everyone the ability to do something for the insects and to create valuable biotopes.



ReNatura®

- Premium seeds
- For nature-like greening and abundant flower fields
- Diverse product line
- Ideal package sizes for private users
- Best results



Bienenweide (Bee pasture)

NOURISHING NECTAR FOR HONEYBEES AND BUMBLEBEES

ReNatura® Bee pasture (Bienenweide) mixture is a magnet for honey-bee and bumblebee species. From the red-tailed bumblebee to the small garden bumblebee, the bee pasture mixture offers the right flowers and food for all. In addition to the well-known pollen collectors, the flowers are also visited by other nectar-collecting insects, such as the hummingbird hawk-moth that resembles its namesake, and acrobatic hoverflies. This diverse and colourful flower mixture also offers the observer an attractive and varied picture, which changes constantly over the course of the growing season.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 80 cm
Growing period: annual and perennial

ReNatura® Bee pasture contains over 20 species of nectar-rich flowering plants.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	25 m ²	4011239008831	12	68232	100



Schmetterlingsoase (Butterfly oasis)

HABITAT FOR BUTTERFLIES

The ReNatura® Butterfly oasis (Schmetterlingsoase) flowering plants mixture serves as a food source for a large variety of butterflies and moths, as well as providing a natural nursery for their caterpillars. Many of the flowers are visited by a diverse array of butterflies and other beneficial insects, which enjoy the energy-rich nectar and pollen. Due to the abundance of nectar, the butterfly oasis flowering plants mixture also creates a popular visiting spot for bees, bumblebees and other insects.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 80 cm
Growing period: annual and perennial

ReNatura® Butterfly oasis contains over 20 species of nectar-rich flowering plants, which serve as a source of sustenance and a nursery for butterflies.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	25 m ²	4011239008916	12	68222	100



Wildblumen (Wildflowers)

A BIT OF WILDERNESS FOR THE GARDEN

The ReNatura® Wildflowers (Wildblumen) mixture offers gardens a piece of colourful wilderness. This versatile mixture is suitable for all locations and thrives particularly well in well-lit areas without too much moisture. The abundance of colourful flowers attract beneficial insects, providing them with a habitat and diverse source of food. Due to the diversity of the species in the mixture, the wildflowers bloom from early summer to late autumn. The wildflowers mixture includes both annual and perennial species, so that some of the species will continue to thrive in the year after sowing.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 80 cm
Growing period: annual and perennial



The ReNatura® Wildflowers mixture contains over 20 different wildflower species, which bloom from early summer to autumn.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	25 m ²	4011239008817	12	68255	100

Singvogeloase (Songbird oasis)

HABITAT AND SUSTENANCE FOR SONGBIRDS

The Songbird oasis (Singvogeloase) flowering plants mixture from ReNatura® offers an ideal habitat and an abundant source of food for a wide variety of songbirds. Due to the large number of plant species the mixture contains, Singvogeloase provides tasty seeds and grains over a long period of time, well into winter. The numerous flowers also attract many nectar-gathering insects. The insects and their caterpillars are an important source of protein for many birds and are vital in rearing their young. It is important not to cut back the growth of the Singvogeloase flowering plants in the autumn.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 100 cm
Growing period: annual and perennial



The ReNatura® Songbird oasis mixture contains over 20 different flower species, which provide food and habitat for many wild birds.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	25 m ²	4011239682161	12	68266	100

Schnittblumen (Cut flowers)

COLOURFUL FLOWERS FROM SPRING TO AUTUMN

The Cut flowers (Schnittblumen) seed mix from ReNatura® helps create a flower patch in your own garden from which you can cut and assemble colourful bouquets as you please. Whether they are meant for your own living room or as a lovely gift to someone, a bouquet of flowers is always a pretty sight and appreciated by everyone. The ReNatura® cut flowers seed mix contains species with different flowering times, so that the choice of flowers that are ready to be cut keeps changing. You'll have colourful flowers from early summer right up to late autumn.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 60 cm
Growing period: annual and perennial

The ReNatura® Cut flowers mixture contains over 20 species of vibrantly coloured flowers, which are ideal as cut flowers and decorations.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	25 m ²	4011239681706	12	68240	100



Balkon- & Terrassenmix (Balcony and Patio Mix)

SEED MIX FOR LOW-GROWING, COLOURFUL FLOWERS

The balcony and patio mix (Balkon- & Terrassenmix) from ReNatura® is the perfect seed mix for creating elegant flower patches in window boxes and flowerpots. You can create small yet valuable biotopes even in limited available space – these can serve as food source and habitat for numerous beneficial insects. With their wide variety of colours, these magnificent flowers make an extremely pretty sight; they lend a summery ambiance to any balcony and enrich patios with bright, vibrant blossoms. The flower species in this mix manage wonderfully in the limited available soil in planters and thrive abundantly.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 50 cm
Growing period: annual

The ReNatura® Balcony and Patio Mix contains over 20 different flowers, which are excellent options for cultivation in window boxes and flowerpots.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	5 m ²	4011239682697	12	68268	100



Blumennachsaat (Flower Reseeding)

FRESH FLOWERS FOR EXISTING FLOWER PATCHES

The flower reseedling (Blumennachsaat) mix from ReNatura® is the ideal way to replenish all flower patches and fields that are a year or more old. In these areas the annuals have mostly disappeared and the stand comprises only of long-term and perennial varieties. Flower reseedling can rejuvenate such areas and significantly increase the range of species and thus the flower diversity. New planting is then not necessary. When sowing this mixture, it is important to ensure that the reseeded area receives enough space and light to grow.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 60 cm
Growing period: annual

The ReNatura® Flower Reseeding mixture contains over 20 flowers and herbs, which are ideally suited to rejuvenating existing flower fields.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	50 m ²	4011239681492	12	68219	100



Blumenwiese (Flower Meadow)

MIXTURE OF COLOURFUL FLOWERS FOR ALL LOCATIONS

Flower meadows are an important habitat for insects, birds and small mammals, playing a crucial role in preserving natural biodiversity. The ReNatura® Flower Meadow (Blumenwiese) mixture contains various grasses and the flowers typically found in a flower meadow. The flowers are a source of food for insects, which are attracted to them. The nectar and pollen they produce are consumed by a wide variety of insects, such as bumblebees and butterflies. Songbirds such as robins find cover and a diverse source of food among the seeds and insects in these flower meadows.

Ideal sowing period: Spring, soil temperature >12°C
Germination time: 2-3 weeks
Flowering period: 8-24 weeks after sowing
Flower colour: multi-coloured
Growth height: up to approx. 60 cm
Growing period: annual and perennial

The ReNatura® Flower Meadow contains over 35 species of flowers and grasses, which provide habitat to a wide array of animals.

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	40 m ²	4011239008824	12	68212	100
500 g pouch	70 m ²	4011239009012	10	68215	63



Extensive Dachbegrünung (Extensive Green Roofs)

FOR ROOF PLANTING IN DRY AND SHALLOW CONDITIONS

This very low-growing, drought-tolerant mixture is ideal for planting roof areas with low vegetation layers. It has a good capacity for regeneration through tillering and self-sowing. These characteristics ensure effective greening without levels of growth that would result in an excessive increase to the load weight.

Sowing period:	Spring, soil temperature >12°C
Germination time:	2-3 weeks
Flowering period:	8-24 weeks after sowing
Flower colour:	Multi-coloured
Growth height:	30 cm
Growing period:	perennial

Advantages of extensive green roofs:

- Drought tolerant
- Low maintenance requirements
- Slow growth
- Habitat for insects
- High regenerative capacity

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
275 g pouch	20 m ²	4011239681362	10	68136	100



Sunflowers (Helianthus debilis/annuus)

VERSATILE MIXTURE OF LOW-GROWING VARIETIES

ReNatura® sunflowers bloom bright yellow and orange. The use of multiple varieties results in a mixture of flowers of various colours and sizes. Sunflowers are particularly popular with bumblebees when they are in bloom, and the seeds later serve as food for many species of birds and rodents.

Sowing period:	Spring, soil temperature >12°C
Sowing rate:	5 g/m ²
Sowing depth:	2-3 cm
Germination time:	Around 2 weeks
Growing period:	annual
Plant height:	150 cm

Advantages of sunflowers:

- Low-growing sunflower mixture
- Insect magnet
- Cover and food for garden birds
- Bird food for the entire winter
- Beautiful cut flowers

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
300 g pouch	60 m ²	4011239683571	10	68286	80



ReNatura® Cover crops and soil enhancement

Fodder plants, legumes and grasses

Also available as organic seeds!

Catch crops have played an important role in sustainable agriculture for hundreds of years, contributing to maintaining soil fertility and ensuring good harvests. Because of the numerous benefits of cultivating catch crops, they are used to this day.

These benefits include:

- Erosion control
- Soil loosening
- Humus enriching
- Nutrient storage
- Habitat for animals
- Easing up crop rotations
- Natural pest reduction
- Weed suppression

The benefits of the individual species can be found in the corresponding descriptions. In order to make use of as wide a spectrum of benefits as possible, we recommend a combination of various catch crops. The ReNatura® Grünmix combines different species in a highly versatile catch crop mixture that is suitable for a range of applications.

In addition to cover crops, the ReNatura® range of cover crops and soil enhancement also offers various fodder crops and mixtures. This allows all livestock operators to cultivate their own fodder and produce it to their own specifications.

In addition to important fodder crops like clover and alfalfa, the small animal feed is particularly well suited to the needs of many animals and offers generous fodder production over several years.

Benefits of in-house fodder cultivation:

- Fresh fodder available continuously
- Can also be used as hay
- Controlled cultivation conditions
- Cost savings vs. purchasing fodder
- Freshly harvested forage
- Palatable fodder
- Control over the use of fertilisers, plant protection chemicals, etc.
- Harvests over multiple years

ReNatura® cover crops make these tried and tested products available for private users, allowing for the option to cultivate them in home gardens.



Phacelia (*Phacelia tanacetifolia*)

A SOURCE OF FOOD FOR INSECTS

Lacy phacelia, also called bee pasture, is a green manure plant that is particularly suitable for vegetable gardeners. Lacy phacelia is a fast-growing plant with a rich root network. Nectar-collecting insects pay frequent visits to its blue-violet flowers, which are a particular favourite. Lacy phacelia provides humus-rich, evenly distributed soil for the subsequent crop. It dies back in winter, but can tolerate late seeding and early frosts to -7°C . It can be part of all crop rotations, since it is not related to any other agricultural species, meaning that it can be sown without any phytosanitary considerations.

Sowing period:	May-September
Sowing rate:	5 g/m ²
Sowing depth:	2 cm
Germination time:	1-2 weeks
Growing period:	annual
Plant height:	60 cm



Characteristics of lacy phacelia:

- Nectar-rich flowering plant
- Very fast growth
- Lengthy flowering period
- Ample roots that loosen soil
- Paradise for insects

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
400 g pouch	80 m ²	4011239683427	10	68276	99

Organic Phacelia (*Phacelia tanacetifolia*)

A SOURCE OF FOOD FOR INSECTS

Organic lacy phacelia, also called bee pasture, is a green manure plant that is particularly suitable for vegetable gardeners. Lacy phacelia is a fast-growing plant with a rich root network. Nectar-collecting insects pay frequent visits to its blue-violet flowers, which are a particular favourite. Lacy phacelia provides humus-rich, evenly distributed soil for the subsequent crop. It dies back in winter, but can tolerate late seeding and early frosts to -7°C . It can be part of all crop rotations, since it is not related to any other agricultural species, meaning that it can be sown without any phytosanitary considerations.

Sowing period:	May-September
Sowing rate:	5 g/m ²
Sowing depth:	2 cm
Germination time:	1-2 weeks
Growing period:	annual
Plant height:	60 cm

Advantages of organic lacy phacelia

- Nectar-rich flowering plant
- Very fast growth
- Lengthy flowering period
- Ample roots that loosen soil
- Paradise for insects

Package size	Area	GTIN SU	SU	Item no. SU	SU/pallet
0.5 kg folding carton	100 m ²	4011239681461	10	68146	96



ReNatura® Cover crops

The ReNatura® Cover crops product line includes 10 products sold in practical, resealable, plastic packaging.



Please contact us for a precise breakdown of the mixtures!

Product name	Description	Contents	Area	SU	Item No.	SU/pallet
Natural meadow (Naturwiese)	The natural meadow mixture from ReNatura® contains different environmentally important grass and clover species.	1.0 kg	40 m ²	10	68250	40
Small animal feed (Kleintiereinsaat)	The ReNatura® Small animal feed is a mixture that is suitable for all soils and contains valuable fodder plants for rabbits, hamsters, etc.	1.0 kg	50 m ²	10	68260	40
Lucerne (alfalfa) Medicago sativa	The “queen of fodder plants” is a beloved source of perennial fodder for many species of livestock, including cattle and sheep.	0.5 kg	100 m ²	10	68278	99
White clover Trifolium repens	This perennial clover species is an excellent source of fodder when sown pure or in mixtures with grasses.	0.5 kg	100 m ²	10	68284	99
Red clover Trifolium pratense	This perennial clover species is an excellent provider of feed for fresh forage and clover hay production.	0.5 kg	100 m ²	10	68282	99
Common bird's foot Ornithopus sativus	Common bird's foot is an annual, single-cut fodder crop and a leguminous plant (nitrogen fixer).	0.3 kg	75 m ²	10	68280	99
Blue lupin Lupinus angustifolius	Blue lupin is suitable for all soils, efficiently suppresses weeds and forms soil-loosening taproots.	0.5 kg	15 m ²	10	68274	99
White mustard Sinapis alba	ReNatura® Gelbsenf white mustard is a classic green manure plant. It germinates very quickly, covers the ground and dies back in winter.	0.5 kg	100 m ²	10	68272	99
Lacy phacelia Phacelia tanacetifolia	Lacy phacelia, also called bee pasture, is a green manure plant that is particularly suitable for vegetable gardeners.	0.4 kg	80 m ²	10	68276	99
Green manure mix (Grünmix)	The green manure mixture from ReNatura®, combines the benefits of a large number of green manure plants.	0.5 kg	30 m ²	10	68270	99



ReNatura® **Organic** Cover crops

The ReNatura® Organic Cover crops product line includes 9 quality organic products.



Please contact us for a precise breakdown of the mixtures!

Product name	Description	Contents	Area	SU	Item No.	SU/pallet
ORGANIC Small animal feed (Kleintiereinsaat)	The ReNatura® Small animal feed is a mixture that is suitable for all soils and contains valuable fodder plants for rabbits, hamsters, etc.	1.0 kg	50 m ²	10	68126	40
ORGANIC Alfalfa Medicago sativa	The “queen of fodder plants” is a beloved source of perennial fodder for many species of livestock, including cattle and sheep.	0.5 kg	100 m ²	10	68142	96
ORGANIC White clover Trifolium repens	This perennial clover species is an excellent source of fodder when sown pure or in mixtures with grasses.	0.5 kg	100 m ²	10	68166	96
ORGANIC Red clover Trifolium pratense	This perennial clover species is an excellent provider of feed for fresh forage and clover hay production.	0.5 kg	100 m ²	10	68152	96
ORGANIC Blue lupin Lupinus angustifolius	Blue lupin is suitable for all soils, efficiently suppresses weeds and forms soil-loosening taproots.	0.5 kg	15 m ²	12	68112	63
ORGANIC Common buckwheat Fagopyrum esculentum	Buckwheat can be a part of many crop rotations and used in a variety of applications. Its white flowers are visited by numerous beneficial insect species.	0.5 kg	50 m ²	12	68156	63
ORGANIC White mustard Sinapis alba	ReNatura® Gelbsenf white mustard is a classic green manure plant. It germinates very quickly, covers the ground and dies back in winter.	0.5 kg	100 m ²	12	68116	63
ORGANIC Lacy phacelia Phacelia tanacetifolia	Lacy phacelia, also called bee pasture, is a green manure plant that is particularly suitable for vegetable gardeners.	0.5 kg	100 m ²	10	68146	96
ORGANIC Soil fit (BodenFit®)	Organic Soil fit is a mixture of various green manure plants, which was primarily designed for use in catch crop cultivation.	0.5 kg	50 m ²	12	68122	63





Cover crops

ProGreen® Cover crops are ideal for all gardeners who wish to produce their own livestock and small animal feed, or do some good for their soil using cover crops and green manure. The product line consists of 11 different products for a range of uses.



ProGreen®

- Classical cover crops
- Individual seeds and mixtures
- Small package sizes
- Resealable
- Solid quality





Product name	Description	Con- tents	SU	Item No.	SU/pallet
Small animal feed (Kleintiereinsaat)	This small animal seed mix is suitable for all soil types. It consists of high-quality fodder crops with a balanced ratio of clover and forage grasses that is ideal for fodder production.	0.5 kg	10	40780	63
Lucerne (alfalfa) <i>Medicago sativa</i>	Alfalfa is particularly suitable for calcareous and loose soils. The “queen of fodder plants” is a perennial plant whose roots penetrate deep into the ground and provide humus for the following crop. It also serves as a fodder plant and is readily consumed.	0.5 kg	10	40756	100
White clover <i>Trifolium repens</i>	White clover is particularly well-suited for good, moist soils. This perennial clover species is an excellent source of fodder when sown pure or in mixtures with grasses. It converts atmospheric nitrogen into plant-available forms through a symbiosis with nodule-forming bacteria.	0.5 kg	10	40753	100
Red clover <i>Trifolium pratense</i>	Red clover is very well-suited to moist, humus-rich soils, but also to cohesive and calcareous soils. This perennial clover species is an excellent provider of feed for fresh forage and clover hay production.	0.5 kg	10	40750	100
Bird's-foot trefoil <i>Lotus corniculatus</i>	ProGreen® bird's-foot trefoil is very stable and resistant to diseases. It is an excellent source of protein, and is also persistent and winter-hardy and prefers relatively dry, calcareous soils.	0.5 kg	10	40771	100
Common bird's foot <i>Ornithopus sativus</i>	Serradella, or common bird's foot, is particularly well-suited to light soils with a low lime content. It is an annual, single-cut plant and a legume. Since the degree of lignification in the plant is low, it can also be used later on for fodder.	0.3 kg	10	40765	100
Blue lupin <i>Lupinus angustifolius</i>	Blue lupin is suitable for all soil types. Its roots penetrate deep into the ground, while its rapid early development helps effectively suppress weeds. It is ideal for improving compacted soils.	0.5 kg	10	40768	100
White mustard <i>Sinapis alba</i>	White mustard is a classic green manure plant. It germinates very quickly, covers the ground, suppresses weeds, improves soil tilth and soil fertility, and dies back in winter. White mustard is well-suited to mulch seeding.	0.5 kg	10	40762	100
Lacy phacelia <i>Phacelia tanacetifolia</i>	Lacy phacelia, also known as bee pasture, is a green manure plant. It is a fast-growing plant with a rich root network. Lacy phacelia provides humus-rich, evenly distributed soil for the subsequent crop. It dies back in winter.	0.4 kg	10	40759	100
Feed beet <i>Beta vulgaris</i>	Feed beets provide highly palatable fodder known for its good shelf life and dry matter content. The beets can be provided as fodder whole or shredded.	0.2 kg	10	40777	100
Marrow-stem kale <i>Brassica oleracea</i>	Marrow-stem kale is a very frost-hardy, biennial fodder crop, which tolerates both high and low temperatures. Marrow-stem kale yields large amounts of crude protein and is also readily consumed by wild game.	0.5 kg	10	40774	100

Please contact us for a precise breakdown of the mixtures!

QUALITY ASSUR- ANCE AT FELDSAATEN FREUDENBERGER

Quality assurance is a top priority at Freudenberger, since only seeds of outstanding quality produce a good harvest.

Feldsaaten Freudenberger gives the highest importance to ensuring that only the best quality seeds are delivered. A seamless quality management system is absolutely essential in order to guarantee consistently high quality. Quality assurance begins as soon as goods are received. Samples are collected from every incoming delivery batch using the ISTA sampler, certified by the Agricultural Chambers of North Rhine-Westphalia, and are tested in the in-house laboratory and ISTA testing stations. The parameters to be checked are mainly germination capacity, technical purity, dockage, humidity and thousand grain weight. Every year, around 5,000 seed spec-

imens are tested and controlled in the in-house laboratories at Freudenberger. An additional 5,000 specimens are tested in external laboratories in Germany and abroad, which work in close cooperation with Freudenberger. These external laboratories include, among others, the labs of individual agricultural chambers and seed testing stations of the respective provincial departments. All tests are performed conscientiously and in accordance with the latest methodology. The current regulations for the all seed testing worldwide precisely define which seeds have to be tested and how. The ISTA rules for testing play a very special and important role in this regard.



Workplace with microscope camera



Germination trials



Environmental chamber with germination testing

SeedBlower



The cleaning machine settings can always be checked based on the results. This is the only way to ensure that the cleaning results in a high-quality seed batch. The comprehensive analysis mentioned above helps to ensure consistent compliance with the regulations in place in each recipient countries. These regulations can vary greatly from country to country. Certain countries designate some plants as quarantine weeds. If a batch contains seeds belonging to these weeds, the entire batch is unmarketable. This means that thorough and careful inspections are absolutely necessary. Seed impurities in the form of foreign matter of any kind are checked and sorted out manually. Sorting out empty husks presents a special challenge because it is often extremely difficult to visually distinguish them from the entire batch of seeds. The process is simplified using the SeedBlower, a technical device in which air currents remove objects with specific weight lower than that of the actual product. The seed sample is placed in a glass tube through which air is blown from below. While the empty husks are thrown upwards, the seeds remain at the bottom of the glass tube. This makes it possible to achieve a quick and effective differentiation.

PURITY AND DOCKAGE

The sample size tested for determining purity and dockage at Freudenberger generally exceeds the prescribed standards. This way, we ensure that even the smallest of impurities are detected. The test seeds are examined by well-trained hands using forceps. Good lighting and a magnifying lens serve as ideal tools. Foreign matter is separated out and the species and/or genera are identified.

A microscope camera is used to get a better idea of the difficult-to-identify seeds. This device allows a highly magnified view of the grains. In addition, the images can be directly captured, allowing creation of digital records. Since the seeds are bought from all over the world, sometimes it is not possible to identify foreign seeds. The digital images are used to consult with international experts and determine the species or genus. In some cases, the foreign matter looks very similar to the desired seed. More elaborate methods, such as fluorescence microscopy, are then required for precise identification. In addition to grains, seedlings such as red fescue and sheep's fescue can also be identified and distinguished using this method.

The decision about what to do next with the seeds depends on whether dockage is found during these tests. Either a complaint is raised and the seed is sent back to the supplier, or it is thoroughly cleaned. Alternately, it may be used for another purpose (e.g. as bird feed). The test is also important for the cleaning process.



Fluorescence microscopy in red fescue



Grass undergoing germination testing

THOUSAND GRAIN WEIGHT

The thousand grain weight plays a key role in seed quality. For every seed there is a desired range of thousand grain weight. If the grains are too small, then they may lack energy. If the weight is too much, the number of seeds in proportion to the field area could be extremely low at the time of sowing. This point is particularly important in the context of greening. In greening, mixtures are based on seed percentages and not weight proportion. For this reason, the thousand grain weight is determined for all incoming batches. This is the only way to ensure that the respective seed percentages are correctly calculated in mixtures.

Thousand grain weight can be determined either manually or using a seed counter. Both methods involve counting 1,000 seeds are counted determining their weight using calibrated precision scales. Data obtained in this manner is captured and guarantees consistently high quality mixture compositions.



Precision scales



Seed counter

GERMINATION CAPACITY

Germination capacity is the most important quality characteristic of seeds. Only material that germinates can provide farmers with the desired results. No measures can correct for seeds that either do not germinate at all or have poor germination. Six experienced agricultural and biological technicians work in our in-house laboratory to ensure that all requirements are strictly complied with and carried out. This laboratory was expanded in 2018 to keep up with the constantly increasing sample volumes in recent years. Two special walk-in environmental chambers facilitate automatic regulation of temperature and lighting.

Both chambers have a total shelf space of 40 m², meaning that there is sufficient space for a large number of parallel tests. Parameters such as day and night temperature, air circulation and illumination duration can be precisely controlled with the help of specific programmes. This way, species-specific requirements can be fulfilled during germination tests, achieving precise results. At the end of a germination test, the results are evaluated and an appropriate test report is issued. In addition to the newly received seed batches, the already stored batches are also tested in order to guarantee a consistently high quality.



MOISTURE CONTENT

Seed moisture content is also regulated and is subject to precise requirements. If the moisture content of the seed is too high, it can negatively impact parameters such as germination capacity and shelf life. Especially in the case of coated seed, it is important to continuously monitor moisture content and to optimally adjust the drying process of freshly produced coated seed. This is because only seeds with optimum moisture content have the required properties.

To determine seed moisture content, a drying chamber is used that can remove all moisture from the seeds. The seed moisture is then calculated by comparing the weight before and after drying.



*Control unit
of an environmental chamber*

PRIVATE LABEL

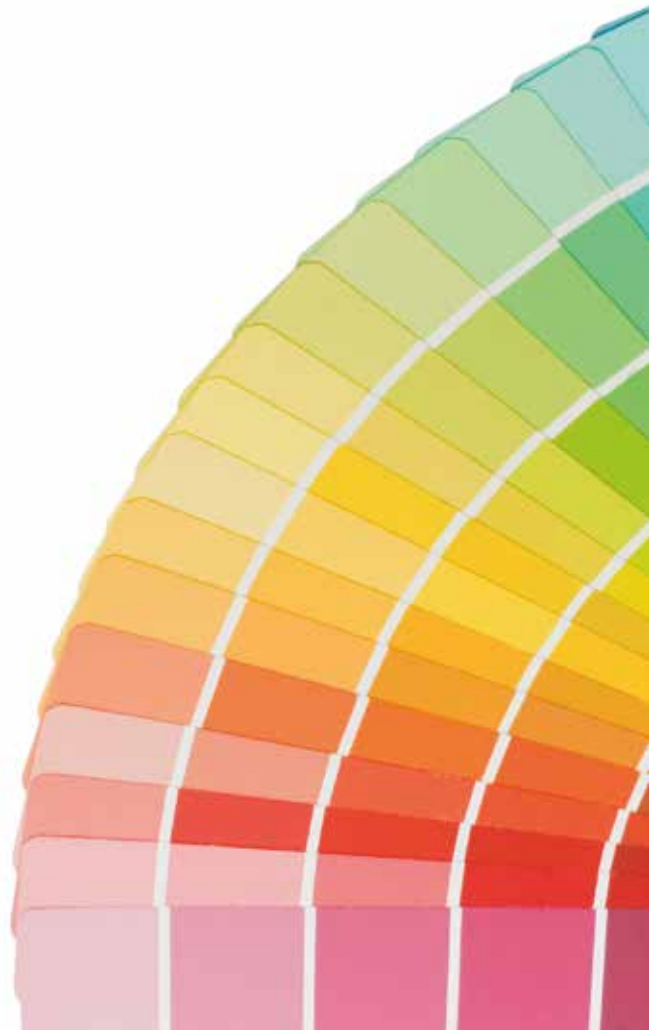
Individual products and packaging

In addition to a vast range of company brands and products, Feldsaaten Freudenberger also offers the option of creating a customised private label product or an entire product line. For several years, Krefeld has been the source of seed, including the accompanying packaging, for the in-house brands of leading hardware stores and retail chains in Germany and across Europe. Feldsaaten Freudenberger offers a wide array of options for the creation of private label products, from the preparation of the seed to the complete creation of a brand with its associated product line and design.



Advantages of private label products:

- Impossible to compare prices on a 1:1 basis with other retailers
- Company's specific product ideas can become reality
- Package sizes made to customer's specifications
- Unique compositions with their own unique selling point
- Size of product line can change to fit available space and needs
- Portfolio can be expanded at any time
- Company's CI and CD can be integrated
- Packaging material can be chosen according to individual preferences



Feldsaaten Freudenberger can take care of the following steps:

- Provision of seed
- Development of individual products
- Preparation of compositions with customised mixtures
- Provision of innovative varieties with unique characteristics
- Use of Coated Seed in individual compositions
- Provision of additional components like substrates, fertilisers, lime and lawn activator
- Creation of a new brand
- Packaging layout, including design and package text
- A wide variety of packaging as well as additional features like embossing, special finishes, etc. can be ordered
- A broad array of overpack options are available, from simple wooden crates to carton boxes or even display options.

PACKAGING OPTIONS



Folding carton



Pouch



Block bottom bag



Flat foil bags



PP bag



Paper bag

IF YOU'RE INTERESTED IN DEVELOPING A COMPANY BRAND, PLEASE GET IN TOUCH WITH OUR CONTACT PERSON, WHO WILL GUIDE YOU THROUGH THE OPTIONS AND GENERAL PARAMETERS OF A COMPANY BRAND.

DISPLAYS AND PRESENTATION

Attractively displayed products catch customers' attention significantly more, leading to increased sales. Several options are available for presentations:



SHELF ARRANGEMENT

The classic method of displaying products on a shelf is a simple and effective way to present numerous products in a visually appealing manner, and offer customers an easy overview of the variety of products on offer.



WOODEN DISPLAY CASE

The wooden display case covers a floor space 80 cm wide by 60 cm deep, offering space for products with a variety of packaging types, including collapsible boxes, pouches or stand-up bags. The height of the display, including the pallet feet, is 180 cm. The arrangement of the display can be customised, just let us know!



RENATURA® DISPLAYS

The ReNatura® displays cover a floor space of 40 x 60 cm and come ready packed on a pallet. The height of the display is 95 cm, or 145 cm with the attached topper. The eye-catching ReNatura® topper is sent with every display. The arrangement of the display can also be customised on request.



MUCH MORE
INFORMATION
ON OUR SEEDS
IS AVAILABLE AT:



The varietal descriptions in this catalogue are given to the best of our knowledge and belief; however, we assume no legal liability for their correctness. The descriptions are based on findings that have generally been verified by regional variety trials, VCU testing and in-house experiments. As seeds are natural products and their performance always depends on specific environmental conditions and other factors, we cannot guarantee that these findings can be repeated under all conditions, despite having taken the utmost care to establish them.

Feldsaaten Freudenberger accepts no liability for any direct, indirect, atypical, accidental or any other consequential losses or claims for compensation arising in connection with the use of the varietal information or cultivation recommendations described in this catalogue. Last revised 01/22. Products are delivered within Germany in accordance with the general conditions for the sale and delivery of seeds (AVLB); international deliveries are made in accordance with the International Seed Federation (ISF) rules.



You can download the Coated Seed Catalogue as well as additional brochures and information at www.freudenberger.net, where you can also order printed copies free of charge using the order page.

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