

DSV Forage Guide

Quality varieties for forage



Innovation for
your growth

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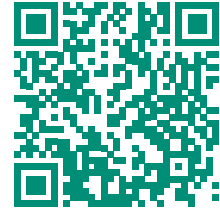
As a breeding and seed company with over 100 years of experience, we offer our customers innovative varieties through a range of cultivation methods. Deutsche Saatveredelung AG (DSV) is an international full-service provider for the entire agricultural crop rotation as well as amenity grasses.

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Video insights
into in
DSV forage
breeding



Focus on quality and progress

DSV, established over 100 years ago, has always prioritized the provision of high-quality forage seed. Recognising the pivotal role of seed in producing superior forage, DSV has dedicated itself to extensive breeding programs across Europe's most important forage grass species and small-seeded legumes. Operating from five breeding stations and additional testing sites, DSV's forage breeders develop varieties tailored to meet the diverse needs of farmers worldwide.

Beyond traditional breeding goals such as biomass yield, disease resistance, and persistence, DSV has maintained a decades-long commitment to improving forage quality. Existing varieties undergo rigorous testing, and new breeding materials are carefully selected to ensure optimal nutritional value.

Milk Index – The brand for high forage quality

DSV are leaders in the breeding of high quality forage species for 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.



Scan to find out
more about
Milk Index



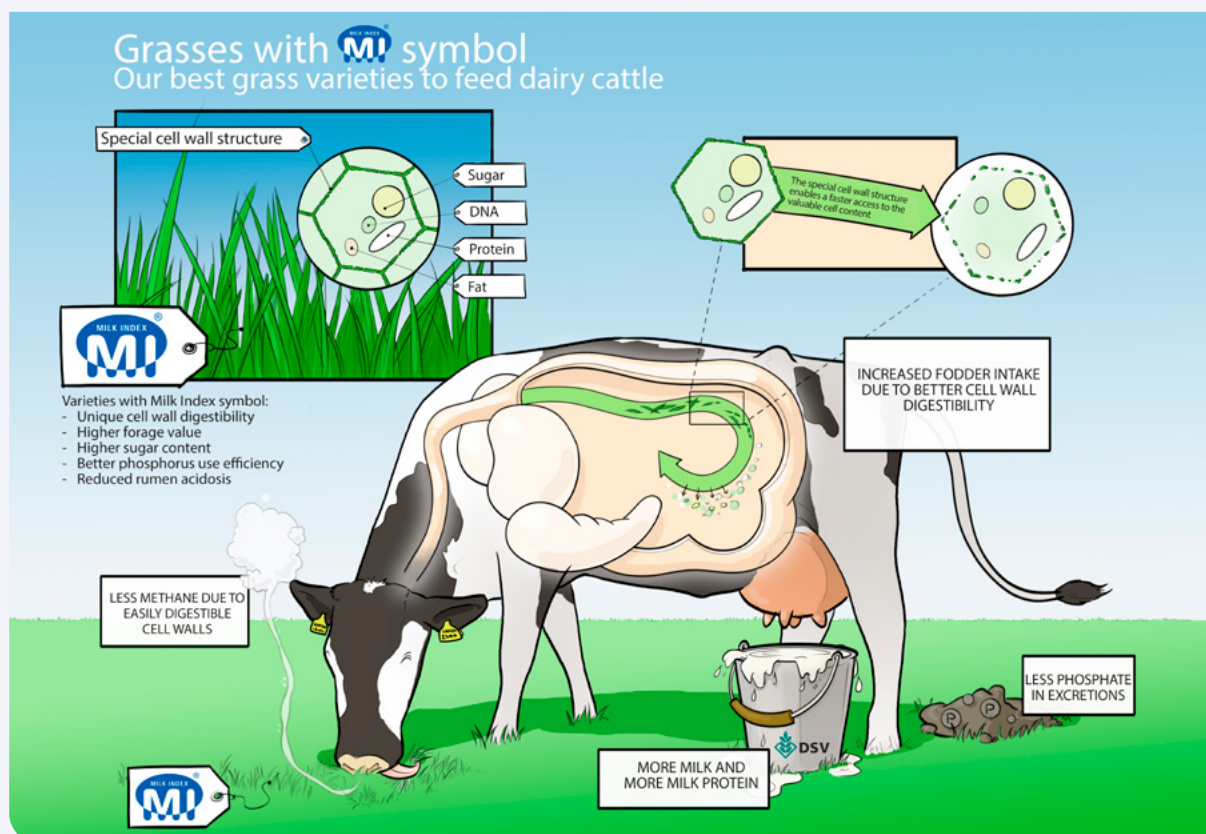
Forage grasses:

At the optimum cutting date, Milk Index grass varieties contain less of the indigestible cell wall component lignin than conventional varieties of each species. This improves the digestibility of the remaining cell wall consisting of cellulose and hemicellulose and the nutrients of the cell content are more quickly available to the ruminant.



Legumes:

Clover is particularly good at meeting protein needs in a ruminant diet from a homegrown source. Our Milk Index varieties are characterized by particularly high crude protein contents and thus maximize the protein value and content in the fodder.



Forage crops species overview



Lolium perenne 8*

Perennial ryegrass

Perennial ryegrass is a very valuable forage grass. The grass is well suited for perennial field forage, meadows, pastures, undersowing and one of the few species most suitable for reseeding.

Identification: red stem base, emerging leaf folded, small auricles, shiny leaf underside, spike without awns.



Lolium multiflorum 7*

Italian ryegrass

Italian ryegrass is an important grass in field forage. It can be used for one season or up to a few years, but should not be established in permanent grassland due to its different growth rhythm and low persistence. The non-winterhardy form is the Annual ryegrass.

Identification: red stem base, emerging leaf rolled, big auricles, shiny leaf underside, spike with awns.

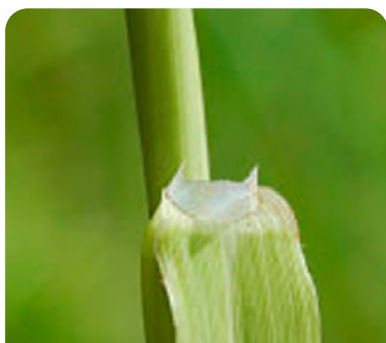


Lolium hybridum 7-8*

Hybrid ryegrass

Hybrid ryegrass is a cross between Perennial and Italian ryegrass. It is suited for field forage with annual to perennial usage, but is not favourable in permanent grassland.

Identification: cross between Perennial and Italian ryegrass: characteristics pronounced in one or other direction.



Phleum pratense 8*

Timothy

Timothy is a very winterhardy, persistent and high-quality forage grass, which is suitable for all perennial uses in grassland and field forage. It is particularly suitable for horse pastures.

Identification: emerging leaf rolled, auricles absent, bulbous base of the stem, ligule with pointed teeth on either side.



Trifolium pratense 7*

Red clover

Red clover is very high-yielding and suitable for intensive field forage and extensive grassland. The species is less tolerant to grazing. The long taproot allows it to survive dry periods well.

Identification: red flower, velvet hairy leaves, upright growth, no stolon.



Dactylis glomerata 7*

Cocksfoot

Cocksfoot is usually early heading and well suited for hay and silage mixtures with an early cut. It is insensitive to drought and also withstands harsh winters.

Identification: stem shoots extremely flat, auricles absent, long and white ligule, leaves not shiny.

*Forage value according to KLAPP (-1 to 8): -1 = toxic; 0 = useless; 8 = highest forage value.

Perennial ryegrass

Lolium perenne

AstonConqueror

INT - DIP - PS

ASTONCONQUEROR is a high yielding, dense sward variety which produces good yields particularly early in the season. ASTONCONQUEROR is highly digestible even at successive cuts of silage. It is better suited to northern locations and remains a good variety on the Scottish RL.

ME Yield	98
Total Yield Year 1	99
Total Yield Year 3	103
Ground cover% (3rd Harvest)	67
Grazing Growth – Spring	107
Crown Rust	3.0
Drechslera	5.3
Mildew	5.3

Heading date: 23rd May

Listed: E&W RL - 2023 & SRUC 2024

Goldwell

INT - DIP - PG



GOLDWELL is an exceptional new variety from DSV. It is a highest yielding variety in pure biomass and ME, at 99%. It has the outstanding grazing yields in late summer and autumn. GOLDWELL yields well in silage managements after the first harvest year, seen by the total yield year 3 result at 1.6% points above the intermediate diploid mean. GOLDWELL shows little weakness in ground cover and demonstrates strong disease resistance.

ME Yield	99
Total Yield Year 1	94
Total Yield Year 3	96
Ground cover% (3rd Harvest)	63
Grazing Growth - Spring	99
Crown Rust	7.0
Drechslera	4.0
Mildew	7.0

Heading date: 2nd June

Listed: E&W RL - 2024

AstonKing

LATE - DIP - PS

ASTONKING demonstrates good spring growth and strong disease resistance, particularly in Crown Rust (7.0) and Mildew (7.0). ASTONKING would be a valuable addition to any mixture for farmers looking for good spring yields of healthy green grass and a persistent silage variety.

ME Yield	99
Total Yield Year 1	94
Total Yield Year 3	96
Ground cover% (3rd Harvest)	63
Grazing Growth - Spring	99
Crown Rust	7.0
Drechslera	4.0
Mildew	7.0

Heading date: 2nd June

Listed: E&W RL - 2024

Gleneagle

LATE - DIP - PG

GLENEAGLE has good performance across grazing and conservation systems and also offers very good autumn ground cover. GLENEAGLE also shows very good Drechslera disease resistance.

ME Yield	98
Total Yield Year 1	95
Total Yield Year 3	97
Ground cover% (3rd Harvest)	67
Grazing Growth - Spring	86
Crown Rust	4.5
Drechslera	5.4
Mildew	6.4

Heading date: 4th June

Listed: E&W RL - 2024

Gusto

INT - DIP

GUSTO fits perfectly to British and Irish climate and demonstrates very good autumn growth, dry matter digestibility and persistence. GUSTO also features on the DAFM recommended list.

Perennial ryegrass

Perennial ryegrass is a very valuable forage grass. The grass is well suited for perennial field forage, meadows, pastures, undersowing and one of the few species most suitable for reseedling.

Identification: red stem base, emerging leaf folded, small auricles, shiny leaf underside, spike without awns.



Perennial ryegrass

Lolium perenne

AstonEnergy

INT - TET - S



Established since 2006, ASTONENERGY is a tried and trusted variety. It boasts high digestibility and it has been tested with real dairy trials proving high palatability and producing high milk yields. ASTONENERGY is the ultimate herd pleaser and easy care variety. Its vertical growth habit allows higher intake combined with its low absence of heading in the regrowth, making it more palatable than other varieties creating a complete clean out.

ME Yield	96
Total Yield Year 1	101
Total Yield Year 3	93
Ground cover% (3rd Harvest)	58
Grazing Growth – Spring	99
Crown Rust	6.7
Drechslera	6.8
Mildew	5.8

Heading date: 31st May
Listed: E&W RL - 2024



AstonVision

INT - TET - PS

ASTONVISION is suited to spring block calving systems due to its high spring yield which is among the best on the recommended list. ASTONVISION excels in crown rust resistance which in turn prevents high spoilage in silage thus helping to reduce losses in the clamp.

ME Yield	99
Total Yield Year 1	101
Total Yield Year 3	96
Ground cover% (3rd Harvest)	63
Grazing Growth – Spring	105
Crown Rust	7.0
Drechslera	4.3
Mildew	5.6

Heading date: 25th May
Listed: E&W RL - 2024

Chatsworth

INT - TET - PG

Listed on the recommended list CHATSWORTH demonstrates high ME yield and D-value under grazing management. CHATSWORTH produces very good ground cover through to the 3rd harvest year. CHATSWORTH has one of the highest rating for Drechslera disease resistance.

ME Yield	99
Total Yield Year 1	103
Total Yield Year 3	100
Ground cover% (3rd Harvest)	64
Grazing Growth – Spring	103
Crown Rust	3.7
Drechslera	6.9
Mildew	6.8

Heading date: 27th May
Listed: E&W RL - 2024

Explosion

INT - TET



High sugar contents combined with an excellent digestibility make EXPLOSION a perfect Milk Index variety. The high quality is ensured due to a very good resistance to rust. Additionally, EXPLOSION convinces with consistently high yield levels.



Italian ryegrass

Lolium multiflorum

Pinaco

DIP - PG

PINACO is a new diploid Italian ryegrass from the DSV breeding programme. A great all rounder, very high quality silage with strong ground cover in both years.

ME Yield	100
Total Yield Year 1	100
Total Yield Year 2	101
Ground cover% (1st Harvest)	63
Ground cover% (2nd Harvest)	55
Crown Rust	6.5
Brown Rust	[4.9]
Mildew	6.9

Heading date: 23rd May

Listed: E&W RL - 2024

Sendero

DIP - PG



In addition to above-average yields, SENDERO is characterized particularly with winter hardiness and high early growth development. SENDERO gives growers the opportunity for 'early-bite' grazing followed by leafy hay or silage cut. SENDERO'S Dvalue (2nd cut), is where it truly excels. With a score of 64.7, this makes it second best variety for this value.

ME Yield	101
Total Yield Year 1	101
Total Yield Year 2	103
Ground cover% (1st Harvest)	62
Ground cover% (2nd Harvest)	55
Crown Rust	6.9
Brown Rust	5.0
Mildew	7.1

Heading date: 23rd May

Listed: E&W RL - 2024

Shakira

DIP - G

SHAKIRA produces large volumes of forage in the first and second harvest year. SHAKIRA is a tried and tested variety that continues to stand the test of time.

ME Yield	100
Total Yield Year 1	100
Total Yield Year 2	101
Ground cover% (1st Harvest)	60
Ground cover% (2nd Harvest)	45
Crown Rust	7.4
Brown Rust	6.7
Mildew	6.8

Heading date: 23rd May

Listed: E&W RL - 2024

Arman

TET - PS

An excellent early bite provided by its spring growth, ARMAN produces high ground cover going into the first winter after harvest of 61%. ARMAN demonstrates good resistance to crown rust. However, ARMAN is more suited to a one year ley.

ME Yield	101
Total Yield Year 1	101
Total Yield Year 2	96
Ground cover% (1st Harvest)	61
Ground cover% (2nd Harvest)	45
Crown Rust	7.4
Brown Rust	6.7
Mildew	6.8

Heading date: 21st May

Listed: E&W RL - 2024

Hybrid ryegrass

Lolium hybridum

AstonCrusader

INT - TET - G

ASTONCRUSADER is a UK bred hybrid ryegrass with intermediate features between perennial and Italian ryegrass. ASTONCRUSADER demonstrates fast establishment making it suitable for overseeding and has a particularly high early spring growth. ASTONCRUSADER was selected for a reduction in secondary heading and produces desirable leafy regrowth in comparison to other hybrids, particularly of the Italian type. ASTONCRUSADER shows very good agronomic characters of ground cover and winter hardiness around and shows little weaknesses to disease.

ME Yield	100
Total Yield Year 1	101
Total Yield Year 2	101
Total Yield Year 3	101
Ground cover% (3rd Harvest)	58
Crown Rust	6.4
Brown Rust	7.3
Mildew	7.0

Heading date: 21st May

Listed: E&W RL - 2024

Perkins

INT - TET - PG

PERKINS quality is reflected in it's outstanding ground cover, winter hardiness and disease resistance scores. PERKINS produces high yields in 2nd and 3rd harvest year. PERKINS is a perennial type hybrid which makes it suitable for mid-term leys.

ME Yield	94
Total Yield Year 1	96
Total Yield Year 2	103
Ground cover% (1st Harvest)	100
Ground cover% (2nd Harvest)	62
Crown Rust	6.0
Brown Rust	7.0
Mildew	7.5

Heading date: 22nd May

Listed: E&W RL - 2024

Timothy

Phleum Pratense

Presto



Presto is an early maturing timothy variety which is especially suited to wetter soils and once established is very persistent. When grazed it will provide a good “early bite” with high springtime yields but will also fill the clamp when ensiled, having the highest first cut silage yield of timothy grass on the England & Wales recommended list.

Aturo

ATURO is a strong yielding timothy variety. ATURO combines yield strength with a good sward density and persistence. ATURO has also shown strong standing power against lodging in trials.

Lischka

LISCHKA shows a good yield distribution throughout the growing season. It has high, stable total yields as well as a good sward density.

Cocksfoot

Dactylis glomerata

Lidacta

Early -Int

LIDACTA is a high-yielding variety with a very good rust resistance and outstanding ground cover. Due to the fast regrowth, LIDACTA is perfectly suited for extensive permanent pasture. A fine-leaved variety with great sward density and excellent regrowth properties, LIDACTA produces perfectly balanced yields for growers.

Total Yield Year 1	100
Ground cover %	72
Grazing growth - Spring	94
Yellow Rust	6
Mastigosporium	5
Mildew	7

Heading date: –
Listed: E&W RL - 2024



Cocksfoot

Cocksfoot is usually early heading and well suited for hay and silage mixtures. Due to its low elasticity of use, suitability for pasture is limited. It is insensitive to drought and also withstands harsh winters. For new sowings and overseeding the proportion in a seed mixture should not be too high. Recognition: stem shoots extremely flat, auricles absent, long and white ligule, leaves not shiny.

White clover

Trifolium repens

Liflex

LIFLEX demonstrates very good sward density and overall good plant health. LIFLEX has a medium leaf size with a low content of hydrocyanic acid. Its dry matter yield especially in the first cut is worth mentioning and thus LIFLEX is very suitable for grazing.



Red clover

Tifolium pratense

Harmonie

DIP - G

HARMONIE leads the pack among the diploid red clovers for two of the three primary characters, the protein content and the ground cover. This combined with a ground cover which is 5 points above the nearest variety, demonstrate the value of HARMONIE for long term protein production.

Total Yield Year 1	97
Total Yield Year 2	98
Total Yield Year 3	98
Protein content % (Year 2)	19.3
Protein content % (Year 3)	20
Ground cover % (3rd Harvest)	55

Heading date: –

Listed: E&W RL - 2024

Atlantis

TET - G

Atlantis is a proven performer in the UK and across Europe, with better than G mean dry matter yield in every harvest year. Both in the UK and in France it has been found to have a higher than average protein content at the first cut, which is also high yielding.

There are no known disease weaknesses and low levels of lodging have been observed.

Key varietal features:

- Higher than G average yield in each harvest year
- Early growing, high first cut yield
- Good protein content
- Proven performer across locations
- No disease weaknesses
- Observed low levels of lodging

Total Yield Year 1	102
Total Yield Year 2	101
Total Yield Year 3	100
Protein content % (Year 2)	19.7
Protein content % (Year 3)	19.7
Ground cover % (3rd Harvest)	47

Heading date: –

Listed: E&W RL - 2024

Diplomat

DIP

DIPLOMAT is a well known and long established variety that provides consistent protein yield. DIPLOMAT is a diploid red clover variety with balanced agronomic characteristics. It shows a balanced dry matter yield distribution across all cuts and low susceptibility to mildew.



Red clover

Red clover is very high-yielding and suitable for intensive field forage and extensive grassland. The species is less tolerant to grazing. The long taproot allows it to survive dry periods well.

Identification: red flower, velvet hairy leaves, upright growth, no stolon.

Westerwolds

Lolium westerwoldicum

Lifloria

DIP

LIFLORIA's fast growth allows an early use and high yields especially in the first cut. Acting as an erosion barrier while the permanent sward develops, LIFLORIA also helps preventing erosion on irrigation ditches.

Alberto

TET

ALBERTO's high yield in the first cut is secured by a low susceptibility to rust. Thus, ALBERTO is excellently suited for intercropping. outstanding in dry matter yield first cut.

Pollanum

TET

POLLANUM is a proven Annual ryegrass with a high dry matter yield in the first cut. The variety can be used as a main crop and as an intercrop; it produces high yields under both systems. Other characteristics of POLLANUM are a fast development and a high vigour.



Festuca x Lolium hybrids

Festulolium

Fedoro

LATE - TET

A crossing of meadow fescue and italian ryegrass, FEDORO is a very healthy and late variety. Due to the late ear emergence, a high forage quality can be guaranteed even for later cuts. Good yield performance is another important argument for this variety.

Meadow Fescue

Festuca pratensis

Liherold

EARLY - DIP

A very impressive, persistent and healthy Meadow fescue variety. LIHEROLD's advantages are the dry matter production at the beginning of plant development and in the yield in the first cut. LIHEROLD also achieved best marks in the important characteristics yield at regrowth, persistence, winter hardiness, tolerance to rust and total dry matter yield.

Schwetra

INT/LATE - TET



SCHWETRA was the first Tetraploid meadow fescue to enter the German grass market. SCHWETRA significantly improves forage quality including high sugar content and digestibility, good yields and is winter hardy and persistent. SCHWETRA makes excellent mixing partner for Legumes.





Forage rape

Brassica napus

Gorilla

GORILLA is a dark purple green, re-growing forage rape with very high clubroot resistance. The stature of GORILLA is slightly shorter than many current varieties and has shown little sign of lodging in trials. The dry matter content of GORILLA is higher than average which leads to high total dry matter yields. GORILLA shows a moderately good resistance to powdery mildew and strong resistance to clubroot. With its good regrowth potential, it can be used for both, silage mixtures and grazing.

Licapo

LICAPO is a high-yield double-zero forage rape, which means it is free of erucic acid and low content of glucosinolates. This variety is suitable both for grazing and for silage-mixtures; the leaf health and high leaf ratio of LICAPO ensures good forage uptake and low pasture residue. It has a good general resistance and high leaf to stem ratio ensure a good palatability and digestibility.

How to rejuvenate your grassland

An intact plant stand is crucial for a high-yielding, high-quality forage crop. Sward damage that occurs in the course of a grassland season results in gaps in the stand. In these gaps, undesirable and unproductive grasses easily establish themselves. To avoid their establishment and to ensure economic forage production, it is necessary to close the gaps quickly with high-quality seed.



Based on sufficient soil moisture, overseeding can be carried out throughout the season. It offers more yield security compared to new sowing by preserving the old sward. The gap detector according to the Aulendorf principle serves as a simple tool to determine the gap percentage in the stand and an appropriate overseeding rate. As a rule of thumb, you can examine an area of about 40 x 40 cm in the stand and see how large the gap percentage is. One hand corresponds to a gap percentage of approximately 15%. To determine the minimum overseeding rate, divide the gap percentage by 2.



Important aspects for successful overseeding

1. Weakening the old sward with selective weed control, harrowing or cutting
2. Overseeding before end of September with sufficient soil moisture for good plant development
3. Rolling to ensure soil contact and stimulate germination
4. Adapted fertilization in order not to strengthen the old sward

New sowing is necessary when the proportion of undesirable species is 40-50% or when the proportion of gaps is very high. This measure is best carried out in autumn, as this does not affect the annual yield and increases the next years' yield performance due to the vernalization stimulus for the perennial grasses. Compared to the old sward, new sowing increases the digestibility and the energy concentration of the plant stand:

	Crude fibre content % in DM	Digestibility %	Energy content MJ NEL/kg DM
New sowing	23,2	85,5	6,74
Old sward	23,9	76,2	5,75
Difference	- 0,7	+9,3	+ 0,99

Source: Digestibility trials LLG Iden and CAU Kiel, 2002

Important aspects for successful new sowing

1. Destroying the old sward with harrow or plough
2. Identification and control of the causes of sward damage
 - Establish a balanced nutrient supply
3. Choice of mixture according to direction and intensity of use and site conditions
4. New sowing with appropriate technique
 - Ensure soil contact, to reach the underground moisture
 - Shallow seed placement of 1-2 cm
5. Post-treatment by a cupping cut at 10-15 cm growth height
 - Weed control
 - Fast sward closure by stimulating tillering
6. Adapted fertilization
 - Start application (30kg/ha N) and at the 1st cut (50-60 kg/ha N)
 - No application of manure directly to the new sowing (risk of smothering seedlings)

Expert advice on site



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If individual species and varieties are not available, they will be replaced equivalent. Seed percentages are subject to natural variation and the data given are for guidance.

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