DSV Product Information 2022

DSV

Innovation for your growth

www.dsv-seeds.com

As a breeding and seed company with nearly 100 years of experience, we offer our customers innovative varieties and complex cultivation methods. Deutsche Saatveredelung AG (DSV) is a full-service provider for the entire agricultural crop rotation and turf grasses. We are a successful breeder of oilseed rape and cereals, as well as grasses and small-seeded forage legumes. Furthermore, we are specialists in cover crops and offer a wide-ranging maize portfolio as well as sorghum. We provide turf customers with several solutions, beginning with single varieties for all kind of turf use, high quality mixtures for professional or private use up to complete programmes for the do-it-yourself market. Our activities encompass not only the breeding and production of new varieties with the properties and combinations of features desired by our customers, but also expert advice, high-quality service and extensive marketing through a global distribution network. Working on the 'one-stop shop' principle, we are a full-service supplier in the seed sector.

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Innovation for your growth: Solutions that meet your needs!

Spearheading innovations in plant breeding are always based on sound scientific research. Therefore, our work is focused on the development of new plant varieties and advanced seed technologies which translate into successful production. We are committed to provide efficient and practice-driven solutions that help our customers meet the increasing economic and regulatory requirements.

Intelligent concepts include seed technology

Cropping systems have to be efficient, biodiverse and sustainable. Therefore, DSV not only offers seeds of a premium quality, but also intelligent and future-proof cropping and greening concepts that are tailored to individual requirements. We can provide successful solutions for undersown crops, energy crops, forage crops and cover crops. In the grass seeds sector we tap into a wealth of expert knowledge on species and varieties to provide customised solutions.

Integrated quality

All this is based on effective quality management which we call Integrated Quality (IQ) management. This approach encompasses all divisions of the company to implement one integrated and comprehensive quality assurance system that is based on high production standards. Our sales specialists listen to our customers and provide extensive and individual advice whilst keeping in touch with the breeders. They channel customer needs so these are taken into account as new varieties and solutions are developed.

You can find the responsible person for your country on our website www.dsv-seeds.com

Oilseed rape bred by DSV – success as a result of innovation and tradition

We have been part of the success of oilseed rape (OSR) breeding in Europe since the 1960s, and have contributed substantially to the innovations that have been essential for the expansion of the crop. While OSR breeding technology has evolved over the decades, the goal is still the same: to deliver improved varieties for our customers' success. We offer a wide range of varieties to meet the needs of farmers all over Europe and beyond. Our European testing network ensures that we are able to identify the varieties from our global portfolio that are the optimum fit for local conditions anywhere.

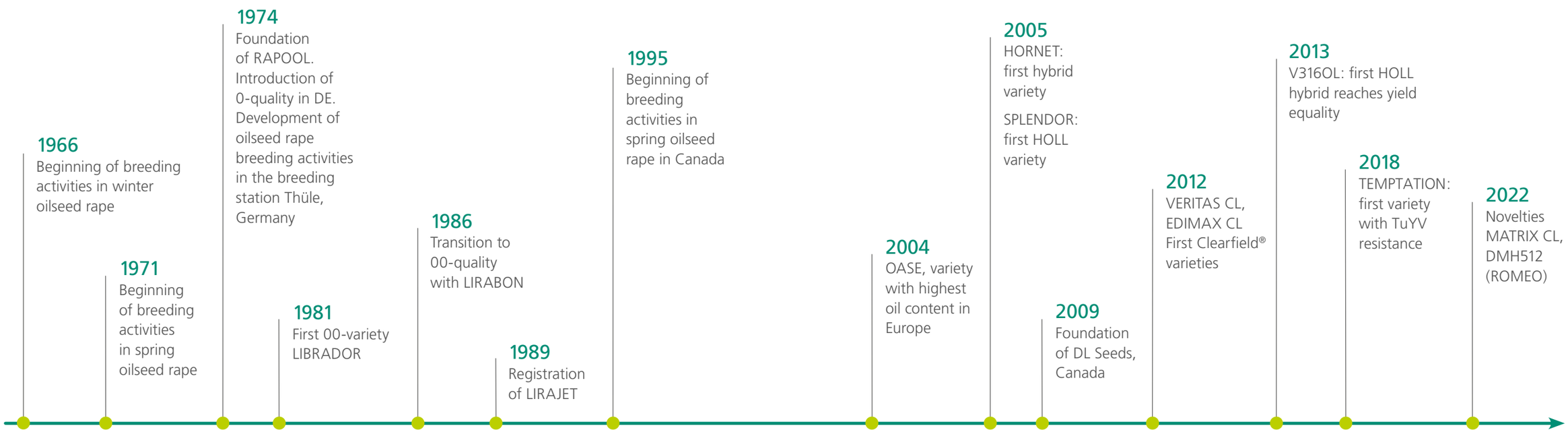
Focused on hybrids

In our OSR breeding we are focusing on hybrids for more than 20 years. Apart from the higher yield achieved by hybrids, hybrid breeding allows us to introduce new disease resistances such as TuYV or clubroot more quickly than in the past. Thus, we are able to react quickly to changing farmer's needs.

International distribution

Depending on the country, our varieties are distributed under the DSV or RAPOOL brand.

Milestones of the DSV oilseed rape breeding



Oilseed rape varieties (selection)

Winter oilseed rape hybrids

BATIS
The new star for early maturity

- Good development before winter and strong regrowth after winter
- Early flowering and medium maturity
- Very even maturity of pods and straw

Distribution in: CZ, HU, PL, RO, SK

CROCODILE
New clubroot resistant variety in the portfolio of DSV – groundbreaker

- Very strong early vigour and good establishment
- Very good lodging resistance
- Excellent yield stability under different environmental conditions

Distribution in: DE, DK, SE, UK

DART NEW!
The agronomist's best friend

- Very strong early vigour
- Very good Cylindrosporium tolerance and TuYV resistance
- Rlm7 and multi-gene resistance to stem canker

Distribution in: FR, UK

DARIOT
Fast and vigorous juvenile development

- Outstanding resistance to stem canker (phoma) due to Rlm7 + multigenic resistance
- Good establishment even at later sowing dates
- Excellent harvestability for a more efficient combining

Distribution in: BG, BY, CZ, ES, HU, LT, RO, SK, UA

DOMINATOR
Optimal yield protection

- Outstanding stem health due to APR37
- TuYV resistance and Verticillium tolerance
- Excellent winter hardiness

Distribution in: CL, CZ, EE, LT, LV, PL, UA

DUKE
Stronger vigour for difficult conditions

- Very strong early vigour and good adaptation to late sowing date
- TuYV resistance combined with very strong resistance to phoma
- Very good pod shatter resistance

Distribution in: AR, CZ, ES, HU, PL, UA, UK

DUPLO
Outstanding vigour in autumn and spring

- Fast regrowth in spring and medium flowering date
- TuYV resistance in combination with outstanding phoma and pod shatter resistance
- Very stable and high grain yield

Distribution in: BG, CZ, EE, LT, LV, RO, SE, UK

DYNAMIC
Excellent stress tolerance and widely adapted

- Broad adaption and excellent yield stability
- Very good resistance to stem canker based on Rlm7 resistance gene
- Resistance to TuYV

Distribution in: BG, BY, HU, LT, LV, PL, RO, RU

DMH512 (ROMEO) NEW!
Excellent stress tolerance

- Very good winter hardiness
- Robust plant type with strong early vigour
- Full trait package with Rlm7, pod shatter and TuYV resistances

Distribution in: CZ, PL

SMARAGD
Excellent package of disease resistances – for flashing yield

- Excellent yield performance and stability in DE, PL and Nordics
- Flat leaf rosette before winter and very good winter hardiness
- Excellent plant health including TuYV resistance, good phoma field resistance and good tolerance to Verticillium wilt

Distribution in: DE, DK, SE, UA

TEMPTATION
High performance TuYV resistant variety

- Strong early vigour and good adaptation to late sowing
- Good winter hardiness
- Good lodging resistance

Distribution in: BY, CZ, EE, HU, LT, LV, PL, RU, RS, SK, UA, UK

CLEARFIELD® winter oilseed rape hybrids

Clearfield® Production System for Oilseed Rape

BEATRIX CL NEW!
The new generation of Clearfield WOSR

- Strong package of disease resistances (Rlm7 + TuYV)
- Pod shatter Resistance
- Very strong early vigour

Distribution in: BG, EE, LT, LV, PL, RO, UK

MATRIX CL NEW!
First Quad Layered PNN Variety from DSV

- Very high grain yield potential
- Very good disease ratings and TuYV resistance
- Excellent pod shatter resistance

Distribution in: HU, RO, UK, US

PHOENIX CL
Fits to all types of soils and tillage systems

- Develops very vigorous in autumn and is adapted to mid-early to late sowing dates
- Very good winter hardiness and drought stress tolerance

Distribution in: AU, AR, BG, BLT, CL, CZ, HU, LT, PL, RO, SK, UA, UK

SIMPLEX CL
Excellent plant health combined with strong early vigour

- Very good winter hardiness
- Excellent disease and pod shatter resistance
- Excellent resistance to biotic and abiotic stress factors

Distribution in: BG, CL, EE, HU, LT, LU, LV, RO, UA, US

CLEARFIELD® spring oilseed rape hybrids

Clearfield® Production System for Oilseed Rape

CEBRA CL

- Mid-early maturity
- Very good lodging resistance
- Very good grain yield stability

CHIP CL

- Vigorous plant growth and robust early development
- Medium maturity and very high yield potential

CLICK CL

- Medium-late maturity
- Medium plant height
- Very high oil content

For more information about our breeding programme and oilseed rape varieties, please visit our homepage www.dsv-seeds.com

HOLL winter oilseed rape hybrids

HOLL refers to a range of winter oilseed rape varieties with a High Oleic and Low Linolenic (HOLL) fatty acid oil profile. It was achieved by conventional breeding methods to provide an oilseed rape oil with a specific fatty acid profile benefiting food processors, foodservice operators and consumers.

V316OL
Very high and stable grain yield

- Excellent oil quality (oleic acid ~80 %, linolenic acid < 3 %)
- Early-medium maturity

Registered in: common EU catalogue

V350OL
Early maturing HOLL

- High grain yield potential and high oil content
- Excellent oil quality (linolenic acid < 3 %)

Registered in: common EU catalogue

Spring oilseed rape hybrids

LAKRITZ NEW!

- Excellent stress tolerance and vigour
- Medium-late flowering and maturity
- Very high oil content

LUMEN

- Compact plant type with excellent lodging resistance
- Very vigorous juvenile development
- Excellent yield stability over all regions

SMILLA

- Very early maturity
- Short plant height
- High thousand grain mass

DSV cereal breeding – a story of success

Wheat and barley breeding

In our winter wheat breeding programmes the focus is on developing high-yielding varieties with well-balanced agronomic features, good resistance package and baking quality. In winter barley, varieties are selected mainly for the characteristics of yield, health, resistances, straw stability, winter hardiness and grain quality. Over the last twenty years, we have steadily expanded our breeding activities in cereals. In addition to the main seed breeding station in Leutewitz, Germany, DSV has now three other seed breeding stations in European key markets – in France, Ukraine and in the United Kingdom. Our own Europe-wide testing network allows the selective breeding on environmentally stable varieties suited to all of the major cereal growing regions in Western and Eastern Europe. DSV has also a strong partnership with two breeding companies for spring wheat. The international distribution of these spring wheat varieties is organised by DSV. We are very pleased that as of this year we are able to offer farmers two resistant varieties, SENSATION and PARADIES, which enable the cultivation of barley on sites with barley yellow dwarf virus (BYDV) or barley yellow mosaic virus (BaYMV).

International distribution

DSV is one of the market leaders in cereals in Germany and DSV varieties have been introduced to the market successfully in many other countries as well. Depending on the country, DSV cereal varieties are sold through wholly-owned subsidiaries or distribution partners.

Milestones of the DSV cereal breeding

1991
Acquisition of the breeding station Leutewitz in Germany (near Dresden). Continuation of the breeding programme for six row winter barley and foundation of a new programme for winter wheat

1997
Start of the breeding programme for winter wheat in the United Kingdom

2000
Registration of the first winter wheat variety bred by DSV (HATTRICK in Denmark)

2001
Registration of COMPLIMENT, first DSV winter wheat variety in Germany

2003
Registration of the leading baking quality (E-quality) winter wheat AKTEUR

2004
Beginning of the set-up of a DSV trial network in Europe. Registration of SAMURAI, the first DSV winter wheat in France

2006
Acquisition of the cereals breeding station Semonville in France

2008
Foundation of the breeding station in Wardington, UK

2010
DSV becomes No.1 breeder for winter wheat in Germany

2011
Foundation of the testing station in Russka Polyana, UA

2012
CHILTON – first DSV winter wheat on the Recommended List in the United Kingdom

2016/17
DSV starts its own distribution line for cereals in Germany

2017/18
Registration of BYDV tolerant winter barley PARADIES

2018
Relocation of the newly built breeding station in Terminiers, FR

2020
Registration BYDV tolerant and BaYMV type 1+2 resistant winter barley SENSATION

Winter wheat varieties

AKTEUR E-quality
- Good quality characteristics and high specific weight
- Good HFN stability
- Longer straw, good standing ability
- Very suitable for late sowing

Distribution in: AT, BY, CZ, DE, HU, NO, PL, RO, UA

ARCHITEKT A-quality
- High yielding A-quality wheat
- Winter hardy and high tillering capacity
- Good lodging resistance
- Well balanced resistance package

Distribution in: DE, EE, LT, LV, PL

ARKTIS E-quality
- Good bread making features
- Very high level of resistance to Fusarium head blight, mildew and eyespot
- Medium straw length
- Very good winter hardiness

Distribution in: BY, CZ, EE, LT, LV, PL

ARTIST B-quality
- Very high and stable grain yields, high specific weight
- Very good winter hardiness
- Medium to early ripening
- Short to medium straw length

Distribution in: CZ, EE, LT, LV, PL

ASKABAN E-quality
- High and stable yielding for an E-variety
- Good standing ability and winter hardiness
- Well balanced disease resistance
- Good quality characteristics

Distribution in: CZ, EE, HU, LT, LV, PL

ASPEKT A-quality
- Stable and high yield in official trials
- Early type with good baking quality (A+)
- Good winter hardiness, good to medium standing ability
- Good suitability after legumes, oilseed rape, maize and sugar beets

Distribution in: BY, EE, FI, HU, LT, LV, PL, RO, SK, UA

ATTRAKTION A-quality
- High and stable grain yield and high specific weight
- Very good rust and mildew resistance
- Medium to early heading and medium ripening
- Good HFN stability

Distribution in: HU, RO, SK

ATTRIBUT A-quality NEW!
- High and stable yielding A-quality wheat
- Good lodging resistance
- Well balanced disease resistance
- High and stable HFN and specific weight

Distribution in: DE

AMUN A-quality
- All-round leaf resistance
- Very high level of resistance against Fusarium
- Carries eyespot resistance gene (PCH1)
- Good winter hardiness
- Good baking quality

Distribution in: EE, HU, LT, LV

ATUAN B-quality
- High yielding variety with a very good Fusarium head blight resistance
- Excellent mildew resistance, short to medium straw and medium maturity
- Resistance-gene SBM2 against soil born mosaic disease included
- Suitable for all regions

Distribution in: CZ, HU, RO

ARTENGO A-quality NEW!
- High and stable yielding A-quality wheat
- Good lodging resistance
- Good fusarium resistance
- High and stable HFN and specific weight

Distribution in: DE

BOSS B-quality
- Robust, multipurpose wheat variety with large reliability
- Very good health from roots to ear
- Good standing ability and winter hardiness
- Brewing quality

Distribution in: DE, LU

CHAMPION Gr. 4-quality NEW!
- Very high yielding hard feed wheat
- Strong disease resistance package especially against septoria and rust
- Included resistance against orange wheat blossom midge (Sm1)
- Good grain quality

Distribution in: DK, NL, UK

CH COMBIN E-quality
- Early harvest, ideal as previous crop before oilseed rape
- Short, stiff straw
- Good baking quality
- Winter hard and drought tolerant

Distribution in: HU, PL, RO, SK, UA **Breeder:** DSP AG, Agroscope

DAVINCI E-quality
- High quality single ear type
- Robust health package
- Medium ripening and good winter hardiness
- Balanced agronomic features

Distribution planned in: EE, LT, LV, PL

ETANA A-quality
- High grain yield
- Stable quality due to the stable HFN, good protein content and high specific weight
- Good leaf and ear resistance
- Very good winter hardiness and stiff straw

Distribution in: BG, BY, CZ, DE, EE, HU, LT, LV, RO, SE, SK, UA

EXPO E-quality
- High treated and untreated grain yield for an E-quality wheat
- Good winter hardiness
- Well balanced disease resistance package
- Very good Fusarium head blight resistance

Distribution in: CZ, HU, PL, SK

JOKER A-quality
- High treated and untreated yield
- Medium straw length, with good lodging resistance
- Good leaf and ear disease resistance
- Good Fusarium head blight resistance package

Distribution in: BG, PL, RO

MATHEO BPS-quality
- Early to medium ripening
- Long straw but stiff steam
- Medium to low winter hardiness
- Very good Fusarium head blight resistance

Distribution in: FR

MAXENCE BPS-quality
- High grain yield
- Good rust and mildew resistance
- Medium ripening, good standing ability
- Medium to high specific weight

Distribution in: FR, RO

MOBILE BPS-quality
- High TGW and good BPS-quality
- Good yellow rust and mildew resistance, medium Septoria and Fusarium head blight resistance
- Medium plant length and good straw stability
- High yielding variety

Distribution in: FR, RO

OLYMPUS Gr. 4-quality
- High yielding feed wheat
- Short straw, good to medium standing ability
- Excellent disease resistance
- Good stability of HFN

Distribution in: BE, UK

PATRAS A-quality
- High and stable treated yield
- Good leaf and Fusarium head blight resistance
- Short straw, good winter hardiness
- Good quality characteristics for an A-quality wheat

Distribution in: BG, CZ, DE, EE, LT, LU, LV, PL, RO, SK, UA

PIONIER A-quality
- High yielding A-quality variety
- Very good HFN stability and good specific weight
- Good leaf and ear resistance
- Stiff straw, medium plant length

Distribution in: DE, LU

PRODUZENT B-quality
- Very high yielding
- Good winter hardiness and straw stability
- Upscale B-quality with good stability of HFN
- Good leaf and Fusarium head blight resistance

Distribution in: DE, EE, LT, LV, UA

RAGNAR C-quality
- High yielding feed wheat
- Good rust resistance
- Medium to late ripening and good straw ability
- High specific weight and medium HFN stability

Distribution in: BE, NL

SYLVESTER B-quality
- Baking wheat suitable for cookies
- Medium straw length with good lodging resistance
- Good leaf resistance package
- Good winter hardiness

Distribution in: UA

THEODORE Gr. 4-quality
- Very high untreated yield performance, high treated yield
- Short straw, good standing power
- Excellent Septoria and yellow rust resistance
- Very good suitability for low input

Distribution in: UK

TITANUS B-quality
- Highest yield performance in National list trials in LT
- Short straw and medium maturity, very high yielding baking wheat
- Good winter hardiness and standing ability
- Suitable for all regions

Distribution in: EE, LT, LV, PL

TOBY Gr. 3-quality
- Very high untreated and high treated yield performance
- Short straw, good standing power
- Excellent Septoria and yellow rust resistance
- Extreme healthy with late maturity
- Low input suitability

Distribution in: NL, UK

XERXES E-quality
- Good bread making features with a high gluten content
- Medium to good disease resistance, good Fusarium head blight resistance
- Longer straw length, medium to good standing ability
- Medium to low winter hardiness, medium-early ripening

Distribution in: AT, IT, SK

Spring wheat varieties

AKVITAN A-quality*

- High and stable yield
- Mid-early variety with high TGW
- Balanced health
- Good lodging resistance

Distribution in: DE **Breeder:** LLA Triesdorf

BROCA A-quality* NEW!

- High yielding, mid-late low input variety
- Strong performance also in autumn sowing
- Very healthy, short and resistant to lodging
- Suitable HFN stability and high TGW

Distribution in: DE, EE, LT, LV **Breeder:** LLA Triesdorf

CONTINENTAL E-quality

- Medium to long plant length but good standing ability
- Good baking qualities
- Good Fusarium head blight resistance
- High yielding variety

Distribution in: KZ **Breeder:** DSP AG, Agroscope

KOSTANAI E-quality

- High yield potential
- Good disease resistance package
- Stiff straw, medium plant height
- Medium heading

Distribution in: KZ **Breeder:** DSP AG, Agroscope

SIGNAL E-quality

- High yielding quality wheat
- Well balanced disease resistance
- Good standing ability
- Early to medium ripening

Distribution in: EE, LT, LV **Breeder:** LLA Triesdorf

SORBAS E-quality*

- Stable HFN, good protein content and high specific weight
- Medium ear emergence and ripening
- Excellent Fusarium head blight resistance
- Balanced resistance profile

Distribution in: DE, EE, LT **Breeder:** LLA Triesdorf

TRISO E-quality*

- Good yield stability
- Very high protein content
- High level of Fusarium head blight resistance, medium leaf health
- Wide ecological adaption

Distribution in: BY, DE, EE, FR, LT, LV, RO, RU, UA
Breeder: LLA Triesdorf

E, A, B, C, BPS, BP, BAU, Gr.1, Gr.2, Gr.3, Gr.4 = Wheat quality classes of the countries

*with the option for late autumn sowing

Winter barley varieties

ANDORIA 6-row

- Short to medium plant length
- Good straw stability and lodging resistance
- Balanced resistance and medium early maturity
- High TGW and good specific weight

Distribution in: HU

DETROIT 6-row

- High yield performance (treated and untreated)
- Outstanding mildew and good rust resistance
- Balanced disease resistance
- Good screening and specific weight

Distribution in: BE, FR

DEEPLO 6-row

- Winter barley with malting quality
- Good winter hardiness
- Short straw length
- Good lodging resistance

Distribution in: BY, UA

ESPRIT 6-row NEW!

- Very high yield with easy handling
- Healthy leaf
- Lodging resistant and steam stiff
- High hectolitre weight with TOP sorting

Distribution in: DE, PL, RO

HIGHLIGHT 6-row

- Large grain comparable with 2-row varieties
- Longer straw length, good to medium standing ability
- Good performance in organic trials
- Medium to late ripening

Distribution in: DE, RU, UA

IMPALA 6-row

- Very high yield performance
- Medium straw length, good straw stability
- Excellent winter hardiness and medium maturity
- Well balanced disease resistance, very good mildew and snow mould resistance

Distribution in: CZ, PL

JULIA 6-row NEW!

- Well rounded resistance profile
- Record yielding in official trials
- Resistant to BaYMV Type 1 + 2
- Good kernel quality

Distribution in: DE, FR

VIOLA 6-row NEW!

- Highest yielding new registration 2020 in DE
- Early heading
- Short and stem stiff
- Good specific weight and high TGW

Distribution in: DE, RO

SENSATION 6-row NEW! BYDV protection virus protection

- World's first winter barley variety combining tolerance to BYDV and resistance to BaYMV type 1 + 2
- Top yielding and early maturing
- Good disease resistance package and good straw stability
- High specific weight

Distribution in: BE, DE, DK, FR, UK

SAPHIRA 6-row

- Early to medium heading and ripening
- Medium straw length
- Good resistance package
- Good screening >2.2 mm and >2.5 mm

Distribution in: AT, RO

PARADIES 6-row BYDV protection

- Resistance against BYDV, BaYMV type 1 and BaMMV
- High yield also under infection conditions
- No insecticide use, early sowing dates possible
- Very good leaf health and winter hardiness

Distribution in: AT, BE, DE, HU, LU, RS, UA

BYDV = Barley yellow dwarf virus
BaYMV = Barley yellow mosaic virus
BaMMV = Barley mild mosaic virus

Lupin

Since the mid 1990s, the cultivation of white lupin has rapidly decreased in Germany and other countries in Central Europe because of the fungal disease anthracnose. In collaboration with our breeding partner the development of new varieties with improved resistance is our target. The first anthracnose tolerant variety FRIEDA was registered in 2019 in Germany.

FRIEDA White Lupin

- Branching type with low content of bitter substances
- High protein yield for feed use
- Also usable for human nutrition due to lower alkaloid content
- Tolerance against anthracnose

Distribution in: AT, CH, DE **Breeder:** LLA Triesdorf

CELINA White Lupin NEW!

- Low bitter content, high tillering type
- High yield potential and stability
- Good to medium standing ability
- Tolerance against anthracnose

Distribution in: AT, CH, DE **Breeder:** LLA Triesdorf

CARABOR Blue Lupin

- Branching type with low content of bitter substances
- High yield potential with very good agronomic features
- Good standing ability
- Excellent drought tolerance and medium TGW

Distribution in: DE, PL **Breeder:** Saatzucht Steinach

Turf grass breeding

For decades, DSV has bred outstanding varieties for all requirements – from sports pitches and golf courses to parks and private gardens. We maintain constant programmes of investment into research and breeding progress. In this way we put our motto "Innovation for your growth" into practice.

Leader in Europe

DSV is the Number 1 breeder of turf grasses in Germany, and we are major suppliers in the international markets for quality turf grasses. Our premium varieties head the lists of all significant turf trials in Europe. They are ideal components in turf mixtures for various purposes. The complete portfolio and essential information can be found at www.dsv-seeds.com

Innovation is breeding

Our breeders focus on a number of different characteristics such as:

- Beautiful and shiny appearance
- Improved sports tolerance
- Recovery after wear
- Fineness of leaf
- Tolerance to close mowing
- Intense beautiful colours
- Disease resistance
- Location and climate factors
- Persistence
- Traits with specific characteristics (e.g. tolerance to drought, heat, shade)

Our athletes

Perennial ryegrass *Lolium perenne*

Cultivar	Live ground cover	Visual merit	Mean	Recovery	Shoot density	Fineness of leaf	Resistance to Red thread	Winter greenness	Summer greenness
EUROSPORT	7.6	7.6	7.6	7.7	7.4	7.0	-	5.7	5.6
EUROPITCH	7.8	7.9	7.9	7.3	7.9	7.6	4.1	5.3	5.0
EURODIAMOND	7.9	7.8	7.8	7.0	7.6	6.5	3.9	5.4	5.3

EUROSPORT – The superjock
EUROSPORT was developed to withstand toughest conditions in stadiums shown in its overall highscore for recovery speed.

EUROPITCH – A new star is born
Incredibly high density combined with overall highscores shoot this variety to the pinnacle of seeds for sports use.

EURODIAMOND – For champions
The extraordinary winter performance of EURODIAMOND makes it the Number 1 in Europe on most independent recommendation lists and we therefore enjoy the trust of the stadium's greenkeepers of many European Top Clubs.

Kentucky bluegrass *Poa pratensis*

Cultivar	Live ground cover	Visual merit	Mean	Recovery	Shoot density	Fineness of leaf	Resistance to Red thread	Winter greenness	Summer greenness
LIMOUSINE	7.0	7.2	7.1	7.4	8.0	7.3	4.7	6.3	5.5
JOKER	7.1	7.3	7.2	7.2	7.4	7.7	6.0	6.0	6.1
LINCOLNSHIRE	6.7	7.1	6.9	6.9	7.0	6.9	4.4	6.2	5.0
ZEPTOR	4.6	4.7	4.7	4.5	4.6	4.6	7.1	5.4	5.5

LIMOUSINE – A legend in its own time
As always, LIMOUSINE sets the standard for quality, performance and persistence and as far as versatility in use is required, it is a true all-round genius.

Tall fescue *Festuca arundinacea*

Cultivar	Live ground cover	Visual merit	Mean	Recovery	Shoot density	Fineness of leaf	Winter greenness	Summer greenness
REGENERATE	7.6	7.7	7.6	7.4	7.8	7.2	6.4	7.0

REGENERATE – Generation future
REGENERATE is the medium to light green new top turf variety for sports and lawns use. Outstanding results in shoot density and fineness of leaf take quality in Tall fescues to the next level. It is at the top of the lists in France and USA already, that means the next quality-turf grasses Tall fescue generation is available now.

Source: Turfgrass Seed 2021, British Society of Plant Breeders

High quality varieties

Perennial ryegrass *Lolium perenne*

Cultivar	Country list	Sports	Lawn	Density
EVENTUS	UK, DE, FR, NL, SK	4	5	5
EG RESISTUS	UK, FR	4	4	4
POLLEN	UK, FR	3	3	4
VULCANUS	UK, DE	3	3	4
PASCAL	UK, DE, FR	2	3	3
HAMAC	DE, FR	4	3	3

Cultivar	Country list	Sports	Lawn	Density
TRANSATE	UK, DE, FR	3	3	2
TURFGOLD	DE	4	2	3
TURFSUN	DE, SK	3	3	3
JUBILEE EG	UK, DE, SK	2	3	3
TETRASPORT tetraploid	UK	4	2	2

Range: 1-5 (5 = best); breeders classification

EVENTUS – A really fine thing

EVENTUS is essential for all professional ornamental and sports mixtures, where an extremely dense, outstanding fine textured lawn of highest quality and vitality is desired. No. 2 in France.

POLLEN – The iceman

When a high ability to start germination at low temperature is required, POLLEN is the No. 1 and first choice for unfavourable weather conditions, especially during winter time.

PASCAL – The sunnyboy

PASCAL is characterised by outstanding performance in hot and dry conditions. The unbeaten persistence and incredible disease resistance makes it the first choice for all lawn and sports uses, not only in the Mediterranean zone.

TETRASPORT – Higher germination rate at cold temperatures

TETRASPORT is tetraploid and has an improved disease resistance and vitality. It is made for heavy use in professional and semi-professional sports mixtures and is characterised by high wear tolerance.

Smooth-stalked meadow-grass *Poa pratensis*

Cultivar	Country list	Sports	Lawn	Density	Recovery
LIMOUSINE	UK, DE, FR, NL, SK	4	4	5	4
MARKUS	UK, NL, SK	3	3	3	3
DAUNTLESS	UK	3	4	4	4

Range: 1-5 (5 = best); breeders classification

DAUNTLESS – A handsome US type

DAUNTLESS is a quite new US-variety with high disease resistance and good winter performance. We paid special attention to the colour of DAUNTLESS that has to meet the European needs. We are able to offer DAUNTLESS in very high technical purity for the use in sod production and as component for mixtures with high technical standards.

Chewings fescue *Festuca rubra commutata*

Cultivar	Country list	Density	Appearance	Red thread tolerance	Close mowing
RAMONA	UK	5	5	5	5
EUROCARINA	UK, DE, FR, NL	4	4	5	5
FILIUS	DE, NL, UK	4	4	4	5
ANTOINETTE	UK, FR	4	4	3	3

Range: 1-5 (5 = best); breeders classification

ANTOINETTE – The French beauty

Compositions of noble lawn mixtures should consist ANTOINETTE as partner. The vegetation aspect is phenomenal and for sure will improve the appearance. If you want to create a healthy and vital lawn at a state of the art, this is your variety.

Slender creeping red fescue *Festuca rubra trichophylla*

Cultivar	Country list	Density	Appearance	Red thread tolerance	Close mowing
MIRADOR	UK, DE	5	5	4	4
EUROMARIE	UK, DE	4	4	5	5
CATHRINE	UK, DE, SK	4	4	4	5
TEENIE	UK, DE, NL	4	4	3	3

Range: 1-5 (5 = best); breeders classification

TEENIE

TEENIE is a medium green variety with outstanding shoot density. This variety presents both, a high winter and a nice summer aspect, means it looks nice all year round. TEENIE achieves a high score in disease resistance and can be used as a universal partner for various lawn mixtures.

Strong creeping red fescue *Festuca rubra rubra*

Cultivar	Country list	Density	Appearance	Red thread tolerance
MAGITTE	UK, DE	4	4	4
MELLORI	UK, DE, NL, SK	4	4	3
RYDER	UK, DE, SK	4	4	3
MARLENE	DE	3	4	3

Range: 1-5 (5 = best); breeders classification

MARLENE

MARLENE is one of our all-round talents for lawn use with improved resistance of red thread. High shoot density, very fine leaves and an intensive green colour make MARLENE the ideal partner for all red fescues based lawn mixtures with focus on fine texture.

Tall fescue *Festuca arundinacea*

Cultivar	Country list	Sports	Lawn	Density	Fineness of leaf
MELYANE	UK, FR	3	4	4	4
REGENERATE	FR	4	4	5	5

Range: 1-5 (5 = best); breeders classification

MELYANE

MELYANE forms a very dense and due to its attractive color a good-looking lawn. It is suitable for lawns and sports pitches as it has fine leafs compared with other Tall fescue varieties. MELYANE is well adapted to Mediterranean climate and the shade tolerance is quite good. Top class in fineness of leaf and density make MELYANE the first choice for all premium mixtures.

Tufted hair-grass *Deschampsia cespitosa*

DESANTO – For the dark side of life!

Improved wear tolerance and recovery speed are the key factors of this all new variety classifying it for use in shady areas.

Hard and Sheep's fescue *Festuca trachyphylla*

Cultivar	Country list	Sports	Lawn	Density
MENTOR	UK, DE, NL, FR	2	3	4

Range: 1-5 (5 = best); breeders classification

MENTOR – Unpretentious

MENTOR is an especially drought tolerant variety with very low demand concerning the area of use and maintenance. It is remarkable for its fine structure and the intensive colour.

EUROGRASS mixture programmes

DSV has successfully bred all the main species of turf grasses for many decades, and a turf grass programme has been developed for the European market based on years of experience and great breeding success. EUROGRASS is the brand name with two strong product lines EUROGRASS PRO for the professional and EUROGRASS DIY for the private sector.

EUROGRASS PRO (EG PRO)

The EUROGRASS PRO mixture programme is developed for professional use and high demands for a wide range of use. We select species and varieties carefully for their different characteristics to meet top quality requirements. The time of sowing, climatic and soil conditions, intention and subsequent maintenance are all important parameters in its compositions. With experience and know how we compose mixtures adapted to the different but very specific purpose which are tailor made for experts in lawns.

The EUROGRASS PRO mixtures are divided into five groups:

- Classic
- Ornamental
- Shade
- Sport
- Renovation

EUROGRASS mixtures for professionals

EG PRO Classic

Classic is designed for general purpose lawns and landscaping where an economic option is required. The mixture establishs quickly and does not require a lot of mowing. Classic is suitable for a broad spectrum of use and offers average tolerance to wear.

	Species	Variety examples	Main characteristics
EG PRO 120 Classic			
50 %	*Lolium perenne* (Perennial ryegrass)	BECKHAM, JUBILEE EG, PASCAL, TURFGOLD, VULCANUS	• Fast establishment • Good ground cover • Good soil binding capacities • Low maintenance effort
50 %	*Festuca rubra rubra* (Strong creeping red fescue)	DIPPER, MELLORI, RYDER	

EG PRO Ornamental

Ornamental is ideal for lawns where a very fine leave textured finish is required and only the best will do. Even and homogeneous establishment as well as low mowing maintenance are key characteristics of these mixtures. EG PRO Ornamental is suitable for all professional lawns on a wide range of soil types.

	Species	Variety examples	Main characteristics
EG PRO 230 Ornamental			
30 %	*Poa pratensis* (Smooth-stalked meadow-grass)	LIMOUSINE, MARKUS, ZEPTOR	• Fine textured • Nice appearance • Good ground cover • Very suitable for fairways, ornamental lawns, parks, sod production, etc.
30 %	*Festuca rubra rubra* (Strong creeping red fescue)	DIPPER, MELLORI, RYDER	
30 %	*Festuca rubra commutata* (Chewings fescue)	ANNALENA, ANTOINETTE, JOANNA, MISSION	
10 %	*Lolium perenne* (Perennial ryegrass)	EVENTUS, EUROCORDUS, VULCANUS	

EG PRO Shade

Shade is specially designed for shaded areas, but will also perform well in open conditions. Shade mixtures are ideal for areas around buildings and under and around trees on varying soil types. Due to the high content of heat and dry tolerant species and varieties in EG PRO 320, this mixture is also suitable for hot and dry conditions.

	Species	Variety examples	Main characteristics
EG PRO 320 Shade			
70 %	*Festuca arundinacea* (Tall fescue)	MELYANE, REGENERATE	• Shade, drought and heat tolerant • Wear tolerant • Suitable under trees and building shades • Very suitable where shade is combined with dry conditions
20 %	*Festuca rubra rubra* (Strong creeping red fescue)	DIPPER, MELLORI, RYDER	
10 %	*Lolium perenne* (Perennial ryegrass)	PASCAL, TRANSATE, TURFGOLD, VULCANUS	

EG PRO Sport

Sport mixtures are equipped with our best and most wear tolerant varieties which means the mixtures are designed for tough sports conditions. They are suitable for premier sport pitches to municipal sports grounds. They offer outstanding performance and visual appeal.

	Species	Variety examples	Main characteristics
EG PRO 410 Sport			
25 %	*Lolium perenne* (Perennial ryegrass)	BECKHAM, EG RESISTUS, VULCANUS	• Extremely wear tolerant • Fast recovery • Fast establishment • Very suitable for all areas under intense wear
25 %	*Lolium perenne* (Perennial ryegrass)	EURODIAMOND, EUROPITCH, EUROSPORT, POLLEN	
25 %	*Poa pratensis* (Smooth-stalked meadow-grass)	JOKER, LIMOUSINE, LINCOLNSHIRE	
25 %	*Poa pratensis* (Smooth-stalked meadow-grass)	DAUNTLESS, MARKUS, ZEPTOR	
EG PRO 420 Sport			
20 %	*Lolium perenne* (Perennial ryegrass)	BECKHAM, EG RESISTUS, VULCANUS	• Wear tolerant all-round mixture • Fast recovery • Drought tolerant • Very suitable for all areas including wear
20 %	*Lolium perenne* (Perennial ryegrass)	EURODIAMOND, EUROPITCH, EUROSPORT, HAMAC, POLLEN	
20 %	*Poa pratensis* (Smooth-stalked meadow-grass)	DAUNTLESS, JOKER, LIMOUSINE	
20 %	*Poa pratensis* (Smooth-stalked meadow-grass)	LINCOLNSHIRE, MARKUS, ZEPTOR	
10 %	*Festuca rubra trichophylla* (Slender creeping red fescue)	CATHRINE, MIRADOR, EUROMARIE	
10 %	*Festuca rubra commutata* (Chewings fescue)	ANNALENA, JOANNA, MISSION	

EG PRO Renovation

Renovation mainly consists of fast germinating and prevailing grasses. These mixtures are designed for bald, bare spots, thin and sparsely growing lawns. Once established, they will provide a dense ground cover and a refreshed appearance with the ability to quickly recover from any stress.

	Species	Variety examples	Main characteristics
EG PRO 520 Renovation			
25 %	*Lolium perenne* (Perennial ryegrass)	EG RESISTUS, EUROSPORT	• Fast establishment • Extremely hard wearing • Quick recovery from damages • Ideal for renovation programmes
25 %	*Lolium perenne* (Perennial ryegrass)	EURODIAMOND, EVENTUS, POLLEN	
25 %	*Lolium perenne* (Perennial ryegrass)	BECKHAM, EUROCORDUS, HAMAC	
25 %	*Lolium perenne** (Perennial ryegrass)	PASCAL, VULCANUS	

* We can use our tetraploid ryegrass TETRASPORT on request.

Turf assortment

Mixtures	Name	Paper bag 5 kg	Paper bag 10 kg
EG PRO 120	Classic	x	x
EG PRO 230	Ornamental	x	x
EG PRO 320	Shade	x	x
EG PRO 410	Sport	x	x
EG PRO 420	Sport	x	x
EG PRO 520	Renovation	x	x

EUROGRASS mixtures for the do-it-yourself market (EG DIY)

The EUROGRASS DIY mixture programme is particular designed for the do-it-yourself market. It consists of quality class varieties that optimally complement one another in their respective characteristics. We use our knowledge to compose mixtures with the intention to offer our customers good value for money. Special attention is given to the mixtures to ensure no quality compromise in this range.

Universal Lawn

Wear tolerant all-round mixture with fast recovery.
Usable for leisure activities and sports.

	Species	Variety examples
25 %	*Lolium perenne* (Perennial ryegrass)	TURFSUN
25 %	*Lolium perenne* (Perennial ryegrass)	JUBILEE EG
25 %	*Festuca rubra rubra* (Strong creeping red fescue)	MARLENE
25 %	*Poa pratensis* (Smooth-stalked meadow-grass)	MARKUS

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

Luxury Lawn

Luxury lawn mix with a very beautiful exclusive appearance.
It still withstands traffic but is not suited for sport.

	Species	Variety examples
30 %	*Lolium perenne* (Perennial ryegrass)	PASCAL
30 %	*Festuca rubra rubra* (Strong creeping red fescue)	MARLENE
20 %	*Lolium perenne* (Perennial ryegrass)	TURFSUN
15 %	*Festuca rubra commutata* (Chewings fescue)	MISSION
5 %	*Festuca longifolia* (Blue fescue)	BORNITO

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

Shady Lawn

Special mixture suitable for shady and dry locations with special selected species and varieties with high shade tolerance.

	Species	Variety examples
40 %	*Festuca arundinacea* (Tall fescue)	TROUBADIX
25 %	*Festuca rubra rubra* (Strong creeping red fescue)	DIPPER
15 %	*Festuca rubra trichophylla* (Slender creeping red fescue)	CATHRINE
10 %	*Festuca longifolia* (Blue fescue)	BORNITO
10 %	*Deschampsia caespitosa* (Tufted hairgrass)	DESHADE

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

Summer Lawn

The answer to climate change when dry summers become more common. This mixture withstands dry periods much better than other mixtures in this range.

	Species	Variety examples
65 %	*Festuca arundinacea* (Tall fescue)	MANITOU
20 %	*Lolium perenne* (Perennial ryegrass)	STARFIRE
15 %	*Poa pratensis* (Smooth-stalked meadow-grass)	MARKUS

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

Lawn Renovation

Standard mix for frequent lawn renovation to maintain a high standard of quality. Overseeding should be done once or twice a year and EG DIY LAWN RENOVATION is the tool to use.

	Species	Variety examples
30 %	*Lolium perenne* (Perennial ryegrass)	POLLEN
20 %	*Lolium perenne* (Perennial ryegrass)	LOLIUS
20 %	*Lolium perenne* (Perennial ryegrass)	TRANSATE
15 %	*Lolium perenne* (Perennial ryegrass)	STARFIRE
15 %	*Lolium perenne* (Perennial ryegrass)	TURFSUN

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

Lawn Renovation+

Composed for quick repair of old outworn lawns or bare spaces. Very fast establishment and quick germination. The fast solution.

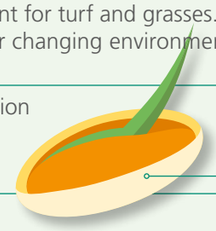
	Species	Variety examples
30 %	*Lolium perenne* (Perennial ryegrass)	POLLEN
25 %	*Lolium perenne* (Perennial ryegrass)	TURFSUN
20 %	*Lolium perenne* (Perennial ryegrass)	TETRASPORT
15 %	*Lolium perenne* (Perennial ryegrass)	STARFIRE
10 %	*Lolium multiflorum* (Italian ryegrass)	CAIRO

Available in following sizes: boxes (1 kg, 2 kg) and paper bags (5 kg, 10 kg)

DynaSeed® Plus inside:

DynaSeed® Plus is DSV's innovative seed treatment for turf and grasses. The customised coating mass ensures reliable germination under changing environmental conditions.

- Consistent and reliable germination
- Reliable emergence
- Health and vigour

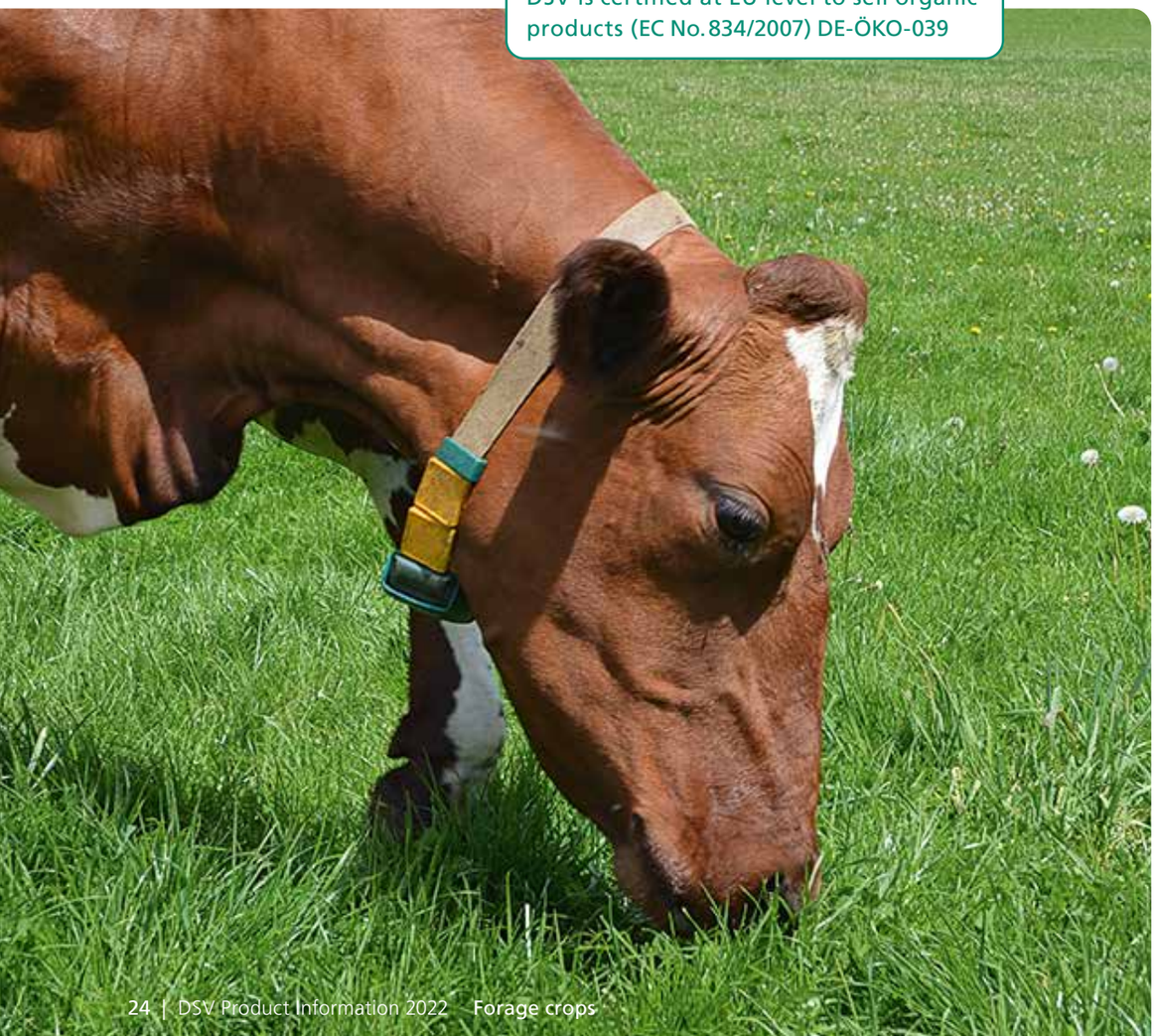


Forage crops

Extensive breeding and testing is carried out in the most important forage grass species as well as in small-seeded legumes. The main species are perennial, italian, annual and hybrid ryegrass, timothy, meadow fescue, tall fescue, cocksfoot as well as different clover species.

Apart from common breeding objectives, like yield, rust resistance and sward density, DSV forage breeders especially focus on forage quality (Milk Index see page 33). Existing varieties are tested and new breeding material is selected for this purpose. Additionally, DSV forage breeders aim to find solutions to cope with challenges due to climate change. The following tables give an overview on the key varieties of the different species. For all of the forage species there are also varieties in organic quality available. The full portfolio can be found at www.dsv-seeds.com

DSV is certified at EU level to sell organic products (EC No. 834/2007) DE-ÖKO-039



Annual ryegrass *Lolium westerwoldicum*

	Variety	Type	Organic*	Maturity	Yield	Rust resistance	National listing/ Official recommendation
diploid	GEPETTO	I	✓	early–inter	5	3	AR, CO, FR, MA
	IMPERIO	I	✓	early–inter	5	4	EC, FR, MA, RU
	LIFLORIA	I		early	4	3	AT, DE, LU, UK
	LIKOLOSS	I		very early–early	5	4	AR, CO, DE, EC, UY
	RAMIRO	M/I	✓	late–very late	5	4	DE
	RODILLO NEW!	M		inter	5	5	BR, FR
tetraploid	ALBERTO	I	✓	early	5	5	CL, DE, FR, MA, UK, UY
	FALLADINO	I		inter	4	4	DE, CE
	LIBONUS	I		early	5	3	AT, DE, EC, FR, LU, MA, UK
	SOUVENIR	I		very early–early	5	4	DE
	ARNOLDO	M/I	✓	inter	4	5	AR, DE, RU
	POLLANUM	M/I	✓	inter	3	3	AR, BY, DE, EC, ES, FI, KZ, LU, PT, RS, RU, TR, UA, UK
	ELUNARIA	M		inter–late	3	3	BY, CA, DE, RU, UA

I = Intercrop M = Maincrop

ALBERTO

- Outstanding performance for intercropping
- Good rust resistance guarantees high quality
- Top variety on the German recommended list

ARNOLDO

- One of the best in rust resistance
- Double purpose type ensures high flexibility

Italian ryegrass *Lolium multiflorum*

	Variety	Organic*	Maturity	Yield	Rust resistance	Persistence	National listing/ Official recommendation
diploid	SHAKIRA	✓	early–inter	3	4	3	DE, UK
	BALANCE	✓	inter	4	4	4	BY, DE, LU
	SENDERO NEW!		inter–late	5	4	4	DE, UK
tetraploid	HUNTER	✓	early	5	4	3	AR, BY, DE, RU, UK
	DOLOMIT	✓	early–inter	5	4	3	AR, DE
	DORIKE	✓	early–inter	5	5	4	AR, BY, DE, RU, UK
	FABIO	✓	early–inter	4	3	3	CA, DE, FI, IE, LU, NL, NO, PL, RU, UK
	LIPSOS		early–inter	5	4	3	CL, DE, LU, NO
	NABUCCO		early–inter	4	5	4	CA, CO, DE, EC, IE, LU, NL, UY

DORIKE

- Convincing by very high yields and overwhelming health
- Outstanding winter hardiness and standing ability

DOLOMIT

- Overwhelming first cut is the base for an overall good yield
- Good early growth leads to good performance in early spring

Range: 1–5 (5 = best); breeders classification

*also available in organic quality

Perennial ryegrass *Lolium perenne*

		Variety	Organic*	Yield	Sward density	Winter hardiness	Rust resistance	Persis-tence	Forage quality	National listing/ Official recommendation
early	diploid	TEMPRANO		3	4	4	3	2	2	AR, BY, DE, DK, RU, TR, UA, UK
	tetraploid	ALGIRA	✓	4	4	5	5	5	5	CH, LU
		KARATOS (M)	✓	4	4	4	4	4	3	DE, RU
		MIRTELLO (M)	✓	4	4	4	5	5	3	AR, BE, DE, LU
		PRANA		3	4	4	3	2	2	AR, AT, BY, EC, NL, NO, RU, TR, UA
inter	diploid	ARELIO (M)	✓	4	4	4	3	4	4	DE, EC, NL, RU, UK
		ARSENAL	✓	4	5	3	3	3	3	BY, DE, KZ, LU, NL, RU, UA, UK
		ASTONCONQUEROR	✓	4	4	2	3	3	3	DE, IE, UK
		GUSTO	✓	4	4	2	4	4	3	IE, UK
	tetraploid	ALLIGATOR	✓	5	4	5	3	5	2	AT, CH, DE, LU
		ASTONENERGY MI	✓	4	3	3	4	3	5	AR, BY, CL, CO, FR, IE, UK
		ASTONHOCKEY (M)	✓	4	4	4	3	5	4	BE, DE
		EUROCONQUEST (M) MI	✓	4	4	5	4	4	5	DE
		EXPLOSION (M) MI	✓	5	4	5	5	4	5	DE, NL, UK
		LIDELTA		4	4	4	3	5	3	DE
		TRIVOS	✓	4	4	4	4	5	3	CH, CO, DE, EC, LU, NL, RU, UA
		BOTOND NEW!		4	4	4	4	5	4	DE
		ASTONVISION NEW!		4	5	3	5	4	4	NL, UK
late	diploid	ARNANDO		4	4	4	4	3	3	DE, NL
		ASTONCHIEFTAIN		4	4	2	3	2	4	DE, UK
		ASTONKING		4	4	2	4	3	3	IE, NL, UK
		KAIMAN MI	✓	5	4	3	4	4	5	DE, NL
		MAIKO (M)		3	5	4	5	4	4	DE, NL
		ROSSERA MI	✓	3	4	3	3	5	5	DE, FR, NL, RU, UK
		ROSSIMONTE MI		5	4	3	3	4	4	DE, NL
	tetraploid	HURRICANE		5	4	3	4	4	4	DE, FR, LU, NL, UK
		RIVALDO	✓	4	4	4	4	3	3	DE, NL
		SHERLOCK (M)	✓	4	4	4	5	4	3	DE
		VALERIO (M)	✓	5	4	5	4	5	4	BE, DE, RU, UK
		CHEVALIER (M) NEW!		5	4	4	4	4	3	DE
		NEUVILLE NEW!		5	4	4	5	3	4	DE, FR, NL

M = especially suitable for peat soils

VALERIO

- Top yield over all cuts
- Very good persistence based on the suitability for peat soils
- At the top of the German recommendation list since 2016 (Northern German chambers of agriculture)

Hybrid ryegrass *Lolium hybridum*

	Variety	Organic*	Type	Maturity	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
diploid	PIROL	✓	Lm	inter	4	3	3	3	4	AT, DE, IE, LU, UK
tetraploid	ASTON-CRUSADER	✓	Lm/Lp	early–inter	5	3	3	4	4	CO, DE, LU, UK
	IBEX	✓	Lm	early–inter	5	2	4	4	5	CH, CL, DE, EC, FR, LU, UY

Lm = Lolium multiflorum; Lp = Lolium perenne

ASTONCRUSADER

- Excellent in yield and early spring growth
- Convincing recommendation in England and Wales

Festulolium *Festulolium*

Variety	Organic*	Type	Maturity	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
FEDORO	✓	Fp x Lm	late	4	2	4	4	4	BY, DE, RU, UA, UK

Fp = Festuca pratensis; Lm = Lolium multiflorum

Meadow fescue *Festuca pratensis*

	Variety	Organic*	Maturity	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	Forage quality	National listing/ Official recommendation
diploid	LIHEROLD	✓	early	5	4	5	4	5	4	BY, DE, KZ, LU, NO, RU, UA, UK
	BALTAS		early–inter	5	4	5	4	5	3	DE
	PREVAL	✓	early–inter	4	3	5	4	5	3	BE, CA, CH, CZ, DE, FR, LU, NL, SK
tetraploid	SCHWETRA MI		inter	4	2	5	4	4	5	DE
	TETRAX MI	✓	inter	4	2	5	4	4	5	AT, BY, CH, FR, RU

Tall fescue *Festuca arundinacea*

Variety	Organic*	Maturity	Yield	Winter hardiness	Rust resistance	Leaf flexibility	National listing/ Official recommendation
LIPALMA	✓	early	3	3	3	2	BY, CL, DE, KZ, RU, UA, UY
ROSTUQUE	✓	early–inter	4	4	4	3	DE, FR
ROSPARON	✓	inter	5	5	5	3	AR, BY, CL, FR
ROSCATI NEW!		inter	4	5	4	4	DE, FR
ROTINO NEW!		late	5	4	5	5	DE, FR

ROSPARON

- Outstanding yield performance based on good spring growth
- Combined with very good health → high resistance to rust and Helminthosporium (GEVES 2020)

Range: 1–5 (5 = best); breeders classification
*also available in organic quality

Cocksfoot *Dactylis glomerata*

Variety	Organic*	Maturity	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
LIDACTA	✓	early–inter	4	-	3	3	4	AR, AT, CA, CL, DE, LU, RU, UA, UK
PASADO		inter	4	-	4	3	4	BY, SK
REVOLIN	✓	inter	5	-	3	4	4	DE, RU, UA, UY
HUSAR	✓	inter–late	5	-	4	2	4	DE
DUERO		late	4	-	4	3	4	BE, CO, EC, FR, UY

Timothy *Phleum pratense*

Variety	Organic*	Maturity	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
LISCHKA	✓	early	4	4	4	-	4	AT, BY, CA, DE, KZ, LU, PL, RU, TR, UA, UK
ATURO	✓	early	4	4	3	-	4	DE, LU, UK
PRESTO	✓	inter	4	4	4	-	4	BE, BY, FR, LU, NL, UA, UK

Smooth-stalked meadow-grass/Kentucky bluegrass *Poa pratensis*

Variety	Organic*	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
LIBLUE	✓	3	5	4	4	5	BE, DE
LIMAGIE	✓	4	4	4	3	5	AT, BY, DE, DK, KZ, LU, NO, RU, UA, UK

Creeping red frescue *Festuca rubra*

Variety	Organic*	Yield	Sward density	Winter hardiness	Rust resistance	Persistence	National listing/ Official recommendation
RAFAEL	✓	4	5	4	-	5	BY, DE, RU, TR, UA

White clover *Trifolium repens*

Variety	Organic*	Yield	Winter hardiness	Crude protein content	Sward density	Leaf size	National listing/ Official recommendation
BIANCA		4	4	4	4	medium	DE, FR
LIFLEX	✓	4	3	4	5	medium	BY, CO, DE, NL, NO, RU, TR, UA, UK
VYSOCAN		5	4	4	4	medium	CH, CZ, DE, LU
MUNIDA NEW!		4	4	-	4	large	CH, LU

Red clover *Trifolium pratense*

	Variety	Organic*	Yield	Winter hardiness	Crude protein content	Resistance to Stem rot	Resistance to Anthracnose	Resistance to Mildew	Persistence	National listing/ Official recommendation
diploid	DIPLOMAT		3	4	3	3	3	4	3	AT, CH, DE, FR, LU, UK
diploid	HARMONIE	✓	4	4	5	4	4	4	4	BY, CH, DE, EE, FR, UK
diploid	MILVUS**	✓	3	4	3	3	4	4	5	AT, CH, DE, LU, UA, UK
diploid	SEMPERINA**		4	3	4	4	3	4	4	AT, CH, DE
tetraploid	LARUS**	✓	5	5	3	4	4	4	5	CH, DE, LU
tetraploid	TAIFUN	✓	5	5	5	3	4	2	4	AT, BY, CH, DE, KZ, RU, SE, UA

**Mattenklee-type

HARMONIE
- Variety with the highest crude protein contents on the recommended list in England and Wales
- A variety without weaknesses

LARUS
- Outstanding in persistence
- Convincing due to high yields and winter hardiness

Lucerne/Alfalfa *Medicago sativa*

Variety	Organic*	Dormancy group	Yield	Winter hardiness	Crude protein content	National listing/ Official recommendation
FLEETWOOD		4–5	4	3	5	DE, LU
FRAVER		4	4	4	4	BY, CH, DE, RU, UA
MADALINA		4	4	4	3	BY, RO, RU, UA
PLANET	✓	3	4	5	4	BY, DE, KZ, PL, RU, TR, UA

Crimson clover *Trifolium incarnatum*

Variety	Organic*	Yield	Winter hardiness	Crude protein content	National listing/ Official recommendation
LINKARUS	✓	5	3	3	BY, DE

Range: 1–5 (5 = best); breeders classification

*also available in organic quality

DSV COUNTRY forage mixture programme 2022: For an economical milk production

COUNTRY EXPLOITS THE SITE POTENTIAL

Site-adapted COUNTRY mixtures with top varieties increase yields and reduce the costs – with maximum flexibility of use.

Unused site potential leads to low efficiency in feed production and burdens profitability.

COUNTRY LOWERS THE BASIC RATION COSTS

COUNTRY high-quality forage mixtures produce grass stands with highest nutritional values and reduce the use of concentrates.

Low protein contents require protein imports and burden the fertilizer balance.

COUNTRY INCREASES MILK YIELD

The palatable high-quality COUNTRY stands increase the feed intake and the animal performance.

Low milk yield is often a consequence of low-quality basic ration.

COUNTRY REDUCES THE NEED FOR FERTILIZER

The clover contained in COUNTRY accumulates atmospheric nitrogen plant available and nourishes the grass stands.

The purchase of nitrogen fertilizers is expensive and burdens the fertilizer balance.

COUNTRY IMPROVES THE SWARD

The crop stand has the highest influence on milk production. The top varieties in COUNTRY ensure an optimal sward density and composition.

High levels of undesirable and inferior species reduce milk yield and the economic success.

Grassland management

Correctly timed maintenance measures, such as harrowing and reseeding, help to introduce valuable forage species in the sward and keep them here. Defecient grassland management leads to degenerated swards with undesirable species, which have a negative impact on the quality and profitability of the grassland.

COUNTRY: Your guide to achieve the best basic ration

Good grass is not the same as grass. To guarantee highest forage quality from your grassland, the crop stand has to be perfectly adapted to the site-conditions: this means, the best performing varieties of suitable species in the perfect mixing ratio. For nearly 100 years, DSV has been breeding forage crops to increase yields, forage quality, persistence and disease resistance. Based on these unique experiences, the COUNTRY mixture programme provides customised forage crop solutions for all sites and usages.

All varieties used are at the top of international recommendations. Based on this 'grassland philosophy', COUNTRY has become the biggest brand range programme for forage grass mixtures in Germany and Poland. Over several years COUNTRY has expanded into more international markets (e. g. the Netherlands, Austria, Hungary, Belarus, the Baltic States and Russia).

COUNTRY is divided into four sub programmes, within which the mixtures are adapted to different sites, uses and intensities (e.g. cutting, grazing, intercropping, new sowing, overseeding).

- COUNTRY Energy
- COUNTRY Grassland
- COUNTRY Field Forage
- COUNTRY Horse

COUNTRY formula for success

top varieties + site-adapted mixtures = high quality basic ration

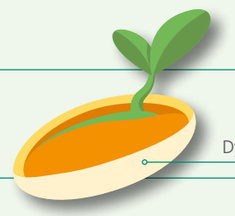
In all COUNTRY mixtures with legumes:

DynaSeed® LegumeMaxx – for a maximum yield

DynaSeed® LegumeMaxx is DSV's innovative seed treatment for alfalfa and clovers. The customised coating-mass ensures improved root growth and a faster establishment. The addition of species-specific rhizobia and molybdenum promotes nodulation and thus nitrogen fixation and yield.

N Nitrogen

- High N-fixation
- More yield
- Disburdened fertilizer balance



Milk Index – benefit due to nutritional value

DSV is leading in breeding of high quality forage species for a high milk production. Only our best varieties receive the Milk Index quality award. In the respective species segment, Milk Index varieties are especially selected for an extraordinary digestibility and a high nutrient concentration. This increases feed intake and ensures a better and more stable energy supply, resulting in higher animal performance. Especially COUNTRY Energy mixtures contain high proportions of Milk Index varieties.

DSV's top Milk Index forage grass and legume varieties:

ROSSIMONTE NEW!

Stable yield meets quality
Perennial ryegrass, late, diploid

- High digestibility of cell wall fraction
- High yielding, especially in second cut
- Combined with a good sward density

KAIMAN

Healthy genetics with high forage value
Perennial ryegrass, late, diploid

- Very good persistence, very good rust resistance
- High sugar content
- High yielding, especially further cuts

ROSSERA

Yield, persistence, forage quality
Perennial ryegrass, late, diploid

- High digestibility and energy concentration
- High persistence and sward density
- Recommended for grazing and cutting

SCHWETRA

Unique in forage quality
Meadow fescue, tetraploid

- High digestibility and sugar content, verified in official trials
- Best forage quality of all meadow fescues
- Top palatability based on good rust resistance because of little susceptibility to rust

FLEETWOOD NEW!

When it comes to crude protein
Alfalfa, dormancy 4–5

- By far highest crude protein content on the German National list
- High quality variety in alfalfa segment
- Combined with good yield and persistence characterics

EXPLOSION

A unique variety
Perennial ryegrass, intermediate, tetraploid

- High sugar contents combined with excellent digestibility
- Outstanding forage quality meets high dry-matter yields
- Based on good rust resistance and winter hardiness

EUROCONQUEST

Forage quality, yield and peat soil suitability
Perennial ryegrass, intermediate, tetraploid

- High dry matter yield over all cuts, especially of further cuts
- Good rust resistance and persistence
- Suitable for peat soils

ASTONENERGY

Leader in digestibility
Perennial ryegrass, intermediate, tetraploid

- Extraordinary forage quality (approved in trials of the German chamber of agriculture)
- High sugar content und high digestibility of the cell wall
- Recommended for a broad range of sites

TETRAX

All-rounder with high forage value
Meadow fescue, tetraploid

- Especially robust, healthy and winter hardy variety
- Digestibility above average
- Fast early growth and high persistence

To find out more about Milk Index, please have a look at www.dsv-seeds.com

COUNTRY Energy – the highest forage quality and dig estibility

COUNTRY Energy mixtures provide the best forage quality. For highest forage performance, the mixtures ensure the establishment of high performance swards on all sites, with maximum breeding process in every mixture.

	Mixture	Designation	Overseeding	New sowings	Seeding rate for new sowings in kg/ha	Description	Composition in %											Site					Use		
						With DSV's innovative seed treatment programme DynaSeed	Lolium perenne inter	Lolium perenne late	Phleum pratense	Festuca pratensis	Poa pratensis	Dactylis glomerata	Festulolium	Festuca arundinacea	Trifolium repens	Trifolium pratense	Cichorium intybus	Plantago lanceolata	dry	normal	wet	peat soil	high altitudes	grazing	grazing and cutting	cutting
	COUNTRY E 2020	Late with clover	X	X	35–40	Intensive cutting and grazing on fresh mineral sites with good nutrient supply	40	45	10						5				••	•••	•••	••	•••	•••	•••	•••
	COUNTRY E 2021	Medium to late without clover	X	X	35	Intensive cutting on mineral and peat soils	60	15	25										•	•••	•••	•••	•••	•••	•••	•••
	COUNTRY E 2022	Medium to late with clover	X	X	35–40	High yielding mixture for cutting and grazing	50	40							10				••	•••	••	•	••	•••	•••	•••
	COUNTRY E 2023	Late for high quality forage	X	X	40	Highest energy densities and flexibility of use		100												•••	•••	••	••	•••	•••	•••
	COUNTRY E 2024	Peat soils and higher altitudes	(X)	X	30–35	Top performance in yield and quality on peat soils and in low mountain ranges	70		20		10								•	••	•••	•••	•••	•••	•••	•••
	COUNTRY E 2025	Special	(X)	X	35–40	Best forage quality on difficult sites: dry, cold, peat soils and low mountain ranges	10	10	25	40	15								•••	••	••	•••	••	•	••	•••
	COUNTRY E 2026	Protein	X	X	35–40	High yielding, protein-optimized quality mixture with clover	40	35							5	20			••	•••	•••	•	•••	•	••	•••
	COUNTRY E 2027	Milk Index MI	X	X	40	High-performance mixture for maximum forage quality	40	60												•••	•••	••	••	•••	•••	•••
NEW!	**COUNTRY E 2030**	HerbMeadow MultiLife	X	X	35–40	Intensive mixture with herbs for cutting and grazing	40	42	10						5		2	1	••	•••	•••	••	•••	•••	•••	•••
NEW!	**COUNTRY E 2031**	HerbCloverGrass MultiLife	(X)	X	35–40	HerbCloverGrass for perennial field forage		22	12	15		5	10	12	5	15	2	2	•••	•••	•••	•	•••	•	••	•••

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••• highly suitable •• suitable • conditionally suitable

Species-rich grassland

Under the name MultiLife, the new COUNTRY Energy mixtures 2030 and 2031 combine at least 5 species from at least 3 plant families. Beside forage and clover species, these mixtures contain herbs like plantain and chicory. The intelligent combination of different grass, legume and herb species leads to deeper and more intensive root systems. These allow better growing conditions and more robust plant stands even under difficult conditions.

COUNTRY Grassland – site-adapted and high-perform ance grassland mixtures

COUNTRY Grassland stands for persistent mixtures with high yields and quality niveaus. Due to the combination of different species and maturity groups, the mixtures are adapted to the needs of the various permanent grassland sites.

COUNTRY Grassland organic mixtures can be found at: www.dsv-seeds.com

Mixture	Designation	Overseeding	New sowings	Seeding rate for new sowings in kg/ha	Description	Composition in %												Site					Use		
					With DSV's innovative seed treatment programme DynaSeed®	Lolium perenne early	Lolium perenne inter	Lolium perenne late	Phleum pratense	Festuca pratensis	Poa pratensis	Dactylis glomerata	Festulolium	Festuca arundinacea	Festuca rubra	Trifolium repens	Trifolium pratense	dry	normal	wet	peat soil	high altitudes	grazing	grazing and cutting	cutting
COUNTRY G 2001	Common site conditions	X	X	40	Top performing mixture for intensive grassland	20	20	60											•••	•••	•	•	•••	•••	•••
COUNTRY G 2002	Peat soils and higher altitudes	X	X	40	For difficult peat soils, mineral sites and altitudes	25	25	40	10										•••	•••	•••	•••	•••	•••	•••
COUNTRY G 2003	Dry sites	X	X	40	Suitable for dry sites	50	30						20					•••	••	•	•	••	••	•••	•••
COUNTRY G 2004	Clovergrass	X	X	40	Top performing mixture with clover for intensive grassland	25	25	45								5		•	••	•••	•	••	•••	•••	•••
COUNTRY G 2010	Universal with clover		X	35–40	Broad site suitability for cutting and grazing	15	20		15	35	10					5		••	•••	•••	•••	•••	•	••	•••
COUNTRY G 2011	Universal without clover		X	35–40	Broad site suitability for cutting and grazing	15	25		15	35	10							••	•••	•••	•••	•••	•	••	•••
COUNTRY G 2012	Hay and silage		X	35–40	Intensive cutting and grazing for medium to good sites	5		30	20	20	10	5				5	5	••	•••	•••	••	•••	•	•••	•••
COUNTRY G 2013	Hay and silage for dry sites		X	35–40	Intensive cutting and grazing for dry areas	10	10					45	20		10	5		•••	••	•	•	•••	•	••	•••
COUNTRY G 2014	High yielding on dry sites		X	40	Secures good yields on dry sites with soft-leafed and high-digestible tall fescue		25	10	10	10		5		40				•••	••	••	••	••	•	••	•••
COUNTRY G 2015	Permanent meadow for dry sites		X	25–30	Mixture for extensive meadows on dry sites with white clover	10	10	10	5	25	10				10	10	10	•••	••	••	•	•••	•	•••	•••
COUNTRY G 2016	For higher altitudes	X	X	35–40	For a late start of vegetation, persistence and winterhardiness	25	20	10	20		10	5				5	5	••	•••	•••	•	•••	••	•••	•••
COUNTRY G 2018	For higher altitudes, intensive	X	X	35–40	Mixture for high use intensities and a high basic ration	10	40	25	10		10					5		•	•••	•••	•	••	•••	•••	•••

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••• highly suitable •• suitable • conditionally suitable

COUNTRY Field Forage – forage production at the hig hest level

COUNTRY Field Forage mixtures bring highest yields and forage quality through the intelligent combination of grasses, clovers and alfalfa.

COUNTRY Field Forage organic mixtures can be found at: www.dsv-seeds.com

Mixture	Designation	Seeding rate for new sowings in kg/ha	Use in years	Description	Composition in %																Site				
				With DSV's innovative seed treatment programme DynaSeed®	Lolium multiflorum italicum	Lolium multiflorum westerwoldicum	Lolium hybridum	Lolium perenne	Phleum pratense	Dactylis glomerata	Festuca pratensis	Poa pratensis	Festuca rubra	Festuca arundinacea	Festulolium	Trifolium repens	Trifolium pratense	Trifolium hybridum	Trifolium resupinatum	Medicago sativa	dry	normal	wet	peat soil	high altitudes
COUNTRY F 2048	Robust and dry	35–40	2–4	Perennial field forage growing on very dry areas						35	25			40							•••	••	••	•	•••
COUNTRY F 2049	Without clover, intercropping	40–45	1	Fast growing grass mixture for intercropping use		100															•	•••	•••	••	••
COUNTRY F 2050	Without clover, annual	40–45	1	Mixture for annual field forage growing on medium to good areas	50	50															•	•••	•••	••	••
COUNTRY F 2051	Without clover, 1–2 years	40–45	1–2	Mixture for annual field forage growing for 1-2 years on medium to good sites	85		15														•	•••	•••	••	••
COUNTRY F 2052	Without clover, 2–4 years	35–40	2–4	Two to four years forage growing mixture for medium to good areas	10		10	30	10		20				20						••	•••	•••	••	••
COUNTRY F 2053	Intercropping Turbo	40	1	Fast growing clovergrass mixture for intercropping purpose		80													20		•	•••	•••	••	••
COUNTRY F 2054	Clovergrass, 1–2 years	35–40	1–2	One to two years clovergrass mixture for medium to good sites	55		10									10	25				•	•••	•••	••	••
COUNTRY F 2055	Clovergrass, 2–3 years	20–25	2–3	Two to three years clovergrass mixture for medium to good sites				20	20		30						30				••	•••	•••	••	••
COUNTRY F 2056	Alfalfa grass	20–25	2–3	Persistent alfalfa mixture for all sites where alfalfa is well suited					5		15									80	•••	•••	••		••
COUNTRY F 2057	Alfalfa grass robust	20–25	2–3	Robust alfalfa grass for perennial field forage										20						80	•••	•	••		••
COUNTRY F 2058	Perennial field forage dry	40	2–4	Two to four years field forage for medium to very dry areas				20		20	20			20	20						•••	••	•••	••	•••
COUNTRY F 2059	Perennial alfalfa-clovergrass dry	35–40	2–3	Perennial alfalfa-clovergrass for medium to dry sites				20	10		20			5	15		10			20	•••	••	••		••
NEW! **COUNTRY F 2060**	Alfalfa Powermix	20	2–3	Persistent alfalfa mixture for perennial use on all areas where alfalfa is well suited																100	•••	•••	••		•••
COUNTRY F 2061	Alfalfa grass, very dry	20–25	2–3	Persistent alfalfa mixture for very dry sites						10										90	•••	•••	••		•••

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••• highly suitable •• suitable • conditionally suitable

COUNTRY Horse – professional mixtures for horse owners

COUNTRY Horse mixtures are tailored to the special needs of horse pastures and to the production of high-quality hay and silage.

Mixture	Designation	Seeding rate for new sowings in kg/ha	Description	Composition in %																					
				Lolium perenne (turf)	Lolium perenne early	Lolium perenne inter	Poa pratensis	Poa pratensis (turf)	Festuca pratensis	Phleum pratense	Festuca rubra	Festuca arundinacea	Alopecurus pratensis	Carum carvi	Cicorium intybus	Sanguisorba officinalis	Foeniculum vulgare	Petroselinum crispum	Plantago lanceolata	Achillea millefolium	Pimpinella	Daucus carota	Galium mollugo
COUNTRY H 830	Racetrack	30	Mixture for highly stressed racetracks and show grounds or horse meadows under difficult conditions	25				25			50												
COUNTRY H 2116	„Brandenburger" horse meadow	40	Developed with the Brandenburg Stud Neustadt Dosse (Germany) for grazing and cutting on dry sites			24	20		28	18	10												
COUNTRY H 2117	Horse meadow for new sowings	40	Mixture for intensively used horse pastures and runs	25	25		20			20	10												
COUNTRY H 2118	Horse meadow for overseeding	20–25	Overseeding mixture to improve gaping old swards, very resilient due to use of turf types	40	20	20				20													
COUNTRY H 2120	Balance	40	Fructan-reduced mixture for horse meadows and to produce hay and silage under difficult conditions		5		15		25	30	5	15	5										
COUNTRY H 2122	Herb menue	1,5	Versatile herb mixture to improve the grassland's palatability and nutrient supply											18	18	16	15	10	10	7	3	2	1

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Horses bite more sharply and tend to be more selective in their forage. For horse pastures that are used intensively, the grass species Lolium perenne, Poa pratensis, Phleum pratense and Festuca rubra are suitable. The optimal composition of the plant stand is 75–80 % grasses and 20–25 % herbs.

Cover crops

Cover crops, grown between two main crops (i. e. cereals, sugar beets, maize, potatoes), improve quality and yield of the main crop, promote soil fertility and beneficial micro-organisms, improve soil structure, soil water regime and erosion control. Therefore, DSV offers a large range of different single components (e. g. oil radish, phacelia, buckwheat) and well balanced mixtures.

Our best cruciferous

White mustard and oil radish have always been very common in cover cropping. Breeding of nematode reducing varieties often secures or even allows the intensive cultivation of beets and vegetables in many regions. Our varieties combine just the best characteristics.

Name	Organic*	Species	Susceptibility for *H. schachtii*	Other nematode resistances	Matter production at the beginning	Tendency for flowering	Sowing time: Early sowing**	Sowing time: Medium sowing**	Sowing time: Late sowing**
RADETZKY	✓	oil radish	2	*Meloidogyne chitwoodi, M. falax, M. minor*	5	3			
RESET		oil radish	1	*Meloidogyne chitwoodi*	6	3			
TRIDENT		oil radish	2	*Meloidogyne chitwoodi, M. hapla*	7	3			
BRUTUS	✓	oil radish	2***						
PASSION		white mustard	2		6	3			
CONVEX NEW!		white mustard	2		4	2			
ConceptOne	✓	white mustard	1		6	3			
POLE POSITION		white mustard	2		7	3			
LITEMBER	✓	white mustard			7	5			

Based on BSA-results, Germany 2021 Range: 1–9 (1 = low expression degree, 9 = high expression degree)
*also available in organic quality **in warm temperate climate zones like in Central Europe ***based on Belgium trial results

Oil radish *(Raphanus sativus)*

RADETZKY
Combines four resistances

- Resistances: *Heterodera schachtii* (cat.2); *Meloidogyne chitwoodi*, *falax* and *minor*
- Far window for sowing due to good standing ability and low tendency for flowering

RESET
Best for sugar beets

- Highest possible resistance against *Heterodera schachtii*
- Low tendency to lodging and flowering

TRIDENT
Three times excellent against nematodes

- Resistances: *Heterodera schachtii* (cat. 2); *Meloidogyne chitwoodi* and *hapla*
- Nematode control in intensive crop rotations with sugar beets, potatoes and vegetables
- Fast early growth for good weed suppression combined with a low tendency to flowering

Mustard *(Sinapis alba)*

CONVEX NEW!
The waxy type

- Very thick cuticle → more lipids to feed the soil life
- Well adapted to early sowings
- Resistance to beet nematods

ConceptOne
No. 1 in controlling beet nematodes

- Unbeatable score of 1 for susceptibility to beet nematodes
- Low tendency to flowering and bolt
- Late heading enables early sowing dates

Winter forage rape *(Brassica napus)*

GORILLA
High yield and dry matter content

- The dark purple green and re-growing forage rape
- Early sown (late spring) GORILLA can be grazed or cut two times in the same year
- Above average dry matter content leads to high total dry matter yields
- Very good standing ability and tolerant to club root
- Moderate to good resistance to powdery mildew

LICAPO
Palatability and high digestibility

- High-yielding 00 forage rape → free of erucic acid and low content of glucosinolates
- Good general resistance and high leaf to stem ratio ensure a good palatability and digestibility
- Well-suited for silage production or grazing

Turnip *(Brassica rapa rapa)*

MARCO
Grazing preference

- Early maturing tetraploid variety
- Mid-summer sowing for grazing in autumn and winter
- Highly palatable due to a leaf to root ratio of 50:50
- Resistant to bolting and tolerant to clubroot and alternaria

Winter forage rye *(Secale cereale)*

BONFIRE*
The fast forage rye

- Winter cover crop to use for forage or biogas production
- With very rapid autumn and spring growth, BONFIRE provides an early sowing window for the follow-up main crop
- Lowers the risk of nitrogen leaching during winter to a minimum

Crimson clover *(Trifolium incarnatum)*

LINKARUS*
Suited for many uses

- Overwintering crimson clover with flexible usage (cover crop, forage, green manuring)
- Characterised by fast growth, intermediate flowering, mass of fibrous roots and dense foliage
- Very good bee pasture

Buckwheat *(Fagopyrum tataricum)*

LIFAGO*
Large leaves for excellent ground cover

- Especially bred for cover crop use
- Impressive high organic matter production based on fast early growth
- Freezes off reliably

Field pea *(Pisum sativum)*

LIVIOLETTA*
Top variety for green manuring

- One of the top field pea varieties for green manuring or forage use
- Shows good standing ability
- High protein contents and dry matter yields
- A low thousand grain weight reduces sowing costs

Hairy vetch *(Vicia villosa)*

Ostsaat Dr. Baumann's*
N-fixing and soil improving

- For winter cover crop cultivation with a good winter hardiness and tillering as well as lush foliage
- Ideal overwintering green manure previous to maize and root crops
- Part of the cover crop mixture TerraLife® Forage Rooter

Linseed *(Linum usitatissimum L.)*

LIRINA*
Blue flowering and deep rooting

- Medium-early heading
- Good drought tolerance
- Good competitiveness

Bristle oat *(Avena strigosa)*

GIRAFFE*
Fast growth meets broad leaves

- Good weed supression
- Suitable for later sowing dates
- Bright green color

*also available in organic quality

How TerraLife® works – focus on the soil

TerraLife® with its species-rich catch crop mixtures offers solutions for the greening of arable land for the whole year. Cover crops and companion crops provide practice-oriented cultivation concepts to ensure the yield capacity of your soils even under difficult climatic conditions.

MORE SOIL LIFE

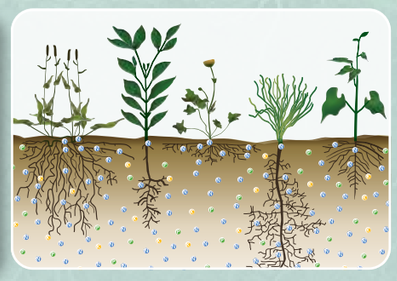
Species-rich TerraLife® greening systems result in a significant higher microbial activity in the soil.

INCREASED HUMIFICATION

Species-rich TerraLife® greening systems with their large root mass have a significantly greater influence on the humification than straw or mustard for example.

IMPROVED NUTRIENT AVAILABILITY

Species-rich TerraLife® greening systems mobilise nutrients in the soil and make them available to plants.



HIGH-QUALITY YIELDS

Species-rich TerraLife® greening systems create a green connection between two main crops and can improve the usable ingredients of the harvest.

Mixture	Crop rotation suitability: Oilseed rape	Legumes	Potatoes	Sugar beets	Cereals Maize	Sowing time: Early sowing*	Medium sowing*	Late sowing*
WarmSeason		•		•	•••			
SolaRigol	•••		•••	••	•••			
SolaRigol DT	•		••		•••			
BetaSola			•••	•••	•••			
MaizePro DT	•				•••			
AquaPro	•••	•••		•••	•••			
N-Fixx	••			••	•••			
BetaMaxx	•••			•••	•••			
BetaMaxx DT	•			••	•••			
Rigol DT	•				•••			
VitaMaxx DT		•••			•••			
ForageRooter	•••		••	••	•••			

DT = Radish Deeptill W = Winter hardy • Suitable, but respect crop rotation diseases •• Suitable ••• Ideally suitable
This is just an excerpt of most important TerraLife® mixtures; please find the full TerraLife® portfolio on our website www.dsv-seeds.com
*in warm temperate climate zones like in Central Europe

The interactive combination with the main crop: NEW!

Companion cropping

Benefits:

- Stabilisation of the soil structure
- Improvement of the nutrient dynamics
- Increase of the photosynthetic active leaf area
- Optimum nutrition of the microbiom

TerraLife®-BrassicaPro

The companion cropping mixture for oilseed rape experts

The varied plant community ensures that the soil life is fed in a more varied way, without competing with the main crop. The high proportion of legumes has a positive effect on the C/N ratio. BrassicaPro can be also used as a legume-heavy cover crop mixture in oilseed rape crop rotations, for example.

Composition	serradella, linseed, blue lupin, egyptian clover, persian clover, niger
Sowing rate	15 – 20 kg/ha

TerraLife® organic mixtures can be found at: www.dsv-seeds.com

TerraLife®-WarmSeason

It's time for growth

WarmSeason is ideal for early sowings in warm temperate climate zones like in Central Europe. E. g. after an early harvest of cereals or whole crop silage. The especially matched components tolerate very warm conditions well and have a long vegetative period, which reduces the risk of volunteer seeds. The early sowing additionally triggers a strong root establishment and a maximum of photo-synthesis activity. This positively effects the excretion of exsudates.

Composition	niger, egyptian clover, linseed, abyssinian cabbage, sorghum, common vetch, safflower
Sowing rate	25–30 kg/ha

TerraLife®-SolaRigol

Available as DT mixture

The cover crop mix for potato crop rotations

SolaRigol is a balanced mix specially adjusted for potato cultivation, which shades the ground well, ensures intensive root penetration and increases biodiversity. The soil structure is perfectly prepared for ridge culture and erosion within the ridges can be reduced. Additionally, blue lupines reduce infestations of tobacco rattle virus in potato better than any other species.

Composition	niger, egyptian clover, linseed, bristle oat, bitter lupin, common vetch, serradella, persian clover, field pea
Sowing rate	55–60 kg/ha; SolaRigol DT: 30–35 kg/ha

TerraLife®-BetaSola

The nematode-reducing mix for sugar beets and potato cultivation

The species richness of BetaSola ensures good soil structure and thereby differs considerably from the cultivation of a single nematode-resistant monocrop. The combination of species has a wide spectrum of activity. In this way, the various nematode-resistant oil radish varieties help to reduce beet nematodes *(Heterodera schachtii)* and Trichodorus. Furthermore, multi-resistant oil radish is resistant to root-knot nematodes. The mix partner bristle oat also reduces soil nematodes *(Pratylenchus)*.

Composition	oil radish cat. 1 and 2, bristle oat, egyptian clover, niger, common vetch
Sowing rate	35–40 kg/ha

TerraLife®-MaizePro DT

Balanced, partly hardy cover crop for maize crop rotations

MaizePro DT selectively supports the formation of mycorrhiza and improves the soil structure. The intensive root penetration creates new root channels, which help the maize particularly during periods of drought. The hardy components guarantee erosion protection right into spring. After a successful cover crop, the soil only requires working to a depth of the soil horizon receiving the maize seed. In this way, the capillarity is maintained, ensuring water availability for germination.

Composition	linseed, phacelia, niger, rye, abyssinian cabbage, deep-rooted radish, persian clover, common vetch, sorghum, crimson clover, winter vetch, field pea, safflower, sunflower, white clover
Sowing rate	40–45 kg/ha

TerraLife®-AquaPro

For water protection areas and oilseed rape rotations

The legume- and crucifer-free mix AquaPro was developed specifically for water protection areas. It protects mineralised nitrogen from leaching. Species like niger or phacelia produce lots of biomass, shade the soil well and thus have a very good weed suppression. Additionally, AquaPro offers very good erosion protection and improves the soil biology.

Composition	phacelia, niger, linseed, bristle oat, sorghum, sunflower, safflower
Sowing rate	25–30 kg/ha

TerraLife®-N-Fixx

Rapid soil coverage and nitrogen fixation

N-Fixx is a perfectly balanced all-round mix. It contains more than 80 % legumes and is therefore an ideal mixture to raise the soil nitrogen content. It is excellent for winter grain crop rotations and freezes off reliably. Furthermore, it leaves very good soil tilth, creates humus and contributes to the health and vitalisation of heavily used soils. The subsequently released nitrogen must be considered during N-fertilisation of the follow-on crop.

Composition	egyptian clover, serradella, phacelia, linseed, persian clover, common vetch, field pea, niger, sunflower, sorghum, safflower
Sowing rate	40–45 kg/ha

TerraLife®-BetaMaxx

Available as DT mixture

The cover crop mix for sugar beet cultivation

BetaMaxx creates the ideal preconditions for successful sugar beet cultivation. The mix includes deep-rooting species, that create deep channels allowing an easy root penetration for the following beets. This helps the beets to overcome dry periods. BetaMaxx allows beet cultivation per reduced tillage or no-till management. BetaMaxx is unsuitable for the biological control of *Heterodera schachtii*.

Composition	egyptian clover, niger, phacelia, linseed, bristle oat, serradella, common vetch, bitter lupin, field pea
Sowing rate	40–45 kg/ha; BetaMaxx DT: 30–35 kg/ha

TerraLife®-Rigol DT

Strong root formation stabilises the soil structure

The cover crop mix Rigol DT is extremely effective in penetrating compacted soils. Numerous root channels are formed, which can be used by the follow-on crop to rapidly reach rooting depth. At the same time, Rigol DT ensures good soil shade and above-ground biomass production.

Composition	linseed, phacelia, false flax, niger, abyssinian cabbage, bristle oat, egyptian clover, buckwheat, deep-rooted radish, common vetch, sunflower
Sowing rate	20–22 kg/ha

TerraLife®-VitaMaxx DT

Fast growing mix for intensive livestock farms

VitaMaxx DT is a fast-growing, legume-free cover crop mix and is therefore very suitable for use in water protection areas. The mix produces plenty of biomass, which serves as a long-term food source for earthworms and other soil inhabitants and preserves the nutrients over winter. Due to fast growing species the mixture is suitable for late sowing dates. Apart from common planting, this mixture can also be broadcasted.

Composition	phacelia, false flax, bristle oat, buckwheat, white mustard, linseed, niger, deep-rooted radish, abyssinian cabbage
Sowing rate	20–25 kg/ha

TerraLife®-ForageRooter

A high-yielding classic

ForageRooter (Landsberger Mix) provides large quantities of fresh and dry matter with excellent feed value and good root structure. It has an aboveaverage capacity for humus reproduction and leaves the soil in excellent condition. The biomass can be razed, used as fresh feed, ensiled or left as a mulching cover crop.

Composition	italian ryegrass, crimson clover, winter vetch
Sowing rate	50 kg/ha

Composition can differ, depending on the legal framework within different countries or availabilities of single components. DT = Radish Deeptill

The drought-tolerant alternative:

Sorghum

The drought of the last years has left many farmers wondering about future alternatives in arable farming and for the production of feed. Here, sorghum is increasingly coming into focus, because the species shows a high stress tolerance towards abiotic factors. It gets along well with smaller amounts of water, has low demands on the soil and can use nitrogen highly efficiently. In terms of area under cereals, sorghum ist the 5th largest crop in the world. In addition sorghum is very versatile. It can be used in human and animal nutrition and for biomass production.

VILOMENE NEW!

Maturity:	Use:	Grain colour:
early	DUAL-silage/grain	brown

DUAL sorghum hybrid

- Very early maturing
- Medium tall plant
- Good forage quality

VIRNA

Maturity:	Use:	Grain colour:
medium-late	silage	brown

Very vigorous mass hybrids, also for mixed cultivation with maize

- Very high yield
- Tall plant
- For mixed cultivation

JUSTUS

Maturity:	Use:	Grain colour:
medium	grain	white

Stable sorghum for grain use

- Very high yield
- Good yield stability
- Good plant stability

Maize

For the coming maize season, DSV offers you a portfolio of new high-performing maize varieties that provides solutions for all possible uses. NEW!

FORTARIS FAO 180/180

FORTARIS is an early silage hybrid with a significant dent expression. Because of this the variety has rapid water release from the grain for early harvest dates. Despite this earliness, high yields can be achieved with good quality parameters. FORTARIS is suitable for all locations and soils, it realizes very good results, also in the Baltic states.

PERLANT FAO 210/210

This is a typical, short grain maize, which is characterised by a high dent expression in grain structure. It has an early flowering date and a good stability. The variety achieves high grain yields with high dry matter contents, which underlines the economic viability of this variety.

KIMMICH FAO 240/240

Produce milk successfully with KIMMICH: The starch content and the good digestibility of this variety should be emphasised. A special feature are the uniform, always fully grained cobs. Due to these quality characteristics, the variety receives the MILK INDEX award. The high total dry matter and biogas yields complete the profile of KIMMICH.

AKANTO FAO 260/260

This medium-late dent maize shows very high grain yields with a good ripening behaviour. The good stability is combined with high disease resistance. Due to its above-average grain yields, the variety is also interesting as a quality silage maize.

PROPULSE FAO 270/350 east

PROPULSE is a typical medium-late grain maize, which is characterised by high yields due to its excellent cob filling. The variety profile is rounded off by good agronomic properties: good stability until harvest, high health status and early flowering.

SYNOPSIS FAO 300/350

Complementing PROPULSE, SYNOPSIS is a late high-yielding grain maize. It is a dent-hybrid which, apart from its good agronomy, is characterised by yield stability on a wide range of sites, making it suitable for many farmers.

GALAKTION FAO 320/370

GALAKTION is a late dual-purpose variety. It is a medium-length hybrid with high yield potential, both in grain and silage maize. In grain use, the variety has a fast dry-down behaviour.

Maize varieties

Variety	Maturity forage/ grain	Use	Organic*	Hybrid	Type of grain	Seeding date	Seeding rate		Location	Dry matter yield	Energy yield	Starch yield	Starch-%	Digestibility	Grain yield	Threshing ability	Resistance to				Growth habit/Structure of yield
							Silage	Grain									Lodging	Maize smut	Fusarium	Helmintho-sporium	
AMBIENT	120/130	silage, energy	✓	three-way-cross	flint	early-very late	10–12	–	fresh-medium	3	3	3	4	4	–	–	5	3	2	3	compact plant with good standability
JOY	150/160	silage, energy	✓	double-hybrid	flint	early-very late	10–12	–	fresh-medium	3	3	4	4	4	–	–	5	3	2	3	mid-compact plant with low cob setting
NEW! **FORTARIS**	180	silage		double-hybrid	dent/flint	early-late	8–10	–	fresh-medium	3	3	3	4	4	–	–	4	3	3	3	early silage hybrid with a significant dent expression, good cob expression
LIKEit	180/180	silage, energy	✓	single-cross	flint	early-late	8–10	–	fresh-medium	5	4	5	5	4	–	–	4	3	4	3	tall plant with best cob expression and good cold resistance
LIROYAL	190/190	silage		single-cross	flint	early-late	8–10	–	fresh-medium	4	3	4	4	3	–	–	4	3	3	3	tall plant with best cob expression
NEW! **PERLANT**	210	grain		single-cross	dent	medium	–	8–9	warm-medium	–	–	–	–	–	4	4	4	3	4	4	early maize for high grainyields with high dry matter contents
DAVOS	210/220	grain, silage		single-cross	flint/dent	early-late	9–10	8–9	all	4	4	5	5	3	4	4	4	4	3	4	medium tall plant with a visible dent input
MOVANNA	220/220	silage, energy	✓	single-cross	flint	early-late	8–11	–	fresh-medium	4	4	5	5	3	–	–	5	4	4	4	tall, robust plant with broad, steep leaves and very good health
PETROSCHKA	230/230	silage, energy		single-cross	flint/dent	early-medium	8–9	–	all	4	3	4	4	3	–	–	4	4	4	3	mid-tall plant with very strong leaves
KORYNT	230/250	silage, energy, grain		single-cross	flint	early-medium	8–9	7–8	all	5	5	5	4	4	5	4	4	4	3	4	medium tall plant with strong ears
NEW! **KIMMICH** MI	240	silage		single-cross	flint/dent	medium	8–9	–	all	4	4	5	5	5			4	3	3	4	Milk Index variety with high starch content and good digestibility
GLUTEXO MI	250/250	silage, grain	✓	single-cross	flint	early-medium	8–10	7–9	all	5	4	5	5	5	5	4	4	3	3	3	high yields due to environmentally stable cobs
NEW! **AKANTO**	260	grain, silage		single-cross	dent	early	8–9	7–9	all	4	4	4	4	3	5	4	4	3	4	4	mid-early grain type with very high grain yields and high disease resistance
BADIANE	270/360 east	grain		single-cross	dent	early	–	7–9	mediumdrought	–	–	–	–	–	4	4	4	4	4	4	grain maize for dry locations
NEW! **PROPULSE**	270/350 east	grain		single-cross	dent	early	–	7–9	all	–	–	–	–	–	4	4	3	4	4	4	high yields due to good cob filling
ERASMUS MI	280/270	silage, energy		single-cross	flint	early	7–9	–	all	5	5	4	4	5	3	–	4	4	4	3	tall hybrid, strong leaves, high digestibility
PIATOV	290/350 east	grain		single-cross	dent	early	–	7–8	fresh-medium	–	–	–	–	–	5	4	4	4	4	4	dent genetics for yield stability
ECLATANT	280/340 east	grain		single-cross	dent	early	–	7–8	all	–	–	–	–	–	5	5	4	3	3	3	high grain yields through healthy plants and cobs
NEW! **SYNOPSIS**	300/350	grain		single-cross	dent	early	–	7–8	all	–	–	–	–	–	5	4	4	4	4	4	dent-hybrid characterised by very good agronomy
NEW! **GALAKTION**	320/370	grain, silage		three-way-cross	dent	early	8–9	7–8	all	5	3	3	4	4	4	4	4	3	4	3	new dual-purpose variety for all locations

Range: 1–5 (5 = best); breeders classification; *also available in organic quality

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