
COUNTRY®
DSV COUNTRY
Quality seed mixtures for forage production
DSV
Innovation for your growth
www.dsv-seeds.com

DSV

Deutsche Saatveredelung AG (DSV) is one of the leading plant breeding and seed companies in Germany. It specialises in the breeding, production and distribution of forage and turf grasses, oilseed crops, clovers, various catch crops, cereals, maize and sorghum.

RESEARCH • BREEDING • PRODUCTION • CONSULTING • DISTRIBUTION
IQ INTEGRATED QUALITY

*NZP-site: DNF breeding cooperation since 2015

COUNTRY®

COUNTRY – DSV's forage mixture programme directly from the breeder

DSV was founded 100 years ago to ensure the availability of forage seed. Even then it was clear, that high-quality forage could only be produced with high-quality seed. Since then, extensive breeding is carried out in the most important forage grass species and in small-seeded legumes. On four breeding stations and further testing sites across Europe, DSV forage breeders develop varieties, that cover all market and utilisation requirements of farmers in Europe and beyond. Apart from common breeding objectives like biomass yield, disease resistance and persistence, we especially focus on forage quality.

Based on DSV's unique experiences in breeding, production and usage of forage grasses and legumes, DSV's COUNTRY mixture programme provides comprehensive, customised forage crop solutions for all sites and usages. By using only varieties from the top of international recommendation lists, COUNTRY has become the biggest brand range programme for forage seed mixtures in Germany and Poland. Over several years COUNTRY has expanded into more international markets (e.g. the Netherlands, Austria, Belarus and the Baltic States).
COUNTRY is divided into four sub programmes:

- COUNTRY Energy
- COUNTRY Grassland
- COUNTRY Field forage
- COUNTRY Horse

Thereby the mixtures are adapted to different sites, uses and intensities (e.g. cutting, grazing, intercropping, new sowing, overseeding). Furthermore we offer a wide range of grassland and field forage mixtures with 100 % organic quality.

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 progress in every mixture.

Mixture	Designation	Overseeding	New sowings	Seeding rate for new sowings in kg/ha	Description	Composition in weight-%										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	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											•	•••	•••	••	••	•••	•••	•••
COUNTRY E 2030	HerbMeadow MultiLife	X	X	35–40	Intensive mixture with herbs for cutting and grazing	40	42	10						5		2	1	••	•••	•••	••	•••	•••	•••	•••
COUNTRY E 2031	HerbCloverGrass MultiLife	(X)	X	35–40	HerbCloverGrass for perennial field forage		22	12	15		5	10	12	5	15	2	2	•••	•••	•••	•	•••	•	••	•••

All specified information is given to the best of our knowledge and belief, but without guarantee on completeness and correctness. Despite care we cannot guarantee that the described characteristics are repeatable/comprehensive in agricultural practice in each case. Deutsche Saatveredelung AG excludes adhesion for damage or claims for damages, resulting of the use for the variety specified in this description.

••• highly suitable •• suitable • conditionally suitable

COUNTRY E 2020

Late with clover

Intensive cutting and grazing on fresh mineral sites with good nutrient supply.

- High energy density through intermediate and late perennial ryegrass
- Suitable for overseeding and new sowing
- Winter-hardy and high-yielding timothy for necessary structure

45 %	Lolium perenne late	SHERLOCK, VALERIO
40 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION
10 %	Phleum pratense	LISCHKA
5 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 4–5
Seeding rate: 35–40 kg/ha for new sowing, 20–25 kg/ha for overseeding, 7-10 kg/ha for overseeding several times per year

COUNTRY E 2021

Medium to late without clover

Intensive cutting on mineral and peat soils.

- High yields and best qualities through high share of perennial ryegrass with peat soil suitability
- Combination of intermediate and late perennial ryegrass for high energy density
- Winter-hardy and high-yielding timothy for necessary structure

Suitable for overseeding on peat soils and in higher altitudes

60 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION
25 %	Phleum pratense	RADDE
15 %	Lolium perenne late	SHERLOCK

Usage per year: 3–5
Seeding rate: 35 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

Our recommendation for overseeding:

COUNTRY E 2022

Medium to late with clover

High yielding mixture for cutting and grazing.

- High use elasticity through intermediate and late perennial ryegrass
- White clover fixes nitrogen and provides high protein and dry matter yield
- Mixture for overseeding, new sowing, field forage and undersowing

Suitable for undersowing in arable farming

50 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION
40 %	Lolium perenne late	SHERLOCK, VALERIO
10 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 4–6
Seeding rate: 40 kg/ha for new sowing, 20–25 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year, 15 kg/ha for undersowing

COUNTRY E 2023

Late for high quality forage

Highest energy densities and flexibility of use.

- Maximum energy density and palatability through sole use of late perennial ryegrass
- High yields with cutting and grazing
- Mixture for overseeding, new sowing, field forage and undersowing

Suitable for undersowing in arable farming

100 %	Lolium perenne late	CHEVALIER, SHERLOCK, THERESE, VALERIO

Usage per year: 4–6
Seeding rate: 40 kg/ha for new sowing, 20-25 kg/ha for overseeding, 7-10 kg/ha for overseeding several times per year, 15 kg/ha for undersowing

COUNTRY E 2024

Peat soils and higher altitudes

Top performance in yield and quality on peat soils and in low mountain ranges.

- High yields and top quality through high share of perennial ryegrass
- Timothy improves winter hardiness and peat soil suitability
- Dense sward and persistency through smooth-stalked meadow-grass
- Suitable for new sowing and overseeding if high gap share in the sward

70 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION, ARELIO
20 %	Phleum pratense	RADDE
10 %	Poa pratensis	LIBLUE

Usage per year: 3–5
Seeding rate: 30–35 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year (only if high gap share in the sward)

COUNTRY E 2025

Special

Best forage quality on difficult sites: dry, cold, peat soils and low mountain ranges.

- High yields and winter hardiness through timothy and meadow fescue
- High sward density and persistency through perennial ryegrass and smooth-stalked meadow-grass

40 %	Festuca pratensis	BALTAS, SCHWETRA
25 %	Phleum pretense	LISCHKA
15 %	Poa pratensis	LIBLUE
10 %	Lolium perenne intermediate	EXPLOSION
10 %	Lolium perenne late	VALERIO

Usage per year: 3–4
Seeding rate: 35–40 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year (only if high gap share in the sward)

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 overseeding.

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

COUNTRY E 2026

Protein

High yielding, protein-optimized quality mixture with clover.

- Top forage quality and safe ensiling through high share of perennial ryegrass
- Very good use elasticity through special combination of intermediate and late ryegrass with red and white clover
- High protein yields through high clover share

Our recommendation for clover-overseeding

40 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION
35 %	Lolium perenne late	HURRICANE, VALERIO
20 %	Trifolium pratense	HARMONIE, MILVUS
5 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 4–5
Seeding rate: 35–40 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

COUNTRY E 2027

Milk Index

High-performance mixture for maximum forage quality.

- Mixture of particularly well digestible varieties
- Outstanding forage quality with high yields
- Designed for maximum forage performance
- Mixture for overseeding, new sowing and field forage

60 %	Lolium perenne late	KAIMAN, ROSSIMONTE
40 %	Lolium perenne intermediate	EUROCONQUEST, EXPLOSION

Usage per year: 4–5
Seeding rate: 40 kg/ha for new sowing, 20–25 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

Milk Index – The brand for high forage quality

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. **COUNTRY Energy mixtures in particular contain high proportions of Milk Index varieties.**

	COUNTRY	Standard grass seed mixture
	Higher energy content	
+	6,29 MJ NEL/kg DM	6,11 MJ NEL/kg DM
	Higher digestibility	
	DM intake +0,36 kg DM/day	+
=	Energy intake +2,26 kg MJ NEL/day	
	MORE MILK	
	21,3 l	19,6 l

Assumptions: 10 kg dry matter (DM) intake per day; +1% digestibility organic matter reflects in +0,2 kg DM intake/day (Gilliand 2007); 3,1 MJ NEL energy needed to produce one liter milk.
Source: DSV research trial

More milk with Milk Index!

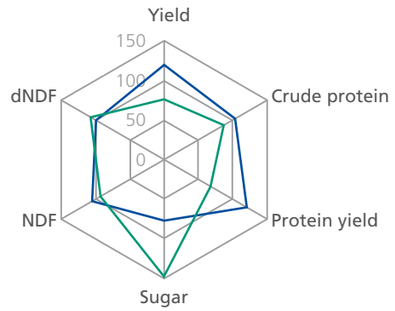
Species-rich grassland

Species-rich or herb-rich grassland has several advantages, such as high yields even under difficult conditions. It can save fertilizer and improve the soil and soil life. In addition it fits well to the Common Agricultural Policy. For several years these productive, species rich MultiLife mixtures are part of the COUNTRY Energy brand of DSV. The MultiLife mixtures have been carefully formulated and extensively tested for the best results in practice and combine several plant species.

Yield and forage quality with low input

Productive species-rich grassland consists of different grass, legume and herb species that are suitable for the production of roughage. The intelligent combination of these plant species ensures a very high yield and forage quality with low nutrient input. The greatest benefit in the mixture comes from the legumes, such as clover. Legumes fix nitrogen from the air and release it into the soil. This means that it is not necessary to apply extra nitrogen from fertilizer.
The nutritional value and the palatability of species-rich grassland is also good. The protein content is particularly high. The energy and digestibility of some of the species is somewhat lower than that of perennial ryegrass. That is why species-rich grassland fits nicely as a supplement to grassland with very high feed value.

Perennial ryegrass vs. COUNTRY MultiLife



Source: DSV research 2022

Improving soil structure and biodiversity

The diversity of components in COUNTRY MultiLife leads to different root structures and depths for a healthy and resilient soil. Deep-rooting species extract water and nutrients from deep layers, while superficial roots ensure good soil structure and build-up of organic matter in the upper layer. This combination improves water infiltration, makes the grassland less likely to suffer from drought and increases fertility. In addition, a varied root system stimulates soil life, e.g. more earthworms can be found under species-rich grassland than under monoculture grass. Hence species-rich grassland contributes to a sustainable and productive agricultural system.

COUNTRY E 2030

HerbMeadow MultiLife

Intensive mixture with herbs for cutting and grazing.

- High energy density through intermediate and late perennial ryegrass
- Chicory and plantain increase the palatability
- Herbs stabilize the mixture yields, especially in dry periods

42 %	Lolium perenne late	VALERIO, SHERLOCK
40 %	Lolium perenne intermediate	EUROCONQUEST MI, EXPLOSION MI
10 %	Phleum pratense	LISCHKA
5 %	Trifolium repens	BIANCA, LIFLEX
2 %	Cichorium intybus	
1 %	Plantago lanceolata	

Usage per year: 4–5
Seeding rate: 35–40 kg/ha for new sowing, 20–25 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

COUNTRY E 2031

HerbCloverGrass MultiLife

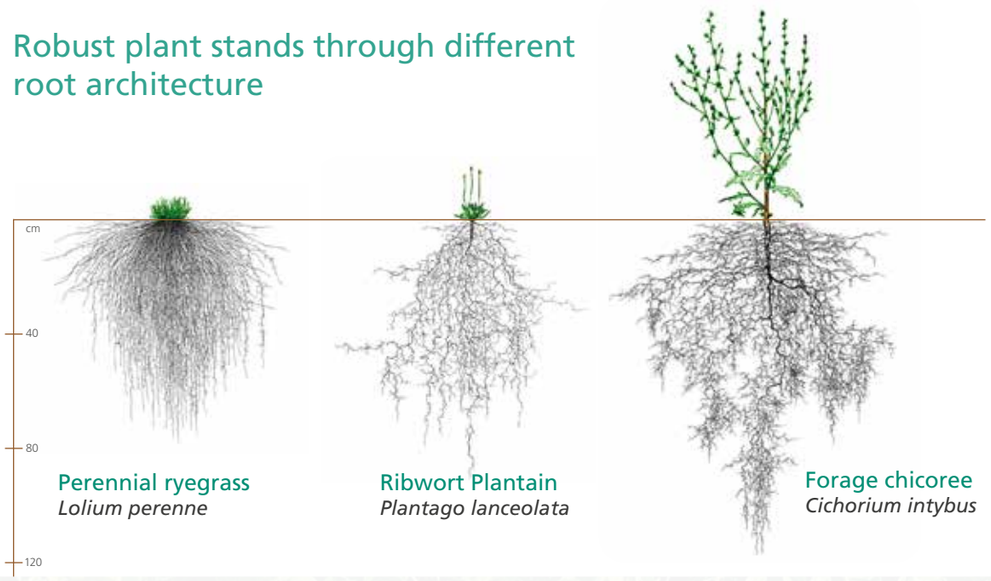
HerbCloverGrass for perennial field forage.

- Combination of several grass, clover and herb species
- Forage quality and palatability in addition to high dry matter and protein yields
- Robust plant stands even under difficult conditions

22 %	Lolium perenne late	VALERIO
15 %	Trifolium pratense	HARMONIE, MILVUS
15 %	Festuca pratensis	SCHWETRA MI
12 %	Phleum pratense	RADDE
12 %	Festuca arundinacea	ROSCATI
10 %	Festulolium	FEDORO
5 %	Trifolium repens	BIANCA, LIFLEX
5 %	Dactylis glomerata	ROSSEUR
2 %	Plantago lanceolata	
2 %	Cichorium intybus	

Usage per year: 3–5
Seeding rate: 35–40 kg/ha for new sowing, 20–25 kg/ha for overseeding (only if high gap share in the sward)

Robust plant stands through different root architecture



Adapted according to KUTSCHERA/LICHTENEGGER

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.

For detailed mixture descriptions please have a look at www.dsv-seeds.com

Mixture	Designation	Overseeding	New sowings	Seeding rate for new sowings in kg/ha	Description (With DSV's innovative seed treatment programme DynaSeed®)	Composition in weight-%: 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	Site: dry	normal	wet	peat soil	high altitudes	Use: 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 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 and red clover	10	10	10	5	25	10				10	10	10	•••	••	••	•	•••	•	•••	•••
COUNTRY G 2016	For higher altitudes	X	X	30–35	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		••	•••	•••	•	••	•••	•••	•••

••• highly suitable •• suitable • conditionally suitable

Recommendations for dry sites

COUNTRY G 2013

Hay and silage for dry sites

Intensive cutting and grazing for dry areas.

- Cocksfoot ensures yield in dry conditions
- Perennial ryegrass and Festulolium utilize winter moisture

45 %	Dactylis glomerata	ROSSEUR, HUSAR
20 %	Festulolium	FEDORO
10 %	Lolium perenne early	KARATOS
10 %	Lolium perenne inter	ASTONHOCKEY
10 %	Festuca rubra	RAFAEL
5 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 3–4
Seeding rate: 35–40 kg/ha for new sowing, 20–25 kg/ha for overseeding (only if high gap share in the sward)

COUNTRY G 2014

High yielding on dry sites

Secures good yields on dry sites with soft-leafed tall fescue.

- Deep-rooting and soft-leafed tall fescue beneficial in dry conditions
- High yield with structural effect
- Perennial ryegrass adds energy and forage quality

40 %	Festuca arundinacea	ROSCATI, ROTINO
25 %	Lolium perenne inter	ASTONHOCKEY, BOTOND
10 %	Lolium perenne late	HURRICANE
10 %	Festuca pratensis	LIHEROLD
10 %	Phleum pratense	ATURO
5 %	Dactylis glomerata	ROSSEUR

Usage per year: 3–4
Seeding rate: 40 kg/ha for new sowing

COUNTRY G 2015

Permanent meadow for dry sites

Mixture for extensive meadows on dry sites with white and red clover.

- Diverse components provide a robust and persistent stand with dense sward
- Clovers increase palatability, protein yield and N-fixation

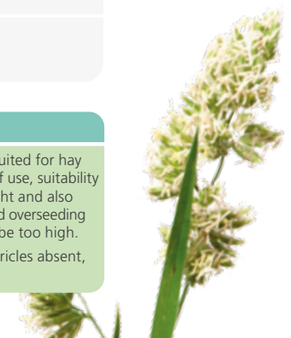
25 %	Festuca pratensis	BALTAS
10 %	Lolium perenne early	MIRTELLO
10 %	Lolium perenne inter	ALLIGATOR
10 %	Lolium perenne late	HURRICANE
10 %	Poa pratensis	LIBLUE
10 %	Festuca rubra	RAFAEL
10 %	Trifolium repens	BIANCA, LIFLEX
10 %	Trifolium pratense	HARMONIE, MILVUS
5 %	Phleum pratense	RADDE

Usage per year: 3–4
Seeding rate: 25–30 kg/ha for new sowing

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



Recommendations for higher altitudes

COUNTRY G 2012

Hay and silage

Intensive cutting and grazing for medium to good sites.

- Timothy provides winter hardiness
- Late perennial ryegrass for high energy density
- Clovers increase N-fixation and protein yield

30 %	Lolium perenne late	HURRICANE, VALERIO
20 %	Phleum pratense	ATURO
20 %	Festuca pratensis	BALTAS, LIHEROLD
10 %	Poa pratensis	LIBLUE
5 %	Lolium perenne early	KARATOS
5 %	Dactylis glomerata	REVOLIN
5 %	Trifolium repens	BIANCA, LIFLEX
5 %	Trifolium pratense	HARMONIE, MILVUS

Usage per year: 3–4
Seeding rate: 35–40 kg/ha for new sowing, 20–25 kg/ha for overseeding (only if high gap share in the sward)

COUNTRY G 2016

For higher altitudes

For a late start of vegetation, persistence and winterhardiness.

- Especially desgined for persistence in high altitudes
- Contains varieties recommended in southern Germany
- Combination of red and white clovers suits even extensive sites

25 %	Lolium perenne early	KARATOS, MIRTELLO
20 %	Lolium perenne inter	ALLIGATOR, EXPLOSION
20 %	Phleum pratense	ATURO, RADDE
10 %	Lolium perenne late	HURRICANE
10 %	Poa pratensis	LATO, LIBLUE
5 %	Dactylis glomerata	ROSSEUR
5 %	Trifolium pratense	HARMONIE, MILVUS
5 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 3–5
Seeding rate: 30–35 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

COUNTRY G 2018

For higher altitudes, intensive

Mixture for high use intensities and a high basic ration.

- Broad site suitability especially in higher altitudes
- Contains varieties recommended in southern Germany
- Provides high yield and forage quality

40 %	Lolium perenne inter	ALLIGATOR, EXPLOSION
25 %	Lolium perenne late	HURRICANE, VALERIO
10 %	Lolium perenne early	MIRTELLO
10 %	Phleum pratense	ATURO
10 %	Poa pratensis	LATO, LIBLUE
5 %	Trifolium repens	BIANCA, LIFLEX

Usage per year: 3–5
Seeding rate: 35–40 kg/ha for new sowing, 15–20 kg/ha for overseeding, 7–10 kg/ha for overseeding several times per year

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.

For detailed mixture descriptions please have a look at www.dsv-seeds.com

Mixture	Designation	Seeding rate for new sowings in kg/ha	Use in years	Description	Composition in weight-%															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 More than 50 %	Clovergrass, 1–2 years	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 More than 50 %	Alfalfa grass	20–25	2–3	Persistent alfalfa mixture for all sites where alfalfa is well suited					5		15								80	•••	•••	••		••
COUNTRY F 2057 More than 50 %	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			10			10		30	•••	••	••		••
COUNTRY F 2060 More than 50 %	Alfalfa Powermix	20	2–3	Persistent alfalfa mixture for perennial use on all areas where alfalfa is well suited															100	•••	•••	••		•••
COUNTRY F 2061 More than 50 %	Alfalfa grass, very dry	20–25	2–3	Persistent alfalfa mixture for very dry sites						10									90	•••	•••	••		•••

If individual varieties are not available, they are replaced by equivalent varieties.

More than 50 % = Mixture contains more than 50 % legumes in the seed content

••• highly suitable •• suitable • conditionally suitable

For grass-based field forage

COUNTRY F 2050

Without clover, annual

Mixture for annual field forage growing on medium to good areas.

- High yields under intensive management
- Balanced yield capacity
- Leafy growth offers high elasticity of use

50 %	Lolium westerwoldicum	ALBERTO, ARNOLDO
50 %	Lolium multiflorum	DOLOMIT, DORIKE

Usage per year: 3–5
Seeding rate: 40–45 kg/ha
Seeding time: March to April, 10 July to the end of August

COUNTRY F 2051

Without clover, 1–2 years

Mixture for annual field forage growing for 1-2 years on medium to good sites.

- High yields under intensive use, especially in the 1st cut and even before maize
- Good utilization of winter moisture
- Hybrid ryegrass increases yield stability in the second year

85 %	Lolium multiflorum	DOLOMIT, LIPSOS, DORIKE
15 %	Lolium hybridum	ASTONCRUSADER, PIROL

Usage per year: 4–6
Seeding rate: 40–45 kg/ha

COUNTRY F 2052

Without clover, 2–4 years

Two to four years forage growing mixture for medium to good areas.

- High yields and qualities with balanced yield distribution over the years
- Particularly suited for cutting and subsequent grazing

30 %	Lolium perenne early	KARATOS, MIRTELLO
20 %	Festulolium	FEDORO
20 %	Festuca pratensis	LIHEROLD
10 %	Phleum pratense	LISCHKA
10 %	Lolium multiflorum	LIPSOS
10 %	Lolium hybridum	ASTONCRUSADER, PIROL

Usage per year: 3–5
Seeding rate: 35–40 kg/ha

For clover-based field forage

COUNTRY F 2053

Intercropping Turbo

Fast growing clovergrass mixture for intercropping purpose.

- High yielding mixture for intensive use
- Persian clover adds a high protein content
- Annual ryegrass varieties for main and intercropping use

80 %	Lolium westerwoldicum	ALBERTO, ARNOLDO, FALLADINO
20 %	Trifolium resupinatum	CIRO, RESAL

Usage per year: 4–5
Seeding rate: 40 kg/ha

COUNTRY F 2054

Clovergrass, 1–2 years

More than 50 %

One to two years clovergrass mixture for medium to good sites.

- Protein-rich growth with high yield levels
- Winterhard varieties enable two years use
- Legume seed proportion >50%

55 %	Lolium multiflorum	DOLOMIT, LIPSOS
25 %	Trifolium pratense	HARMONIE, MILVUS
10 %	Trifolium repens	BIANCA, LIFLEX
10 %	Lolium hybridum	ASTONCRUSADER, PIROL

Usage per year: 4–5
Seeding rate: 40 kg/ha

COUNTRY F 2055

Clovergrass, 2–3 years

Two to three years clovergrass mixture for medium to good sites.

- High red clover content ensures high protein levels
- Balanced yield distribution and uniform regrowth behaviour

30 %	Festuca pratensis	BALTAS, SCHWETRA
30 %	Trifolium pratense	HARMONIE, MILVUS
20 %	Lolium perenne inter	ASTONHOCKEY, TRIVOS
20 %	Phleum pratense	ATURO, LISCHKA

Usage per year: 3–4
Seeding rate: 20–25 kg/ha for new sowing

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.

Recognition: red flower, velvet hairy leaves, upright growth, no stolon

For alfalfa-based field forage

COUNTRY F 2056

Alfalfa grass

Persistent alfalfa mixture for all sites where alfalfa is well suited.

- High yield and protein content
- Meadow fescue and timothy ensure ensilability
- Legume seed proportion >50%

More than 50 %

80 %	Medicago sativa	DAKOTA, FLEETWOOD, FRAVER, PLANET
15 %	Festuca pratensis	SCHWETRA
5 %	Phleum pratense	ATURO

Usage per year: 3–4
Seeding rate: 20–25 kg/ha
Seeding time: April to the end of August

COUNTRY F 2057

Alfalfa grass robust

Robust alfalfa grass for perennial field forage.

- Contains deep rooting and soft-leaved tall fescue
- For particularly dry and rough sites

More than 50 %

80 %	Medicago sativa	DAKOTA, FLEETWOOD, FRAVER, PLANET
20 %	Festuca arundinacea	ROSCATI

Usage per year: 3–4
Seeding rate: 20–25 kg/ha
Seeding time: April to the end of August

COUNTRY F 2059

Perennial alfalfa-clovergrass dry

Perennial alfalfa-clovergrass for medium to dry sites.

- High protein content and yield capacity through red clover and alfalfa
- High sugar grasses improve the silage process

30 %	Medicago sativa	DAKOTA, FLEETWOOD, FRAVER, PLANET
20 %	Lolium perenne inter	ASTONHOCKEY, TRIVOS
20 %	Festuca pratensis	BALTAS, SCHWETRA
10 %	Phleum pratense	ATURO
10 %	Festuca arundinacea	FERGUSON
10 %	Trifolium pratense	HARMONIE, MILVUS

Usage per year: 3–4
Seeding rate: 35–40 kg/ha for new sowing
Seeding time: April to the end of August

COUNTRY F 2060*

Luzerne PowerMix

Persistent alfalfa mixture for perennial use on all areas where alfalfa is well suited.

- Protein-rich forage on dry and groundwater-remote sites
- High N-fixation capacity benefiting the following crop

More than 50 %

100 %	Medicago sativa	DAKOTA, FLEETWOOD, FRAVER, PLANET

Usage per year: 3–4
Seeding rate: 20 kg/ha for new sowing
Seeding time: April to the end of August

* We aim for at least two varieties and a share of at least 20% per variety.

COUNTRY F 2061

Alfalfa grass, very dry

Persistent alfalfa mixture for very dry sites.

- Providing high yields even on inhomogeneous sites
- Both species can cope with very dry conditions
- Cocksfoot adds structure to the forage

More than 50 %

90 %	Medicago sativa	DAKOTA, FLEETWOOD, FRAVER, PLANET
10 %	Dactylis glomerata	ROSSEUR

Usage per year: 3–4
Seeding rate: 20 kg/ha for new sowing
Seeding time: April to the end of August

Alfalfa

Alfalfa has a deep rooting system and a high demands on profundity and pH value of the soil. It delivers high yields and is suitable for three to four cuts in field forage production.

Recognition: upright, branched and slightly hairy stem; leaves tripartite, stalked, front toothed and hairy; spiral seed pots

DynaSeed – DSV's seed technology for improved plant growth

For many years, DSV has been working on the question of how to make even better use of the potential of innovative varieties. In simple terms: How can the plant development of high-quality DSV seed be additionally supported?

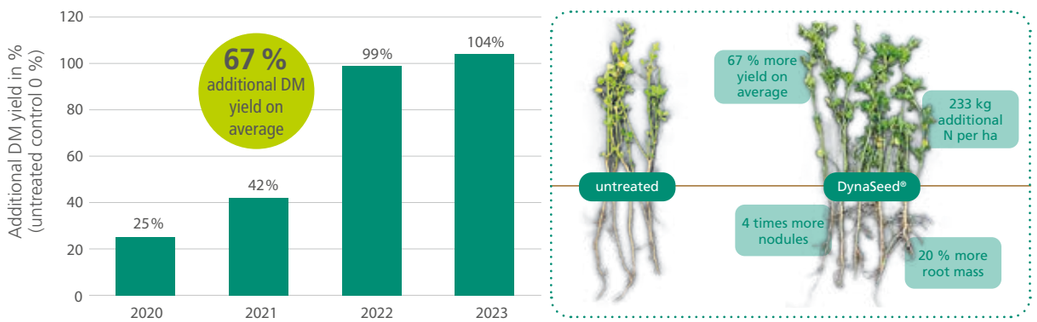
To answer this question, DSV has created a special research department focusing on seed technology. Here, innovative methods for seed treatment are developed to ensure greater dynamics in plant development processes. They include a broad spectrum of biostimulants, nutrients and coating materials, whose positive effects have already been proven in scientific studies. There is a long way to go to find the right formulations: Initially, individual biostimulants are tested in DSV's own testing system and the best are then combined into complex formulations. Only the most innovative formulations later coat the DSV seeds and receive the DynaSeed trademark. True to the credo: high research effort, significant results and visible effects.

DynaSeed LegumeMaxx – measurable yield improvement

The very name of this innovative seed treatment contains the word 'legume', derived from the legume plant family. Together with root-colonizing bacteria, the rhizobia, they are able to fix nitrogen and convert it into a form that is available to plants. The interaction between rhizobia and legumes is known as symbiosis and is highly complex.

With DynaSeed LegumeMaxx, the seed treatment for legumes, each seed is coated with rhizobia. This ensures that they can colonize the roots of the legumes shortly after germination and start to form nodules. To further support this symbiosis, algae extracts, minerals and micronutrients such as molybdenum are added to the seed treatment. This treatment leads to a significant increase in nodule formation compared to untreated varieties. In addition, the combination of biostimulants results in faster juvenile development and improved root growth. The effects can lead to significant higher yields. Due to its many advantages, DynaSeed LegumeMaxx has been the standard treatment for legumes in COUNTRY forage mixtures for years. Under favourable conditions, alfalfa treated with DynaSeed LegumeMaxx can be expected to have a nitrogen fixation capacity of 250 kg per ha over the vegetation period (reached in 2023). This has a direct effect on the plants and therefore on the yield. Crops in which the nitrogen fixation of legumes does not function optimally appear light and often inhomogeneous. Crops with functioning nitrogen fixation are lush green, healthy and dense.

Additional dry matter yield (DM) through DynaSeed LegumeMaxx treatment on alfalfa 2020-2023



In all COUNTRY mixtures with legumes:

DynaSeed LegumeMaxx – for a maximum yield

N Nitrogen

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

DynaSeed coating mass

COUNTRY ORGANIC

100 % organic

	COUNTRY Mixture	Designation	Seeding rate kg/ha	Composition in weight-%																				
				Grasses													Legumes					Herbs	
				Lolium perenne early	Lolium perenne intermediate	Lolium perenne late	Lolium multiflorum italicum	Lolium multiflorum westerwoldicum	Lolium hybridum	Phleum pratense	Festuca pratensis	Dactylis glomerata	Festulolium	Festuca arundinacea	Festuca rubra rubra	Trifolium repens	Trifolium pratense	Trifolium resupinatum	Medicago sativa	Trifolium alexandrinum	Cichorium intybus	Plantago lanceolata
GRASSLAND	G 2440	Medium-late without clover	40		50	50																	
	G 2441	New sowing without clover	40		30					12	15		13	20	10								
	G 2460	Medium-late with clover	40		48	45										7							
	G 2461 More than 50 %	Overseeding with clover	35	20	30	30										20							
	G 2462	Peat soils and higher altitudes	40	30	25	25				13						7							
	G 2463	Overseeding dry sites	40	30	23	20							20			7							
	G 2464	Universal	40	17	20	20				17	20					6							
	G 2465	Dry sites	40	15	15							21	21		21	7							
	G 2466	Medium to dry sites	40	25	25						20	10			10	10							
	G 2470 More than 50 %	Cutting and grazing	30		35	35										10	20						
	G 2471	Clover grass cutting	30		30					10	30					5	25						
	G 2472	Meadow higher altitudes	40	20	25	20				20		5				5	5						
	G 2473	HerbCloverGrass **MultiLife**	35		30	31				10						7	20				1,5	0,5	
FIELD FORAGE	F 2480 More than 50 %	Alfalfa grass perennial	30							5	15								80				
	F 2481 More than 50 %	Alfalfa grass sandy soils	30								10	10	10			2			68				
	F 2482	Alfalfa-, red clover grass perennial	35	15					10	5	20					3	7		40				
	F 2483	Clover-, alfalfa grass perennial	35	20			20		20								30		10				
	F 2484	Clover grass perennial	35		30		22		23								25						
	F 2485 More than 50 %	Clover grass 1-2 years	35				60										40						
	F 2487 More than 50 %	Clover grass annual	35				30	30										20		20			
	F 2488	Clover grass intercropping	35					70										15		15			

If individual varieties are not available, they are replaced by equivalent varieties.

More than 50 % = Mixture contains more than 50 % legumes in the seed content

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.

For detailed mixture descriptions please have a look at www.dsv-seeds.com

Mixture	Designation	Seeding rate for new sowings in kg/ha	Description	Composition in weight-%																		
				Lolium perenne (turf)	Lolium perenne	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	300	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	40				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	15	5	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

All specified information is given to the best of our knowledge and belief, but without guarantee on completeness and correctness. Despite care we cannot guarantee that the described characteristics are repeatable/comprehensive in agricultural practice in each case. Deutsche Saatveredelung AG excludes adhesion for damage or claims for damages, resulting of the use for the variety specified in this description.

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.

Spike and panicle emergence determines cutting time and forage quality

How do I choose the perfect cutting time for my forage grass and what influences it? With unique expertise in forage quality DSV has in-depth knowledge how grassland management can be optimized and what influence spike and panicle emergence has.

Dairy farms are familiar with the spike and panicle emergence of forage grasses during vegetation: the flower sprouts from the stem of the plant at the end of the growth phase. If cutting is delayed until this time, the lignin content of the plant increases. At the same time, the digestibility of the organic matter decreases and the proportion of cell contents also decreases the longer you wait to cut. However, the time of cutting should not be chosen too early either, because this results in yield losses since the optimum yield has not yet been reached. Especially for silage management, this raises the question of when is the "perfect" cutting time, or does it exist at all?

Generative and vegetative phase

Grass growth can be divided into two phases during the year. In spring, grass grows very fast, as the plants aim to sprout and push heads and panicles during this time. This is the generative phase. On average, more than 50% of the total annual yield is achieved during this period. However, especially towards the end of the generative phase, the ratio of cell content and cell walls shifts steadily. The proportion of cell walls increases, causing the proportion of cell contents to decrease. This in turn leads to a lower forage quality of the growth.

The generative phase is followed by the vegetative phase with a lower growth increase. In this phase, it should be noted that the grass can no longer shoot, as the growth cone, the so-called apex, was removed in the generative phase by the timely cutting. In the vegetative phase, particular care must be taken not to cut too deeply, as the grasses grow back more slowly in this phase. Only after the plants have received a cold stimulus (vernalization) over a sufficient period of time does the generative phase begin again with rising temperatures. From this moment on, the grass plant grows faster and can shoot again. This means that only when the generative phase begins again, new culms are formed and spike and panicle emergence can occur again.

The growth cone (apex): Important for the timing of cutting

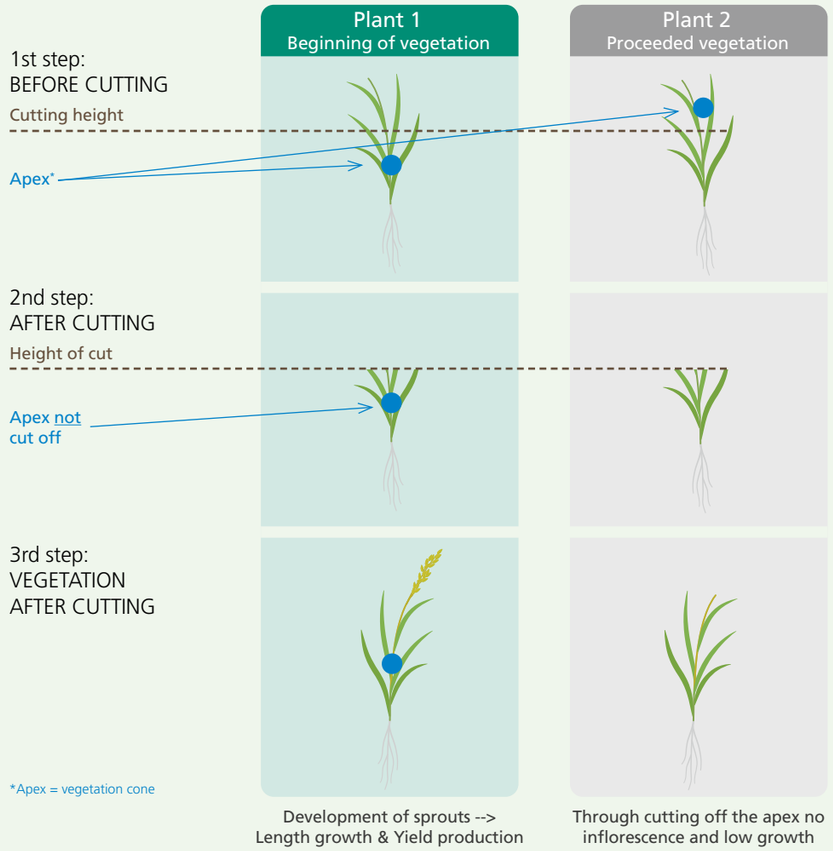
In practice, the aim is to find the cutting time at which the ingredients are optimal for the feed quality and at the same time as much yield as possible can be harvested. Therefore, the following applies to every grass cut: do not cut too early, but also not too late!

An important criterion for deciding when to cut is the "apex". This is the vegetation cone of each plant, which sits in the tip of a shoot and comprises the apical meristem, a group of divisible cells. From there, the plant grows and forms new leaves. Among other things, hormones are produced in the apex that prevent the growth of side shoots. If the shoot tip and thus the apex is removed by a cut, the stem no longer grows further in length. Instead, side shoots sprout from the leaf nodes further down (plant 2, stage 3). Here the nutrients are stored more safely and no lignification takes place.

Influence of the apex on forage quality

The first cut shortly before spike and panicle emergence is optimal for silage, then the apex is still low and will not be damaged during cutting (plant 1). In addition, yield and forage quality are at a high level at this time. The grass plant can grow again in length and produce yield due to the still existing vegetation cone. In the course of further growth during vegetation, however, this cone grows upwards. The more suitable the first cutting time is, i.e. close to the beginning of spike emergence, the easier it is to choose subsequent cuts. In order to fulfil this condition, the following recommendation applies: There should be at least 4 weeks between the grass cuts to ensure a sufficient yield and an optimal conversion and utilization of nitrogen into protein.

Graphical comparison between plant 1, where the apex is not cut off vs. plant 2, where the apex is removed through the cut



Practical tip:
The aim is to mow above the apex of the grass at the first cut so that the grass can still shoot at the second cut and benefit from the high mass growth of the generative phase.

In practice, a balance must always be struck between the longest possible use of the plants with generative growth and the unavoidable shooting of the plants.

Conclusion

There is no clear-cut statement as to when is the right time to cut. For orientation, it is important to wait for the beginning of spike and shoot emergence in order to achieve an optimum yield and forage quality of the silage. If you wait too long with the first cut, the forage quality will decrease and the vegetative phase of the emergence will start too early. The aim should be to leave the growth in the generative phase until the 2nd cut and to "harvest" the apex with the 2nd cut. Then the crop enters the vegetative phase and it becomes easier to find the optimal time for cutting, as the plants no longer shoot.

Summary

Too early 1st cut:	Too late 1st cut:
– Lower yield (not yet profitable to mow)	+ High yield
+ High digestibility of organic matter	– Lower digestibility of organic matter
+ High protein content	– Less protein
+ Grass wants to shoot further, as apex is not "topped" –> Fast regrowth	– Grass already shot

Optimal:
Carry out the 1st cut one month before spike emergence – then keep a four-week interval between cuts. In this way, you can benefit from the high growth rate of the generative phase even longer before the vegetative phase follows.

Deutsche Saatveredelung AG
Weissenburger Straße 5
59557 Lippstadt
phone +49 2941 296 0
fax +49 2941 296 100
info@dsv-saaten.de

www.dsv-seeds.com

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