FORAGE FIRST®
BY DLF

LA CROSSE SEED
A DLF DIVISION

5 SERIES™

PRODUCT GUIDE | 2026

WHEN YIELD & QUALITY MATTER®

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ABOUT FORAGE FIRST® 5 SERIES™

GREATER VALUE. GOOD MOVE.

Yield and quality matter. But there's more. Our goal is to provide a higher standard of forage to maximize ROI – while keeping your wallet in mind. We take pride in delivering proven products that increase the bottom line at a good price.

FOCUSED ON PERFORMANCE

5 Series™ brand products deliver a wide range of agronomic solutions tailored to where and how you farm. Real solutions–like salinity and stress tolerance, improved persistence, yield performance, better fiber digestibility for feed efficiency and nutrition, adding value through more milk, more meat and greater productivity per acre.

FOCUSED ON INNOVATION

Decades of alfalfa research results in a fast paced environment of continual innovation devoted exclusively to alfalfa and forages. That means you can rely on us for groundbreaking products along with steady advances in yield, quality, pest resistance, stress tolerance and persistence.

DLF

FORAGE FIRST® BY DLF

LA CROSSE SEED A DLF DIVISION

5 SERIES™

FOCUSED ON YOU

When you choose 5 Series™ Alfalfa, you benefit from dedicated technical experts and a sales team who focuses solely on alfalfa and forages. Their insight and experience across millions of acres when combined with the knowledge you have of the specific conditions on your farm, will find the best seed solution for you. When it comes time to plant, you won't rely on speculation; you'll rely on proven expertise.

DLF + LA CROSSE SEED: SEEDS & SCIENCE, DELIVERED

DLF and La Crosse Seed have worked in synergy since 2018, when DLF acquired La Crosse Seed. DLF (Dansk Landbrugs Frøselskab), which translates to the "Danish Farmers Organization's Seed Supplier," was founded in 1872. DLF is owned by 3,000 growers specializing in growing and developing forage and turf seeds.

DLF is a global leader in the development of innovative forage products. DLF's US business is headquartered in Albany, Oregon together with a large portion of DLF's North American research and seed production activities. DLF operates a distribution focused division through La Crosse Seed which includes strategically placed warehouses across the United States.

With our synergistic approach, you are supported by a worldwide organization with a tremendous passion for innovation and commitment to helping deliver the absolute best forage products. As we move forward, our goal is to provide continuity to the alfalfa products you have been accustomed to sourcing along with all the other forage, cover crop, and specialty seed products you may require.

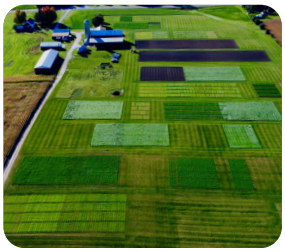
XL **The XL symbol throughout the guide represents branded products that meet the Forage First® promise. XL brands contain one or more improved varieties.**

GROWING WITH DLF

Our customers demand a lot from their seed: yield, forage quality, winterhardiness and disease resistance. That is why we invest heavily in global R&D and Product Management. For more than 30 years, DLF R&D and Product Management have optimized forage grass and legume varieties ideal to local climatic and environmental conditions to seed the green future. We aim to deliver sustainable solutions with the potential to increase productivity of land and livestock, sequester carbon and reduce emissions in the supply chain.

Touchet, Washington USA

Port Hope, Ontario Canada

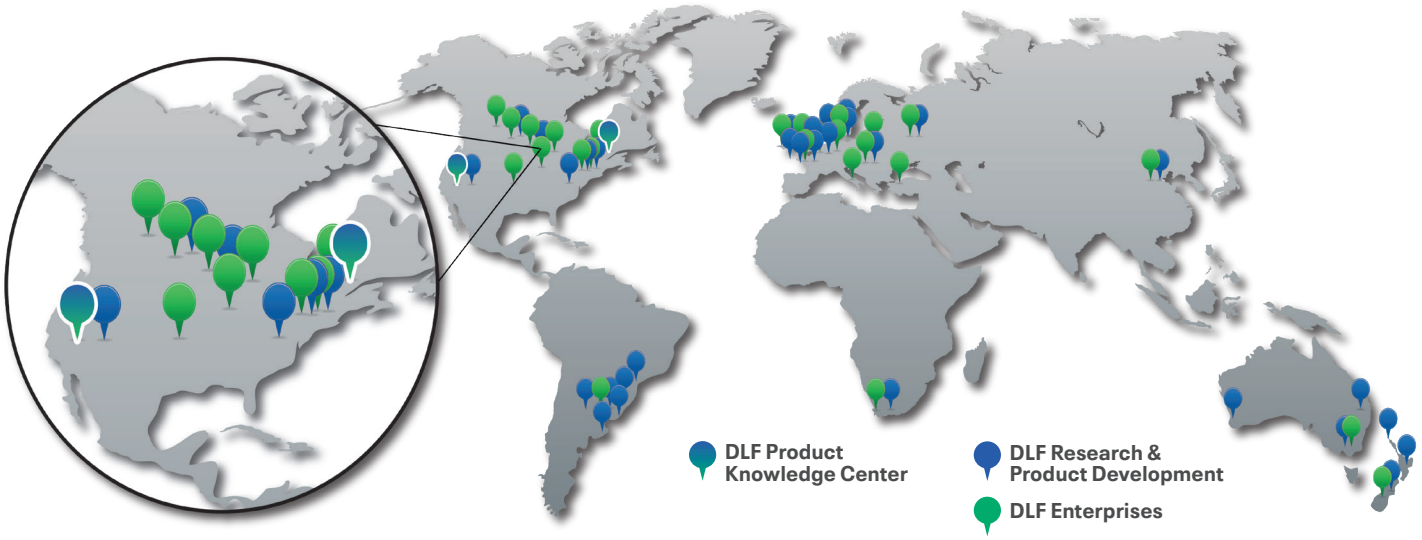


West Salem, Wisconsin USA

Philomath, Oregon USA

Berry, Kentucky USA

THE WORLD OF DLF



WE ENRICH LAND, LIFE, AND PEOPLE THROUGH SEEDS AND SCIENCE

EMBRACING CHANGE AND LOOKING TO THE FUTURE

At DLF, we believe in the transformative power of seeds and science to create a better future. As a farmer-owned cooperative with deep roots, expert knowhow, and global presence, we are uniquely positioned to lead the change in addressing the challenges of climate change and biodiversity loss through our product solutions and their productivity.

Our purpose *"We enrich land, life and people through seeds and science"* captures the heart of who we are and what we aim to achieve.

A LEGACY OF COLLABORATION AND INNOVATION

Founded on the democratic traditions of cooperation, DLF has grown from a local Danish seed producer to a global leader in forage and turf seed. Guided by the collective dedication of our farmer-owners and suppliers, we bring locally adapted seed solutions to over 100 countries. Our heritage ensures business resilience, and our forward-looking mindset drives innovation.

We see the world's challenges not as obstacles, but as opportunities to make a difference. By blending science with sustainability, we aim to create products and solutions that go beyond profitability, contributing to ecosystems, economies, and communities.

SEEDS AS CATALYSTS FOR A GREEN TRANSITION

Seeds are a catalyst of the green transition. They are simple, essential, scalable, and regenerative. Through plant breeding and scientific research, our seeds work both above and below the ground to deliver dual-purpose solutions that address critical issues.

Above the ground innovative seeds enable biomass production and quality of leaves, enhance biodiversity and tolerance to disease, and stabilize landscapes through erosion control.

Below the ground our seeds enable carbon capture, improve soil health, reduce nutrient loss, and foster stable, resilient ecosystems. As global market leaders, we invest in future growth levers to build seeds for a changing climate and use our expertise to unfold future opportunities for businesses and people.

ENRICHING LAND, LIFE, AND PEOPLE

DLF's commitment to innovation enriches ecosystems and enhances quality of life for all living organisms. By leveraging our local knowledge and global presence, we bring green surroundings and climate-resilient solutions to people and communities.

THE POWER OF COLLABORATION

Our purpose is grounded in DLF's cooperative model and a deep-rooted belief that collaboration is the path forward. By uniting farmers, scientists, and businesses, we unlock the full potential of seeds to drive positive change. Together, we are more than a seed supplier – we are partners in transformation, empowering our sector and communities to thrive.

A FUTURE GROUNDED IN PURPOSE

DLF's long-term purpose strengthens us as a company with a significant societal and environmental impact. The phrase *"We enrich land, life and people through seeds and science"* reflects our commitment to creating a better future. It is a story of passion, potential, and positivity.

As we continue to lead the seed sector, we remain dedicated to bridge the past and the future, tradition and innovation, local presence, and global impact.

WE WORK WITH NATURE AND SCIENCE TO BRING RESILIENT SEED SOLUTIONS FOR LAND, LIFE AND PEOPLE.

FORAGE FIRST®

Hi-Gest ALFALFA TECHNOLOGY

54HG25

ALFALFA

FORAGE FIRST®
BY DLF

Hi-Gest® ALFALFA TECHNOLOGY

5 SERIES™

ON-FARM PERFORMANCE

Varieties with Hi-Gest® have been proving their extra performance and value since the 2015 growing season. Livestock respond to the improved fiber digestibility and forage intake increases as expected when Hi-Gest® forage is included in the ration. Dairymen who grow their own forage are rapidly converting their acres to Hi-Gest® to take advantage of the higher digestibility, while commercial hay growers who focus on quality for their clients are being rewarded for preserving the identity of these higher performing lots of hay.

BALANCING YIELD AND QUALITY

Lignin is the complex organic compound that hardens and strengthens the plant's cell walls. In mature plants, **lignin increases yield, but negatively affects forage quality** and interferes with animal digestion. To minimize this dilemma, producers have traditionally found a compromise between yield and quality by harvesting at late-bud stage to one-tenth flower. Today's Hi-Gest® varieties with faster fiber digestibility provide growers additional management flexibility around the traditional yield versus quality dilemma.

Through focused breeding Hi-Gest® developed varieties offer high yield potential, **a 5-10% increased rate of fiber digestion** which improves animal intake; **increased extent of fiber digestion (as measured by UNDF 240) by 5-10%, and raises crude protein of the forage by 3-5%** when compared to other conventional varieties*. The net impact is higher testing, higher value hay which can mean 2.5 or more pounds of milk per cow per day when fed versus other conventional varieties.

MANAGEMENT FLEXIBILITY

Alfalfa varieties with Hi-Gest® will easily fit into your alfalfa management system. The varieties have the flexibility to adjust to aggressive harvest systems to maximize yield and quality or to more relaxed schedules focused on tonnage. Either way, growers put the odds of improved returns per acre and animal performance in their favor.

ASK YOUR 5 SERIES™ DEALER

They can tell you who's growing Hi-Gest® alfalfa in your area and share their experiences with you. You may be surprised who has already made the move!

*The increased rate of fiber digestion, extent of digestion, and crude protein data was developed from replicated research and on-farm testing. During the 2015 growing season at West Salem, WI and Woodland, CA, the following commercial dormant, semi-dormant and non-dormant alfalfa varieties were compared head-to head with Hi-Gest® alfalfa for rate of digestion, extent of digestion and percent crude protein; America's Alfalfa Brand Ameristand 427TQ, Croplan Brands Legendairy XHD and Artesia Sunrise, Fertizona Brand Fertilac, S&W Seeds Brands SW6330, SW7410 and SW10, and WL Brands WL 319HQ and WL 354HQ. Also during the 2015 growing season, 32 on-farm Hi-Gest® hay and silage samples were submitted to Rock River Laboratory, Inc. for forage analysis. The results for rate of digestion, extent of digestion and percent crude protein were averaged and compared to the 60 day and four year running averages for alfalfa in the Rock River database which included approximately 1,700 alfalfa hay and 3,800 silage 60 day test results and 23,000 hay and 62,000 silage tests results in the four year average.

PERFORMANCE

- A high yield potential variety with Hi-Gest® alfalfa technology for geographies using fall dormancy 4 varieties
- Product of conventional plant breeding that features improved fiber digestibility, better animal performance and harvest flexibility when compared to other conventional varieties

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 1.5
FastGrowth Rating	1.98cm /Day-Avg
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid			●		
Blue Aphid		●			
Spotted Alfalfa Aphid		●			
Stem Nematode		●			

5 SERIES™ NAMING CONVENTION

Product Naming

54VQ52

First Number = Crop Code
Second Number = Fall Dormancy
Third and/or Fourth Letter = Trait
Fifth Number = Arbitrary
Sixth Number = Arbitrary

TRAIT IDENTIFICATION

Q	=	Quality
V	=	Very Winterhardy
HG	=	High Digestibility/ Harvest Flexibility
H	=	Leafhopper
S	=	Salt Tolerance
B	=	Brand

FastGrowth Ratings are calculated by DLF alfalfa breeders from weekly measurement of varieties grown side-by- side from green-up to harvest through the growing season. Expressed as average centimeters growth per day.

>2.20 = Very Fast

>2.00 = Fast

>1.80 = Average

>1.60 = Slow

<1.60 = Very Slow

FORAGE FIRST®

5 SERIES™

54Q16

PERFORMANCE

- 54Q16 delivers high forage quality coupled with very good yield potential
- Excellent disease and pest resistance to enhance stand establishment and stand persistence
- Fall dormancy 4 product with very good winterhardiness

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
FastGrowth Rating	1.85cm /Day-Avg
Total DRI	35/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Stem Nematode	●				

FORAGE FIRST®

5 SERIES™

54Q29

PERFORMANCE

- Excellent fall dormancy 4 variety with high yield potential and excellent forage quality
- Multi-race Aphanomyces resistance (Aph2 = R) allows for establishing in challenging environments

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 1.8
FastGrowth Rating	1.86cm /Day-Avg
Total DRI	33/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt		●			
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid	●				
Spotted Alfalfa Aphid		●			
Stem Nematode	●				

FORAGE FIRST®

5 SERIES™

NEW

54Q30

PERFORMANCE

- 6% yield advantage over 54Q29
- Bred with emphasis on high forage quality
- Multi-race Aphanomyces high resistance for superior establishment in challenging environments
- 35/35 disease rating index with superior winter survival

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.3
Winter Hardiness Class	WS 1.5
FastGrowth Rating	2.00cm /Day-Avg
Total DRI	35/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Stem Nematode			●		

PEST RESISTANCE RATINGS

% Resistant Plants	Resistance Class	Class Abbreviation
0-5%	Susceptible	S
6-14%	Low Resistance	LR
15-30%	Moderate Resistance	MR
31-50%	Resistant	R
>50%	High Resistance	HR

FORAGE FIRST®

5 SERIES™

54VQ52

PERFORMANCE

- Excellent choice for high forage quality with high yield potential
- Strong disease resistance for broad adaptation to most growing environments
- 54VQ52 has Phytophthora and multi-race Aphanomyces resistance for improved establishment success in poorly drained soils

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
FastGrowth Rating	1.82cm /Day-Avg
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt		●			
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Spotted Alfalfa Aphid		●			
Stem Nematode	●				

FORAGE FIRST®

5 SERIES™

54VQ56

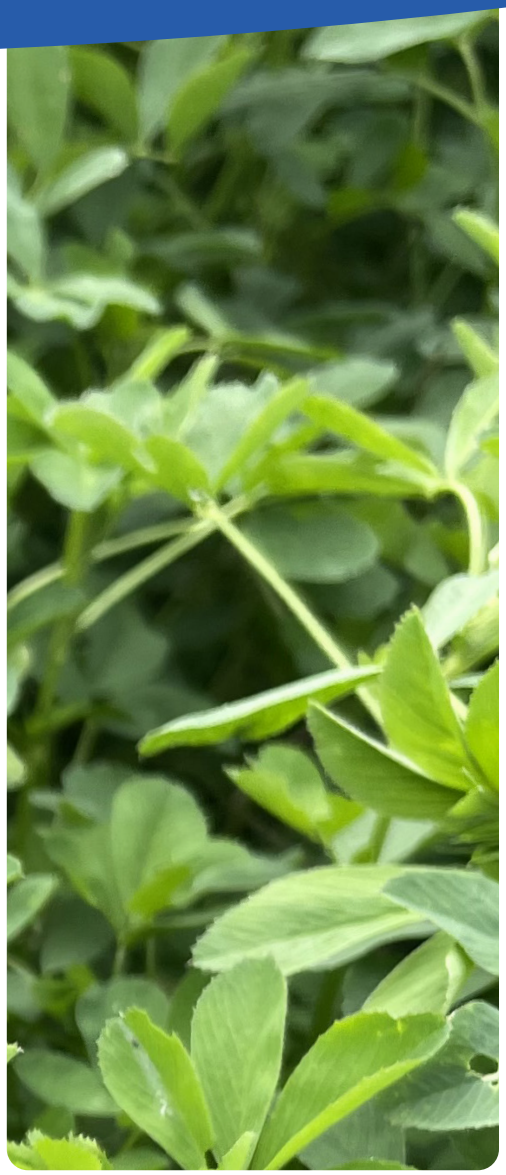
PERFORMANCE

- Excellent fall dormancy 4 variety with enhanced seeding year yield and provides improved yield potential over the life of the alfalfa stand
- Very strong disease and pest resistance allows for broad adaptation

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
FastGrowth Rating	2.05cm /Day-Avg
Total DRI	35/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Stem Nematode			●		



5 SERIES™ ALFALFA COMPARISON CHART

DISEASE & PEST CONTROL

5 SERIES™		FALL DORMANCY	WINTER SURVIVAL	FASTGROWTH RATING (CM)	TOTAL DRI	BACTERIAL WILT	FUSARIUM WILT	VERTICILLIUM WILT	ANTHRACNOSE	ANTHRACNOSE - RACE 5	PHYTOPHTHORA ROOT ROT	APHANOMYCES ROOT ROT - RACE 1	APHANOMYCES ROOT ROT - RACE 2	APHNOMYCES ROOT ROT - EVOLVING STRAINS	PEA APHID	BLUE APHID	COWPEA APHID	SPOTTED ALFALFA APHID	POTATO LEAFHOPPER	STEM NAMATODE	NORTHERN ROOT KNOT NEMATODE	SOUTHERN ROOT KNOT NEMATODE
54Q16		4.0	2.0	1.91	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	R	°	°	°	°	HR	°	°
54Q29		4.0	1.8	1.86	33/35	HR	R	HR	HR	°	HR	HR	R	°	HR	°	°	R	°	HR	°	°
54Q30		4.3	1.5	2.00	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	°	°	°	°	°	R	°	°
54VQ52		4.0	2.0	1.82	29/35	HR	R	HR	HR	°	HR	HR	HR	°	R	°	°	R	°	HR	°	°
54VQ56		4.0	2.0	2.05	34/35	HR	HR	HR	HR	°	HR	HR	R	°	°	°	°	°	°	R	°	°
54VS72		4.0	2.0	1.84	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	°	°	°	°	R	°	°
54H98		4.0	°	1.75	30/30	HR	HR	HR	HR	°	HR	HR	°	°	R	HR	°	HR	HR	°	°	°
54HG25	Hi-Gest ALFALFA TECHNOLOGY	4.0	2.0	1.98	34/35	HR	HR	HR	HR	°	HR	HR	R	°	MR	R	°	R	°	R	°	°
54B66 BRAND		4.0	2.0	°	32/35	HR	HR	HR	HR	°	HR	R	MR	°	R	°	°	°	°	°	°	°

FORAGE FIRST® 5 SERIES™

54H98

PERFORMANCE

- Fall dormancy 4 product with improved yield
- This potato leafhopper variety combines an excellent disease package with high productivity under moderate to high leafhopper pressure
- 54H98 has an excellent disease package allowing for successful establishment in a wide range of soils

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
FastGrowth Rating	1.75cm /Day -Avg
Total DRI	30/30

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Potato Leafhopper	●				
Pea Aphid		●			
Blue Aphid	●				
Spotted Alfalfa Aphid	●				

FORAGE FIRST® 5 SERIES™

54VS72

PERFORMANCE

- Fall dormancy 4 variety that performs well in dryland or irrigated regions where fall dormancy 3, 4 or 5 alfalfas are grown
- High yield potential and persistence when establishing alfalfa on high electrical conductivity (EC) fields or when using high EC irrigation water
- No yield drag when planted into non-saline soils

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
FastGrowth Rating	1.84cm /Day -Avg
Salinity Tolerance	
Germination	Tolerant
Forage Production	Tolerant
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Stem Nematode		●			

FORAGE FIRST® 5 SERIES™

54B66 BRAND

PERFORMANCE

- A premium blend of winterhardy genetics that work well in many alfalfa growing environments
- Resistant to most common alfalfa diseases (DRI>30), helping to provide yield protection in all but the most extreme environments
- Seed has fungicide and inoculants to ensure emergence and seedling growth at establishment

AGRONOMICS

Cutting System	3-5
Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
Total DRI	32/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1		●			
Aphanomyces-Race 2			●		
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			

SOIL SALINITY'S IMPACT ON YIELD

Salinity is a natural byproduct of irrigated and dryland agriculture in low rainfall areas. Over time, soluble salts move upward in the soil profile and when rainfall or irrigation are not sufficient to leach accumulating soluble salts from the root zone, salinity begins to interfere with crop growth.

Salinity of soil and irrigation water is usually measured and expressed as ECs or Electrical Conductivity. Soil with an EC range of less than 1.0 will have little effect on germination or yield. Soils with an EC measurement of 4.0 can increase seeding mortality by 35% and decrease yield by 15%. For every EC point above a variety's salinity threshold, yield decreases by 7.5%.*

FF 5 SERIES SALINITY TOLERANT ALFALFA

Through focused breeding, FF 5 Series has salinity tolerant varieties that reduce the impact of salinity by 2.0 to 3.0 EC points. For a field with EC measurements approaching EC 4.0, the expected 35% seedling mortality and 15% yield loss can be reduced to a negligible amount.** And for fields with even higher levels of salinity, varieties with the salinity tolerant trait have allowed producers to plant alfalfa in areas where it was otherwise thought to be impossible.

* Maas,E.V. 1984. Salt Tolerance of plants. In Handbook of Plant Science in Agriculture (ed). B.R. Christie CRC Press Inc.

** Benes, S., et. al., What Is The Ability Of Alfalfa To Sustain Saline Conditions? In Proceedings, 2014 California Alfalfa, Forage, and Grain Symposium,Long Beach, CA, 10-12 December, 2014. UC Cooperative Extension, Plant Sciences Department, University of California, Davis, CA 95616. (See http://alfalfaucdavis.edu for this and other Alfalfa Symposium Proceedings.)

ICON KEY

Salt Tolerant

Very High Quality

Leafhopper Resistant

PEST RESISTANCE RATINGS

% Resistant Plants	Resistance Class	Class Abbreviation
0-5%	Susceptible	S
6-14%	Low Resistance	LR
15-30%	Moderate Resistance	MR
31-50%	Resistant	R
>50%	High Resistance	HR

LA CROSSE SEED + NEXGROW®: PREMIUM ALFALFA TECHNOLOGIES

HARVXTRA® ALFALFA WITH ROUNDUP READY® TECHNOLOGY

NEXGROW® alfalfa offers HarvXtra® alfalfa with Roundup Ready® Technology. The HarvXtra® Alfalfa with Roundup Ready® Technology trait puts you back in charge of your cutting schedule. A flexible cutting window makes it easier to manage your operation, but that isn't all it does for you. Maintain a normal harvest schedule and achieve higher forage quality than with conventional varieties at the same stage of maturity or delay harvest up to 10 days for higher yield potential without sacrificing quality.

ROUNDUP READY® ALFALFA VARIETIES

A critical component to a strong crop is a weed-free field. Along with conventional varieties, NEXGROW®alfalfa offers one of the industry's leading portfolios of alfalfa varieties with Roundup Ready® technology. Look for trusted varieties like 6430R and 6517.ST.R for help achieving a weed-free field.

DISEASE PROTECTION

Select NEXGROW® varieties include the UltraCut™ alfalfa disease package, helping growers produce a healthy alfalfa crop in field conditions susceptible to evolving Aphanomyces and Anthracnose disease strains. Its protection can help deliver an advantage through improved agronomic performance and yield potential. Look for UltraCut™ enhanced varieties like 6442HVXR and 6423R.

Includes race 1 and race 2 protection. In addition, Forage Genetics International, LLC (FGI) has identified a novel source of Aphanomyces resistance in the greenhouse and field that visibly outperforms unrelated varieties on the market when grown under natural or artificial disease pressure. FGI researchers have been working cooperatively with universities collecting and testing the most virulent strains of Aphanomyces to help determine the level of resistance to this novel source.
Includes Anthracnose Race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

SEED ENHANCEMENT & TREATMENT

La Crosse Seed's portfolio of elite alfalfas include seed enhancement and treatment options to optimize germination, nodulation and promote early-season health and root development – allowing more seedlings to survive and reach their full genetic potential.

PREMIUM SEED ENHANCEMENT + QUALITY SEED = BEST POSSIBLE SEEDLING ESTABLISHMENT

CrosseCoat™ is an elite platform of proven seed treatments to enhance germination, establishment and survival of the top legumes, offered within the Forage First® portfolio.

CROSSECOAT™ BENEFITS INCLUDE:

- Improves seeding distribution
- Improves seed-to-soil contact
- Improves water intake
- Protects against fungal attacks
- Enhances nutrient uptake
- Enhances nodulation to provide superior nitrogen fixation

COATING ABBREVIATIONS (AS NOTED ON LA CROSSE SEED PRICELIST)*

CTD	Coated Only
CPF	Coated, Pre-Inoculated, and Fungicide
CP	Coated, Pre-Inoculated
PI	Pre-Inoculated, No Coating or Fungicide

34% COATED SEED – RECOMMENDED SEED RATES

Coated seed items or mixes with coated seed have same recommended seeding rates as they would if non-coated

*Lot number abbreviations may differ from above. Refer to tag for specific seed treatments.

NEXGROW HARVXTRA ULTRACUT

6442HVX.RR

PERFORMANCE

- The first genetically enhanced alfalfa developed to maximize quality – 15-20% increase in RFQ over conventional check varieties
- Offers excellent harvest flexibility for optimal balance of quality and yield
- Top choice for poorly drained soils
- Features industry leading UltraCut® alfalfa disease package that offers high resistance to multiple strains of Aphanomyces root rot and Anthracnose Race 5

AGRONOMICS

Fall Dormancy Class	FD 4.4
Winter Hardiness Class	WS 2.2
Total DRI	40/40

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Anthracnose 5	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Spotted Alfalfa Aphid		●			

NEXGROW

6374R

Roundup Ready ALFALFA

PERFORMANCE

- Quick regrowth in a FD3, that delivers potential for high yields and long stand life
- Extremely winterhardy (WH=1.0); delivers excellent cold tolerance even under harsh weather conditions
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 3.3
Winter Hardiness Class	WS 1.0
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Spotted Alfalfa Aphid		●			
Stem Nematode		●			

PEST RESISTANCE RATINGS

% Resistant Plants	Resistance Class	Class Abbreviation
0-5%	Susceptible	S
6-14%	Low Resistance	LR
15-30%	Moderate Resistance	MR
31-50%	Resistant	R
>50%	High Resistance	HR

NEXGROW ULTRACUT

6423R

Roundup Ready ALFALFA

PERFORMANCE

- Top Roundup Ready® alfalfa variety with the UltraCut® disease package with extreme cold tolerance
- Best choice for heavy, compacted and saturated soils
- Salt tolerance at germination
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 4.3
Winter Hardiness Class	WS 1.4
Total DRI	40/40

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Anthracnose 5	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid	●				
Spotted Alfalfa Aphid		●			
Stem Nematode		●			

NEXGROW

6427R

Roundup Ready ALFALFA

PERFORMANCE

- Top yield potential variety with high resistance to stem nematodes
- High tolerance to salt at germination
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 4.1
Winter Hardiness Class	WS 1.0
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Spotted Alfalfa Aphid		●			
Stem Nematode	●				

NEXGROW

6430R

Roundup Ready ALFALFA

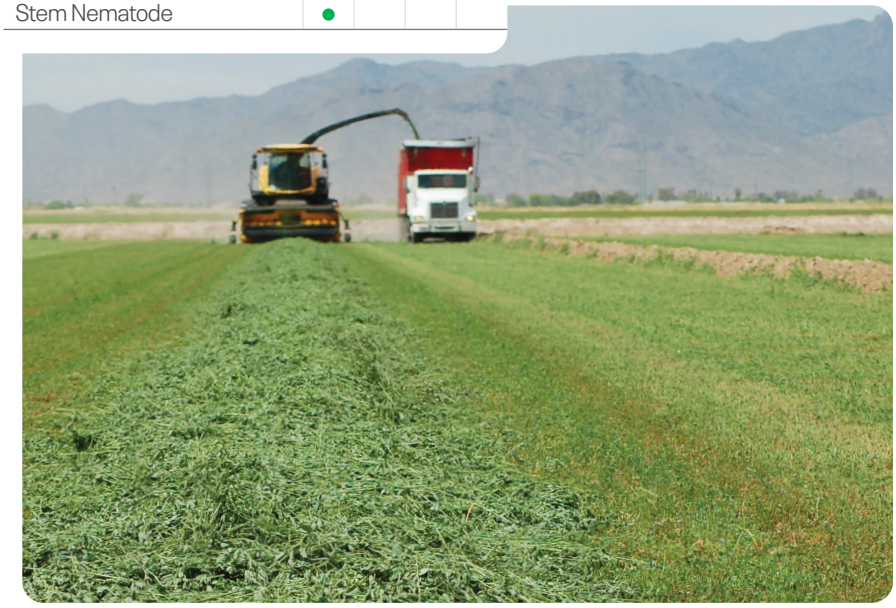
PERFORMANCE

- Good stress tolerance for dryland, irrigated and saturated soils under intense management
- Forage quality is above average with a high leaf-to-stem ratio
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
Total DRI	34/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Stem Nematode	●				



ICON KEY

- Salt Tolerant
- Very High Quality
- Weed Resistance

PEST RESISTANCE RATINGS

% Resistant Plants	Resistance Class	Class Abbreviation
0-5%	Susceptible	S
6-14%	Low Resistance	LR
15-30%	Moderate Resistance	MR
31-50%	Resistant	R
>50%	High Resistance	HR

NEXGROW

6517R.ST

Roundup Ready ALFALFA

PERFORMANCE

- Replaces NexGrow 6516 with multiple generations of salt tolerant breeding
- High resistance to Stem Nematode
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 5.1
Winter Hardiness Class	Very Hardy
Total DRI	35/35

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid	●				
Spotted Alfalfa Aphid	●				
Stem Nematode	●				

NEXGROW

6720R

Roundup Ready ALFALFA

PERFORMANCE

- Excellent combination of yield potential and forage quality
- High resistance to Stem Nematode
- Provides salt tolerance at critical stages in plant development
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 7.3
Total DRI	26/30

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Bacterial Wilt		●			
Fusarium Wilt		●			
Phytophthora Root Rot		●			
Verticillium Wilt		●			
Insects					
Blue Pea Aphid		●			
Pea Aphid	●				
Spotted Alfalfa Aphid		●			
Stem Nematode	●				

NEXGROW ULTRA CUT

NEXTECT RR

Roundup Ready ALFALFA

PERFORMANCE

- An economical Roundup Ready® alfalfa blended for dependable forage yield and good quality
- Good winterhardiness and pest package with resistance to key diseases
- The Roundup Ready® Alfalfa trait provides optimal weed control, making crop management easier than ever before. It helps produce better feed quality and stand during establishment while increasing yield potential.

AGRONOMICS

Fall Dormancy Class	FD 4.0
Winter Hardiness Class	WS 2.0
Total DRI	28/30

PEST PACKAGE	HR	R	MR	LR	S
Diseases					
Anthracnose		●			
Aphanomyces-Race 1		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

NEXGROW® ALFALFA COMPARISON CHART

		FALL DORMANCY	WINTER SURVIVAL	WINTER SURVIVAL	TOTAL DRI	DISEASE & PEST CONTROL: BACTERIAL WILT	FUSARIUM WILT	VERTICILLIUM WILT	ANTHRACNOSE	ANTHRACNOSE - RACE 5	PHYTOPHTHORA ROOT ROT	APHANOMYCES ROOT ROT - RACE 1	APHANOMYCES ROOT ROT - RACE 2	APHNOMYCES ROOT ROT - EVOLVING STRAINS	PEA APHID	BLUE APHID	COWPEA APHID	SPOTTED ALFALFA APHID	POTATO LEAFHOPPER	STEM NAMATODE	NORTHERN ROOT KNOT NEMATODE	SOUTHERN ROOT KNOT NEMATODE
NEXGROW																						
6442 HVX.RR		4.4	2.2	2.2	40/40	HR	HR	HR	HR	HR	HR	HR	HR	HR	°	°	°	R	°	°	°	°
6374R		3.3	1.0	1.0	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	°	°	R	°	R	°	°
6423R		4.0	1.0	1.0	40/40	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	°	°	R	°	R	°	°
6427R		4.1	1.0	1.0	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	°	°	R	°	HR	°	°
6430R		4.0	2.0	2.0	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	°	°	°	°	R	°	°
6517R.ST		5.1	°	°	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	HR	°	°	HR	°	HR	°	°
6720R		7.3	°	°	24/30	R	R	R	HR	°	R	HR	°	°	HR	R	°	R	°	HR	°	°
NEXTECT RR		4.0	2.0	2.0	28/30	HR	HR	HR	R	°	HR	R	°	°	°	°	°	°	°	°	°	°

ABOUT FORAGE FIRST®

FORAGE FIRST®
BY DLF

GREATER VALUE. GOOD MOVE.

Yield and quality matter. But there's more. Our goal is to provide a higher standard of forage to maximize ROI – while keeping your wallet in mind. We take pride in delivering proven products that increase the bottom line at a good price.

ALWAYS INNOVATING

As a forage leader for many years, we've always worked hard to improve. Continual research and development of new varieties ensures the right balance of protein and feed quality, recovery and grazability to suit each animal and operation. Every top-performing variety is tested in many trials before being put to use. From the latest genetics to new treatments and technologies, we have you covered.

FORAGE WITH MORE PROFIT POTENTIAL

Walk into a field planted with Forage First® forage seed and you'll instantly notice lush, productive fields. That means healthy gains for your animals and land that lives up to its potential.

MAXIMUM FLEXIBILITY

We provide a diverse selection of products for producing high quality forage for your livestock and dairy operation. Our versatile portfolio offers a variety of proven products to fit each unique operation and was created with flexibility and ease of management in mind.

IMPORTANT FORAGE CONSIDERATIONS

There are many aspects to consider to ensure the highest potential and productivity for your land and your animals. Our team has significant experience in the forage industry, and many agronomic resources on hand to increase your opportunity for success.

Visit foragefirst.com for more information on important forage considerations including:

- Importance of fertility
- Herbicide interactions
- Livestock safety
- Nutritional information
- And much more!

DLF FIBER ENERGY

WHEN SUSTAINABLE FARMING GENERATES HIGHER PROFIT

Years of breeding and selection of only the best forage candidates have increased the overall digestibility of our forages, and only products with the highest fiber digestibility are honored with a DLF Fiber Energy badge.

- The global demand for meat and milk is high, and as the world's population increases exponentially, the demand of tomorrow will be even higher
- Through our breeding program, we developed DLF varieties with high cell wall digestibility – we call them DLF Fiber Energy varieties. These perfected DLF varieties give you more forage energy and a higher milk yield or meat production from your livestock.
- Each animal eats the same amount of grass, but with a higher digestibility, the feed uptake increases, and provides more energy to the animal
- 1% increase in fiber digestibility (dNDF) = +0.55 lbs milk per cow per day or .053 lbs of live weight gain per day

DLF FIBER ENERGY QUALIFICATIONS

- ✓ *dNDF 2% higher than check variety*
- ✓ *Recognized check variety*
- ✓ *2 years of data collected from DLF head to head trials*

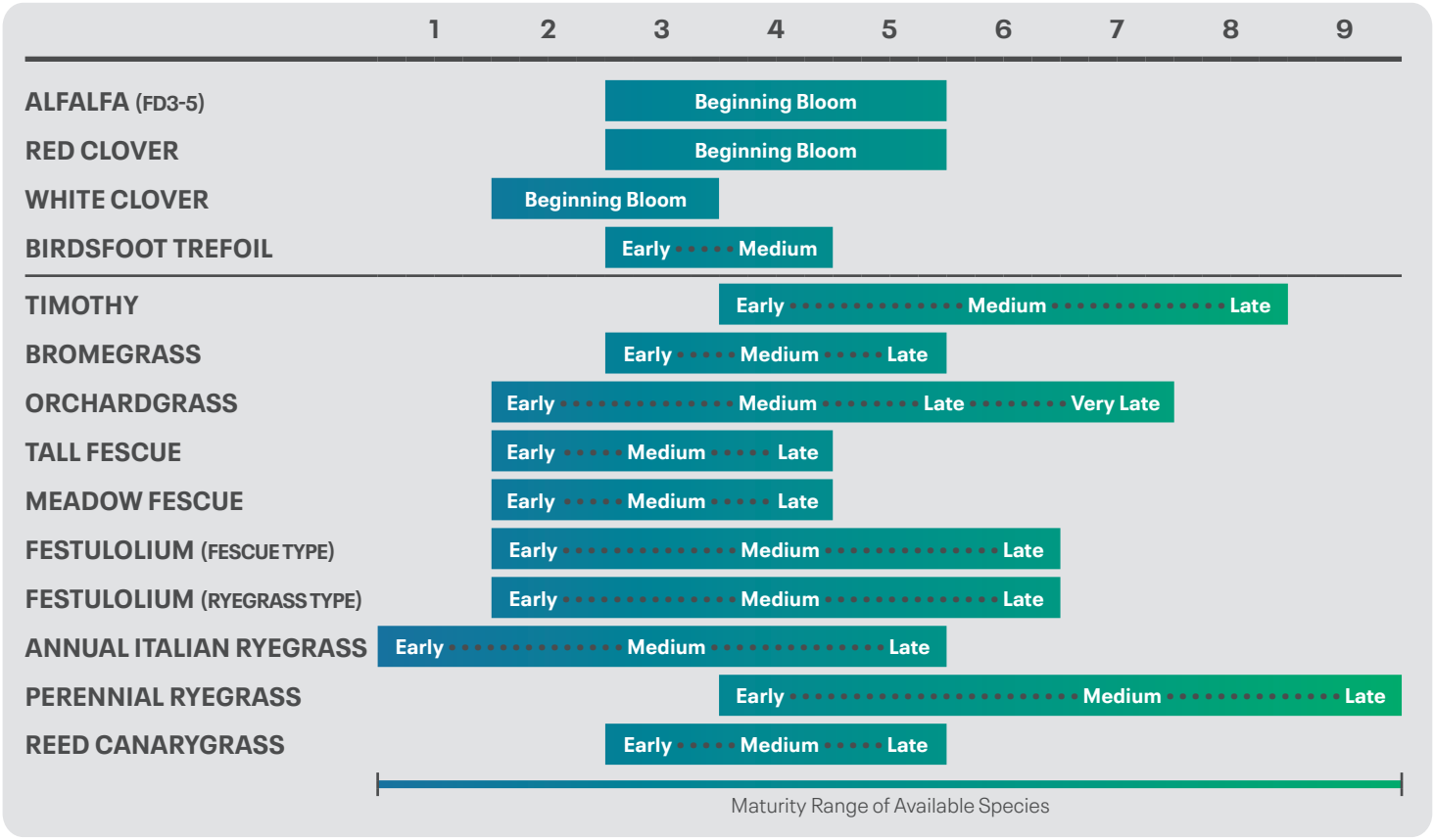
HIGHER DIGESTIBILITY = HIGHER FEED INTAKE

- Livestock perform better with maximum forage yield, digestibility and protein content
- Our top products improve dry matter intake and boost milk or meat yields
- It is the surest way to maximize output without increasing input costs

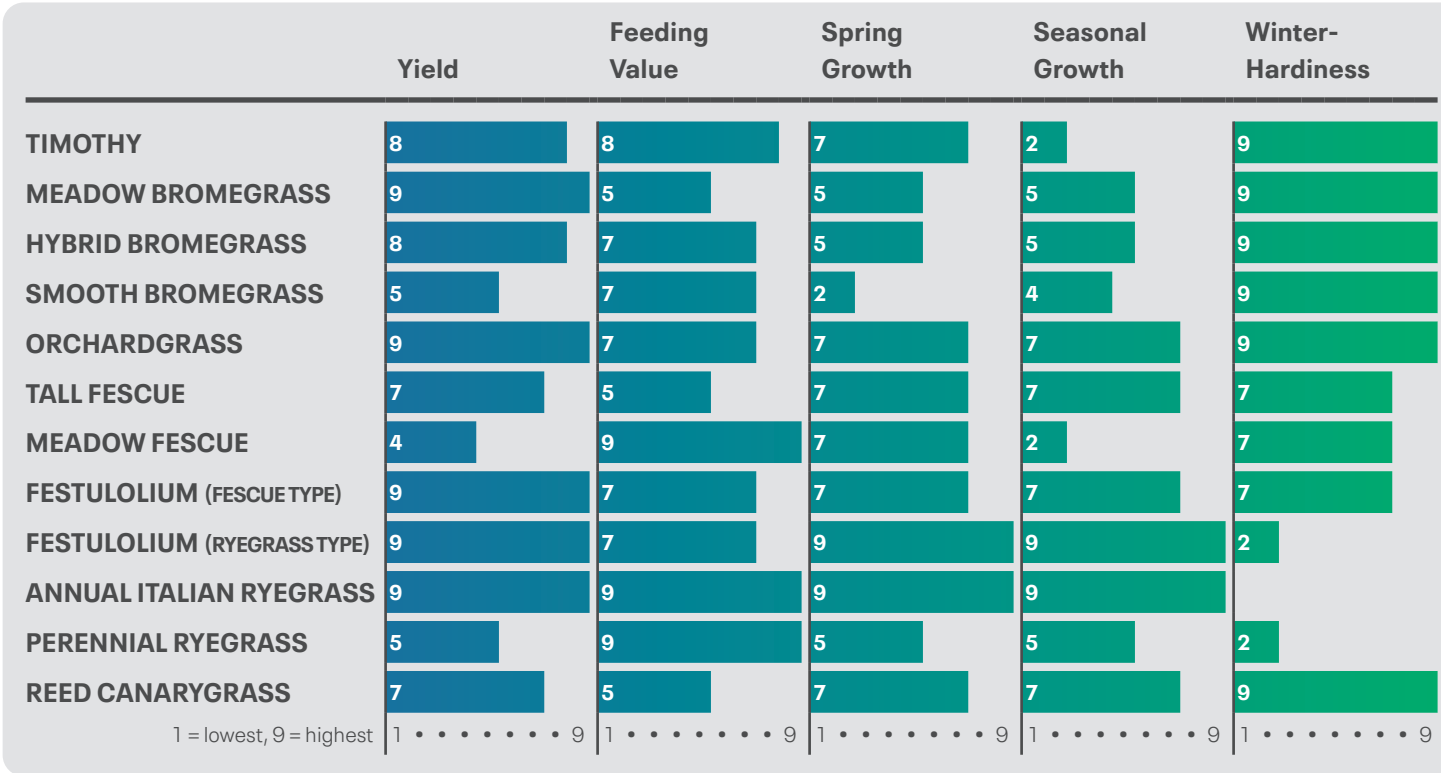
FORAGE MATURITY MATRIX

DLF's Forage Maturity Index has been designed to accommodate the broader range of species and maturities utilized in the North American forage industry. It has a 9 point index with a maturity difference of approximately 3 days per unit, reflecting Oregon conditions. Variance with this index may occur in different regions since some cultivars are more temperature dependent, while others may be more day length dependent in maturity.

With all species using the same Maturity Index Rating System, the maturity range of various forage species can now be directly compared on the same chronological maturity index (the grey index scale at the top of the matrix). The gradient blocks in the Forage Maturity Matrix Species reflect the maturity range of available varieties within the species. The respective maturity of public varieties using the traditional nomenclature of early/medium/late is superimposed on the index. A maturity index in one species corresponds to the same maturity in another forage species.



PROPERTIES OF GRASSES



CLOVER & OTHER LEGUMES

3-YEAR RED CLOVER

FORAGE FIRST® FACTOR: Red clover resilience (or lack thereof) is typically triggered by diseases that affect crown health. Most common red clovers (medium red clover included) typically persist for a couple of years before they fall victim. In many cases, a 2-year stand of clover fits the cropping cycle, delivering forage in a brief timeframe and providing a valuable nurse or relay crop for the ensuing cash crop. However, when the rotation allows, it makes sense to incorporate a 3-year clover. 3-year clovers have a stronger resistance to crown diseases that enables persistence into a 3rd year (or 2 years removed from the seeding year). The additional year provides at least 1 spring cutting, if not multiple harvests to greater supplement hay stocks.

REDKIN	DLF, DLF Fiber Energy, CrossecoatTM	•Selected for persistence & disease resistance •3 year yield performance	•High forage quality & yield potential
RED CARPET® XL 990	XL, CrossecoatTM	•Best utilized for silage or spring hay •Increased disease resistance to southern anthracnose & downy mildew	•May produce 3 cuttings on second-year stands •Works well in rotational grazing programs

ALSIKE CLOVER

RADIUM XL	XL, CrossecoatTM	•Withstands heavy grazing pressure, but merits management for success (see "What Forages are Safe for Animals" at foragefirst.com)	•Tolerant to poorly drained soils •Survives in poor pH soils

BALANSA CLOVER

FIXATION	Elite	•High yield and quality potential •Excellent palatability and digestibility	•Tolerant of a variety of soil types

BERSEEM CLOVER

FROSTY	Elite	•Excellent companion to alfalfa •Quick establishment	•High forage quality •Similar dry down to alfalfa

RED CLOVER

ESTABLISHMENT	FAST
PERSISTENCE	LOW
DROUGHT TOLERANCE	MED LOW
WINTER HARDINESS	MED HIGH
PALATABILITY	MED
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	MED

PLANTING TIMES

SPRING PLANTING	FEB - MAY
FALL PLANTING	AUG - OCT
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	8 - 12
MIXES	4 - 8

HARVEST MANAGEMENT

Harvest at 1/4 - 1/2 bloom; leave at least 3-4" of growth after each harvest

ALSIKE CLOVER

ESTABLISHMENT	FAST
PERSISTENCE	MED
DROUGHT TOLERANCE	LOW
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - OCT
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	6 - 8
MIXES	2 - 4

BALANSA & BERSEEM CLOVER

ESTABLISHMENT	MED FAST
PERSISTENCE	MED
DROUGHT TOLERANCE	MED LOW
WINTER HARDINESS	LOW
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	MED

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - OCT
LIFE CYCLE	ANNUAL

SEEDING RATE (LBS/ACRE)

	BALANSA	*BERSEEM*
ALONE	5 - 8	15 - 25
MIXES	3 - 5	7 - 12

INTERMEDIATE WHITE / LADINO CLOVER

ESTABLISHMENT	FAST
PERSISTENCE	MED
DROUGHT TOLERANCE	MED LOW
WINTER HARDINESS	MED HIGH
PALATABILITY	MED HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	MED

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - OCT
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	4 - 6
MIXES	2 - 4

BIRDSFOOT TREFOIL

ESTABLISHMENT	SLOW
PERSISTENCE	HIGH
DROUGHT TOLERANCE	HIGH
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	MED
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - OCT
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	8 - 10
MIXES	4 - 5

ICON KEY

- DLF **ELITE VARIETY**
- Elite **ELITE VARIETY**
- XL **XL BRAND**
- DLF Fiber Energy **DLF FIBER ENERGY**
- Crossecoat **CROSSECOAT™ TECHNOLOGY**

INTERMEDIATE WHITE CLOVER

RIESLING — DLF

- High stolon density
- Medium to large leafed white clover
- Extended grazing potential during colder months
- Yield of ladino, persistence of intermediate

LADINO CLOVER

ORION XL — XL

- Large white clover offering increased quality & protein digestibility
- Good regrowth following grazing
- Tolerates fall usage better than red clover
- Easy to establish
- Superior winter hardiness
- Tolerates low pH soils

HESLOP — DLF

- Selected for improved plant vigor and persistence
- Larger leaf size, and high stolon density
- Uniform plant type

BIRDSFOOT TREFOIL

LOTUS XL — XL

- Tolerant of poorly drained, low pH soils
- High disease resistance
- Fast recovery after cutting
- Upright growth habit

DIFFERENCES BETWEEN 3-YEAR RED CLOVERS & COMMON MEDIUM RED CLOVER

VARIETY	APPROX. COST/LB	LBS PLANTED/ACRE (OVERSEEDING)	SEED COST	3-YEAR TONNAGE ESTIMATION*	YIELD VALUE†	N FIXATION & VALUE‡	TOTAL VALUE	NET RETURN/ACRE
Redkin 3-Year Red Clover	$3.80	12	$45.60	1.25 tons/year = 3.75	$543.75	$43.20	$586.95	$541.35
FF Red Carpet 3-Year Red Clover	$2.50	12	$30.00	1.0 tons/year = 3.0	$435.00	$43.20	$478.20	$448.20
Common Medium Red Clover	$1.90	12	$22.80	0.75 tons/year = 1.5**	$217.50	$28.80	$246.30	$223.50

*With better disease tolerance and crown health, one could easily assume 3-year clovers will outyield medium red in years 1 & 2 as well
**Medium Red Clover only has 2 years of production in a 3-year period
†Based on $145/ton
‡Based on Commercial Nitrogen @ $.48/LB

FORAGE GRASSES

ANNUAL RYEGRASS

FORAGE FIRST® FACTOR: Integrating annual ryegrass in the forage system requires the understanding that spring management will be paramount, depending on forage utilization. Dozens of annual ryegrass varieties exist, so make 100% sure the selection matches the goal and management style of the producer. Improved varieties offer greater winter tolerance and improved forage yields with added pest resistance.

COLDSNAP™

- Suitable for grazing or silage in fall (&/or spring in areas where it overwinters)
- Heavy dry matter producer with outstanding quality
- Widely adapted for forage production in Upper Midwest through Transition Zone
- Great for extending legume stands or emergency forage

ITALIAN RYEGRASS

FORAGE FIRST® FACTOR: Greater persistence mixed with better forage flexibility are reasons growers use Italian Ryegrass. During the establishment year, Italian types remain vegetative, but will act as an annual after winter vernalization in year two and need to be managed as such. Italian ryegrass is highly palatable with high leaf to stem ratio, providing higher digestibility. Improved varieties bring better winter hardiness and greater forage yield.

TETRABANA XL (XL)

- Tetraploid with high palatability
- Rapid establishment-ideal for green chop or silage, intensive grazing, renovating pastures & frost seeding
- Excellent for high-traffic or wet pastures
- High yielding & top feed quality

GRASSHANCER 200 (DLF)

- Blend of diploid & tetraploid Italian annual ryegrass
- Seeded in spring to boost season production
- Excellent establishment & improved persistence
- Rapid regrowth ability for green chop or silage

FIRKIN (DLF)

- Improved disease resistance
- Tetraploid variety with high quality & digestibility
- High vernalization requirement for no heading in seeding year

BROMEGRASS

FORAGE FIRST® FACTOR: Bromegrass can be challenging for many livestock and hay producers. Typically, this sod-forming grass has a shortened grazing or harvest window compared to other cool season grasses. Since bromegrass spreads rapidly by seeds and rhizomes, it can become increasingly dominant in pastures and paddocks. Boosting stocking rates in spring and fall, and either moderate use or rotating away from bromegrass during the summer, will help year-round utilization.

BIG TON XL
SMOOTH BROMEGRASS (XL)

- Vigorous, long-lived sod-forming perennial grass
- Excellent drought resistance
- Improved leaf disease/seedling blight resistance
- VERY versatile, suited to grazing & haying
- Well-suited alongside alfalfa & in mixed stands

FLEET
MEADOW BROMEGRASS (ELITE)

- High yields & rapid regrowth
- Excellent season-long forage quality
- Suitable for hay or pasture

ANNUAL RYEGRASS	
ESTABLISHMENT	FAST
PERSISTENCE	LOW
DROUGHT TOLERANCE	MED
WINTER HARDINESS	MED
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	ANNUAL

SEEDING RATE (LBS/ACRE)

ALONE	20 - 40
MIXES	5 - 10
EMERGENCE (DAYS)	5 - 14

ROTATIONAL GRAZING (IN)

BEGIN	8 - 12
STOP	3 - 6
AVERAGE DAYS REST	25 - 30

HARVEST MANAGEMENT

Mechanical harvest should be made at boot to early heading stage. Graze during vegetative stage; removal during stem elongation will slow production until new tiller buds are available for regrowth.

BROMEGRASS	*SMOOTH*	*MEADOW*
ESTABLISHMENT	SLOW	SLOW
PERSISTENCE	HIGH	HIGH
DROUGHT TOLERANCE	MED	MED
WINTER HARDINESS	MED	MED
PALATABILITY	HIGH	HIGH
YIELD POTENTIAL	HIGH	HIGH
GRAZING TOLERANCE	HIGH	MED

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	15 - 20
MIXES	5 - 10
EMERGENCE (DAYS)	14 - 21

ROTATIONAL GRAZING (IN)

BEGIN	10 - 12
STOP	4 - 6
AVERAGE DAYS REST	20 - 30

HARVEST MANAGEMENT

Bromegrass is tolerant of grazing in spring before the growing point emerges from below the ground; after jointing, frequent harvest can destroy stands. Mechanical harvest at boot to early bloom stage.

ICON KEY

- DLF ELITE VARIETY
- ELITE VARIETY
- XL BRAND
- DLF FIBER ENERGY
- CROSSECOAT™ TECHNOLOGY

FESTULOLIUM

FORAGE FIRST® FACTOR: Festulolium is a hybrid of fescue and ryegrass. Some varieties exhibit greater characteristics (both in appearance and agronomic performance) as fescue and some are more similar to ryegrass. Selecting the right festulolium is critical, depending on its use and environment.

FUSION XL	XL	• Italian Ryegrass x Meadow Fescue • Ideal in winter-damaged alfalfa or where emergency forage is needed	• Increased summer performance & drought tolerance • Fast germination & establishment • High yielding & very palatable
FOJTAN	DLF, DLF FIRST ENERGY	• Perennial Ryegrass x Tall Fescue • Looks & grows like Tall Fescue • Higher forage quality & very palatable	• Excellent for grazing, silage & dry hay • Good rust resistance & winter hardiness

KENTUCKY BLUEGRASS

BALIN	DLF	• Good disease resistance • Suitable in mixes for intensive & extensive use	• Establishes fast with high yields • Persistence & high yields in permanent pastures

ORCHARDGRASS

FORAGE FIRST® FACTOR: La Crosse Seed works hard to bring varieties forward that exhibit strong disease resistance and tolerate the vigorous management schemes that many producers utilize. Maturity should be considered whether matching this grass with legumes or in a mono-culture, as harvesting in the boot stage is the goal. Proper fertility and higher cutting/grazing heights also aid in persistence.

INAVALE	DLF	• Medium maturity • Improved disease resistance	• Very good summer production • Well suited for grazing
HAYMATE XL	XL	• Medium-late maturity • Great companion for alfalfa	• Improved disease resistance • Maturity allows for more flexibility with first harvest in spring
ECHELON	DLF	• Very late maturing, maintains forage quality longer between harvests • Superior leaf disease resistance	• Perfect companion for alfalfa or clover mixes • Excellent persistence & vigor • Increased palatability & stand persistence
CAPTUR	DLF, DLF FIRST ENERGY	• Very late maturing (4 - 6 days later than Echelon), maintains forage quality longer between harvests • High yield, improved rust resistance, high salt tolerance	• Perfect companion for alfalfa or clover mixes • Excellent persistence & vigor

FESTULOLIUM

ESTABLISHMENT	FAST
PERSISTENCE	MED
DROUGHT TOLERANCE	MED
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	30 - 40
MIXES	10 - 15
EMERGENCE (DAYS)	7 - 14

ROTATIONAL GRAZING (IN)

BEGIN	10 - 12
STOP	4 - 6
AVERAGE DAYS REST	25 - 35

HARVEST MANAGEMENT

Mainly used in pastures for either grazing or fall stockpiling. Harvest for hay or haylage at boot to early heading stage.

KENTUCKY BLUEGRASS

ESTABLISHMENT	SLOW
PERSISTENCE	HIGH
DROUGHT TOLERANCE	MED
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	LOW
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	10 - 15
MIXES	3 - 10
EMERGENCE (DAYS)	14 - 28

ROTATIONAL GRAZING (IN)

BEGIN	4 - 6
STOP	2 - 3
AVERAGE DAYS REST	30 - 40

HARVEST MANAGEMENT

High stocking rates in spring take advantage of its early production. Because of its shorter stature, bluegrass is perfectly suited for grazing & tolerates close (or over) grazing.

ORCHARDGRASS

ESTABLISHMENT	MED
PERSISTENCE	HIGH
DROUGHT TOLERANCE	MED
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	MED

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	15 - 25
MIXES	3 - 10
EMERGENCE (DAYS)	7 - 21

ROTATIONAL GRAZING (IN)

BEGIN	8 - 12
STOP	4 - 6
AVERAGE DAYS REST	15 - 30

HARVEST MANAGEMENT

Harvest at boot stage in spring; cut or graze frequently in spring & early summer (cutting frequency influenced by temperature, soil moisture & fertility).

FORAGE GRASSES

TALL FESCUE & MEADOW FESCUE

FORAGE FIRST® FACTOR: Various levels of endophyte toxicity are common in the majority of US tall fescue fields. Unless KY31 is requested, La Crosse Seed is focused on offering only varieties that are free of any endophytes. Improved tall fescue varieties demonstrate better cold tolerance across the Midwest while animal performance trials show enhanced grazing preference and palatability compared to older genetics. If renovating endophyte-infected fescue, it's best to rotate out for a period of 1-2 years until infected seed populations diminish and a new stand can establish without competition. If the goal is to improve existing pasture, adding legumes (like red clover) makes sense by helping production and quality. USDA research has shown that clover reduces some of the negative effects cattle see when consuming the infected plants.

Protek® is a novel endophyte (Neotyphodium coenophialum) and represents a pivotal advancement in sustainable agriculture, offering farmers a safer forage alternative without compromising animal performance and health.

Forage tall fescue is broadly adapted and an excellent forage resource. However, in some regions, the endophyte found in Kentucky 31 plants can have a negative impact on animals. Extensive research highlights the economic benefits of transitioning from toxic endophyte found in Kentucky 31 pastures to novel endophyte tall fescues, including improved calf weight gains, increased milk production, and higher conception rates.

STARGRAZER XL **TALL FESCUE**	XL	• Well adapted for the Midwest, Mid-Atlantic & Northeast • Suitable for both pastures or hay production	• Slightly earlier maturing than KY31 • Good yielder with excellent persistence
TOWER **TALL FESCUE**	DLF	• Broadly adapted with improved tolerance to extreme conditions • Late maturing variety suitable for intense grazing & hay environments	• Improved disease resistance (rust & other leaf diseases) • Maturity helps maintain higher RFQ at harvest
MARTIN 2 PROTEK® **TALL FESCUE**	DLF Protek	• Adapted to the entire US tall fescue market • Medium maturity • Endophyte defends against surface feeding insects	• Increased forage productivity compared to non-inoculated plants of same variety • Improved tolerance to heat and drought
LAURA **MEADOW FESCUE**	DLF	• Very quick to establish & very aggressive • Excellent for cold & wet areas	• High yielding first cuts with excellent regrowth • Very good winter hardiness & persistence
HYPERBOLA **MEADOW FESCUE**	DLF	• Increased disease tolerance • Increased persistence between cuttings & year over year	• Very quick to establish & very aggressive • High yielding first cuts with excellent regrowth

REED CANARYGRASS

DEFIANT XL	XL	• Performs well on poorly-drained soils & overly wet environments • Low alkaloid	• Can be used for hay, silage or pasture • Performs well on low pH soils • Widely adapted & extremely drought tolerant

FESCUE	TALL	MEADOW
ESTABLISHMENT	MED	MED
PERSISTENCE	MED HIGH	MED HIGH
DROUGHT TOLERANCE	HIGH	MED LOW
WINTER HARDINESS	MED	HIGH
PALATABILITY	MED	HIGH
YIELD POTENTIAL	HIGH	MED
GRAZING TOLERANCE	HIGH	HIGH

PLANTING TIMES

SPRING PLANTING	MAR-MAY	APR-MAY
FALL PLANTING		AUG-SEP
LIFE CYCLE		PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	25 - 30
MIXES	5 - 15
EMERGENCE (DAYS)	14 - 21

ROTATIONAL GRAZING (IN)

BEGIN	8 - 10
STOP	3 - 6
AVERAGE DAYS REST	20 - 30

HARVEST MANAGEMENT

Harvest at boot stage in spring; pure stands work well when stockpiled in fall.

REED CANARYGRASS	
ESTABLISHMENT	SLOW
PERSISTENCE	HIGH
DROUGHT TOLERANCE	HIGH
WINTER HARDINESS	HIGH
PALATABILITY	MED
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	HIGH

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	12 - 14
MIXES	6 - 8
EMERGENCE (DAYS)	14 - 28

ROTATIONAL GRAZING (IN)

BEGIN	10 - 12
STOP	4 - 6
AVERAGE DAYS REST	20 - 30

HARVEST MANAGEMENT

Mechanical harvest at heading stage for highest yields; most annual growth occurs before July - rotate pastures often; top growth will desiccate at frost so manage accordingly.

PERENNIAL RYEGRASS (TETRAPLOID)

FORAGE FIRST® FACTOR: Perennial ryegrass is best suited for milder climates, where drought and elevated temperatures aren't as common. Although improved varieties offer increased disease resistance, crown rust can easily overtake a population (even with varietals that offer some protection). Perennial ryegrass includes both diploid and tetraploid varieties. Tetraploid varieties are usually taller, with wider leaves and longer tillers – offering greater production consistently. Tetraploids are commonly less dense, which makes them a good option when mixed with legumes. They also tend to be more effective in grazing environments, however they typically don't persist as long as diploid options. While diploids often have deeper crowns, which make them more tolerant to stress and traffic, they also provide better sod coverage, which is valuable for quick establishment in multiple soil environments.

ENDO-GRAZE XL	XL	• High-yielding with rapid establishment • Excellent high quality forage in spring & fall	• Extremely palatable
DEXTER 1	DLF, DLF FIBER ENERGY	• Early spring growth with high dry matter yield • Very high yield with extremely fast recovery • High cold tolerance	• Very high leaf to stem ratio • Tolerates intensive grazing
KENTAUR	DLF	• Excellent resistance to leaf spot & crown rust • High sugar content • Excellent forage quality & consistency	• Early spring growth with high dry matter yield • Good recovery after cutting • Cold & heat tolerant

TIMOTHY

FORAGE FIRST® FACTOR: Improved varieties of timothy are about improving its faults. Early maturing varieties align more closely when paired with alfalfa's harvest schedules. Timothy's shallow root system can struggle in warm and droughty environments. Increasing seeding rates can compensate for timothy's slow establishment, increasing stand density and weed suppression. What it lacks in seedling vigor, it makes up in winter hardiness.

TOP TIM XL	XL	• Early maturity blend • Excellent with clover or alfalfa for hay or pasture	• 1 - 2 weeks earlier to boot stage than Climax in most environments
ERECTA	DLF	• Late maturing • Very winter-hardy	• Known for its palatability & digestibility
VALOR DT	DLF, DLF FIBER ENERGY	• Early maturing with excellent early spring vigor • Very winter-hardy	• Excellent drought tolerance

BERMUDAGRASS & MORE

La Crosse Seed can access virtually any seed you need, including Bermudagrass & more. Contact us to learn more.

PERENNIAL RYEGRASS

ESTABLISHMENT	FAST
PERSISTENCE	MED
DROUGHT TOLERANCE	MED
WINTER HARDINESS	MED
PALATABILITY	HIGH
YIELD POTENTIAL	HIGH
GRAZING TOLERANCE	MED HIGH

PLANTING TIMES

SPRING PLANTING	FEB - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	30 - 40
MIXES	6 - 10
EMERGENCE (DAYS)	5 - 14

ROTATIONAL GRAZING (IN)

BEGIN	8 - 12
STOP	2 - 4
AVERAGE DAYS REST	15 - 30

HARVEST MANAGEMENT

Once established, ryegrass can be grazed (even continually) as quick as 3-4" in height assuming wet conditions don't ruin stand. Less dm will require longer curing times relative to other cool season grasses.

TIMOTHY

ESTABLISHMENT	SLOW
PERSISTENCE	MED
DROUGHT TOLERANCE	MED
WINTER HARDINESS	HIGH
PALATABILITY	HIGH
YIELD POTENTIAL	MED
GRAZING TOLERANCE	LOW

PLANTING TIMES

SPRING PLANTING	MAR - MAY
FALL PLANTING	AUG - SEP
LIFE CYCLE	PERENNIAL

SEEDING RATE (LBS/ACRE)

ALONE	8 - 15
MIXES	2 - 6
EMERGENCE (DAYS)	14 - 21

HARVEST MANAGEMENT

Because of timothy's lack of basal leaves to support regrowth, as well as its limited energy storage, frequent cutting or grazing greatly weakens stands. Harvest in spring at boot stage.

> "We choose to sell premium brands like Forage First because it helps differentiate our business in the marketplace. The way to compete with big box companies is to offer premium varieties and brands that you can't find in many of those mainstream stores."
>
> Jeff G.,
> Northeastern Missouri

ICON KEY

- DLF ELITE VARIETY
- ELITE VARIETY
- XL BRAND
- DLF FIBER ENERGY
- NOVEL ENDOPHYTE
- CROSSECOAT™ TECHNOLOGY

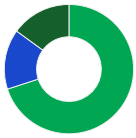
FORAGE FIRST® GRASS & LEGUME MIXES

We provide a diverse set of mixes to produce high quality forage for your unique operation. Our versatile pasture mix portfolio offers a variety of proven products to fit any need, created with flexibility and ease of management in mind.

SEEDING RATE (LBS/ACRE)

ALFALFA BASED MIX — NEW FORMULA — 18 - 20

Suited for traditional hay production & increased management environments. Good winter hardiness. Utilizes 42.A2 Brand alfalfa with high resistance to Aphanomyces Race 2. Replaces 715 Forage Mix.



70% FF 42.A2 Brand Alfalfa
15% Red Carpet® XL 990 Red Clover
15% Top Tim XL Timothy

ALL PURPOSE MIX — 25 - 30

Flexible for hay & long-term pasture across a wide range of soils, but responds to better soils, irrigation & increased fertility.

22% FF Premium Alfalfa
20% Top Tim XL Timothy
15% Haymate XL Orchardgrass
13% Red Carpet® XL 990 Red Clover
12% Endo-Graze XL Perennial Ryegrass
8% Radium XL Alsike Clover
5% Tetrabana XL Italian Ryegrass
5% Orion XL Ladino Clover

CLOVER-BASED MIX — 16 - 18

Formulated for wetter soils with a history of disease & fertility problems. Use in soils with low pH (below 6.5).

63% Red Carpet® XL 990 Red Clover
25% Top Tim XL Timothy
10% Radium XL Alsike Clover
2% Orion XL Ladino Clover

SEEDING RATE (LBS/ACRE)

ALFALFA HAY & PASTURE MIX — 18 - 20

Maximum production per acre. Produces high quality balanced hay.

40% FF Premium Alfalfa
20% Endo-Graze XL Perennial Ryegrass
20% Haymate XL Orchardgrass
15% Top Tim XL Timothy
5% Orion XL Ladino Clover

BEEF MIX — 30 - 40

High protein for maximum daily gain. Strong persistence & regrowth that withstands grazing pressure/hay production. Contains endophyte free tall fescue.

35% Endo-Graze XL Perennial Ryegrass
20% FF Premium Alfalfa
15% Big Ton XL Smooth Bromegrass
15% Stargrazer XL Tall Fescue
10% Fusion XL Festulolium
5% Top Tim XL Timothy

TRIPLE CROWN MIX — 30 - 40

Excellent yields of high-energy feed. Excellent for active horses.

35% Endo-Graze XL Perennial Ryegrass
20% FF Premium Alfalfa
20% Top Tim XL Timothy
15% Balin/Ginger Kentucky Bluegrass
10% Fusion XL Festulolium

FORAGE FIRST® GRASS MIXES

Our all grass mixes feature premium blends of elite performing forage grass varieties (sod-forming and non sod-forming), including endophyte fungus free.

SEEDING RATE (LBS/ACRE)

VERSAGRASS™ MIX — 25 - 30

Excellent for waterways, terraces, ditches, banks & headlands. Great for permanent pastures and companion crop for hay production.

- **25%** Big Ton XL Smooth Bromegrass
- **25%** Endo-Graze XL Perennial Ryegrass
- **25%** Haymate XL Orchardgrass
- **25%** Top Tim XL Timothy

BLM #4 MIX — 30 - 40

Versatile mix, establishes quickly. Endophyte-free tall fescue extends productivity into hot, dry summer.

- **30%** Endo-Graze XL Perennial Ryegrass
- **20%** Tetrabana XL Italian Ryegrass
- **20%** Stargrazer XL Tall Fescue
- **15%** Balin/Ginger Kentucky Bluegrass
- **15%** Top Tim XL Timothy

MARE & FOAL MIX — 30 - 40

Ability to be productive under rotational grazing & hay production. Tolerant to heavy traffic.

- **50%** Haymate XL Orchardgrass
- **25%** Top Tim XL Timothy
- **15%** Fusion XL Festulolium
- **10%** Balin/Ginger Kentucky Bluegrass

FESCUE BASED MIX — 30 - 40

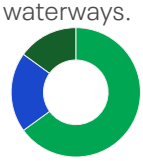
Endophyte-free, fescue based pairs well with dairy quality alfalfa, or can be straight seeded for heifers.

- **40%** Stargrazer XL Tall Fescue
- **30%** Meadow Fescue
- **20%** Fusion XL Festulolium
- **10%** Endo-Graze XL Perennial Ryegrass

SEEDING RATE (LBS/ACRE)

SPECIAL WATERWAY MIX — 25 - 30

Performs well in hay systems. Contains endophyte-free tall fescue, persistence retains quality for many years. Great for waterways.



- **65%** Big Ton XL Smooth Bromegrass
- **20%** Stargrazer XL Tall Fescue
- **15%** Endo-Graze XL Perennial Ryegrass

GRASS MASTER MIX — 30 - 40

Endophyte-free, tall fescue & orchardgrass perform well in less-than-ideal summers. Good for grazing & hay production.

- **35%** Stargrazer XL Tall Fescue
- **35%** Haymate XL Orchardgrass
- **15%** Endo-Graze XL Perennial Ryegrass
- **15%** Fusion XL Festulolium

JUMP START MIX — 30 - 40

Excellent for overseeding existing hay stands or short/long-rotation pastures. Very responsive to fertilization.

- **50%** Endo-Graze XL Perennial Ryegrass
- **25%** Tetrabana XL Italian Ryegrass
- **25%** Fusion XL Festulolium

SILOBUSTER MIXES

*100-120 Nurse

SILOBUSTER PEA & BARLEY MIX* — 100 - 150

Elite combination of forage peas & forage barley, ideal as nurse crop or straight forage.

- **50%** LC6040 Forage Peas
- **50%** Forage Spring Barley

SILOBUSTER PEA & TRITICALE MIX* — 100 - 150

Elite combination of forage peas & forage triticale, ideal as nurse crop or straight forage.

- **50%** LC6040 Forage Peas
- **50%** Forage Spring Triticale

SILOBUSTER PEA & OAT MIX* — 100 - 150

Elite combination of forage peas & forage oats, ideal as nurse crop or straight forage.

- **50%** LC6040 Forage Peas
- **50%** Forage Oats

FORAGE FIRST®
BY DLF

	COOL SEASON GRASSES					
	SOD FORMING		NON-SOD FORMING			
	SMOOTH BROME	KENTUCKY BLUEGRASS	TALL FESCUE	MEADOW FESCUE	ORCHARD	TIMOTHY
	BIG TON XL		STARGRAZER XL		HAYMATE XL	TOP TIM XL
ALL GRASS MIXES						
VERSAGRASS™	25%				25%	25%
SPECIAL WATERWAY	65%		20%			
BLM #4		15%	20%			15%
MARE & FOAL		10%			50%	25%
GRASS MASTER			35%		35%	
JUMP START						
FESCUE BASED MIX			40%	30%		
GRASS + LEGUME MIXES						
ALFALFA BASED						15%
ALFALFA HAY & PASTURE					20%	15%
ALL PURPOSE					15%	20%
BEEF	15%		15%			5%
TRIPLE CROWN		15%				20%
CLOVER-BASED						25%
CHARACTERISTICS						
RATE FOR PURE STAND	15 - 20	10 -15	25 - 30	25 - 30	15 - 25	12 - 15
RATE IN MIX	5 - 10	4 - 10	6 - 12	6 - 12	3 - 10	2 - 6
ESTABLISHMENT	SLOW	SLOW	MED	MED	MED	SLOW
PERSISTENCE	HIGH	HIGH	HIGH	HIGH	HIGH	MED
DROUGHT TOLERANCE	MED	MED	HIGH	HIGH	MED	LOW
WINTER HARDINESS	HIGH	HIGH	MED	HIGH	HIGH	HIGH
PALATABILITY	HIGH	HIGH	MED	HIGH	HIGH	HIGH
YIELD POTENTIAL	HIGH	MED	HIGH	HIGH	HIGH	MED
GRAZING TOLERANCE	HIGH	HIGH	HIGH	HIGH	HIGH	MED
ADDITIONAL ELITE VARIETIES & OTHER FORAGE FIRST® PRODUCTS		BALIN GINGER	TOWER	LAURA HYPERBOLA	INAVALE ECHELON CAPTUR	ERECTA VALOR DT
PAGE #	15	16	17	17	16	18

PERENNIAL RYEGRASS (TETRAPLOID)	ITALIAN RYEGRASS	FESTULOLIUM	LEGUMES * ALFALFA		* RED CLOVER	* LADINO CLOVER	* ALSIKE CLOVER	* BIRDSFOOT TREFOIL	SEEDNG RATE (LBS/ ACRE)
ENDO-GRAZE XL	TETRABANA XL	FUSION XL	FF 42.A2 BRAND	FF PREMIUM	REDCARPET XL990	ORION XL	RADIUM XL	LOTUS XL	
25%									25 - 30
15%									25 - 30
30%	20%								30 - 40
		15%							30 - 40
15%		15%							30 - 40
50%	25%	25%							30 - 40
10%		20%							30 - 40
			70%		15%				18 - 20
20%				40%		5%			18 - 20
12%	5%			22%	13%	5%	8%		25 - 30
35%		10%		20%					30 - 40
35%		10%		20%					30 - 40
					63%	2%	10%		16 - 18
30 - 40	20 - 40	30 - 40	15 - 20	15 - 20	8 - 12	4 - 6	6 - 8	8 - 10	
6 - 10	5 - 10	10 - 15	8 - 10	8 - 10	6 - 8	2 - 4	2 - 4	4 - 5	
FAST	FAST	FAST	MED	MED	FAST	FAST	FAST	SLOW	
MED	LOW	MED	MED	MED	HIGH	MED	MED	HIGH	
MED	LOW	MED	MED	MED	MED	LOW	LOW	MED-HIGH	
MED	LOW	HIGH	HIGH	HIGH	HIGH	MED	HIGH	HIGH	
HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	
HIGH	HIGH	HIGH	HIGH	HIGH	MED	MED	HIGH	MED	
HIGH	HIGH	HIGH	HIGH	HIGH	MED-HIGH	HIGH	MED-HIGH	HIGH	
DEXTER 1 KENTAUR	GRASSHANCER 200 FIRKIN	FOJTAN	FF PREMIUM FF 42.A2		REDKIN	HESLOP			
18	15	16	3 - 10		13	14	13	14	

* LEGUMES WILL BE ENHANCED

SUMMER SELECT™ BY DLF

SUMMER ANNUALS

MULTI-CUT SPECIES

			MATURITY	APPROX. SEEDS PER POUND*	DRYLAND SEEDING LBS/ACRE	IRRIGATION/ HI-RAIN SEEDING LBS/ACRE	RECOVERY AFTER CUTTING	LEAF DISEASE RESISTANCE	SUGARCANE APHID TOLERANCE	SINGLE SILAGE CUT SUITABILITY	RAPID DRY DOWN
SORGHUM X SUDANGRASS	QUICKDRY BMR T/TS	BMR 6	MED LATE	14,000 - 15,000	20 - 25	35 - 50	4	4	3	2	3
	DENSE TONNAGE BMR BD T	BMR 6, BD	MED LATE	14,000 - 15,000	15 - 25	25 - 35	4	4	1	4	2
	EVERGROW BMR PPS T	BMR 6, PPS	LATE	14,000 - 15,000	20 - 25	35 - 50	3	5	2	3	2
	GREENSUGAR TR T		MED	16,000 - 20,000	20 - 25	50 - 60	3	3	2	2	2
	GREENSUGAR MS T	MS	MED LATE	16,000 - 20,000	20 - 25	50 - 60	3	4	1	2	2
	GREENSUGAR PF T	PF	MED LATE	15,000	20 - 25	50 - 60	4	3	2	2	2
SUDANGRASS	BALEMORE		EARLY MED	35,000 - 40,000	15 - 25	20 - 35	3	3	1	2	4
PEARL MILLET	HERCULES BMR BD T	BMR 6, BD	MED	50,000 - 60,000	10 - 12	15 - 20	5	5	5	4	4
	PERFORM T		MED	50,000 - 60,000	10 - 12	15 - 20	5	4	5	4	4
TEFF GRASS	REPRIEVE XL	CC	NA	650,000	8 - 10	8 - 10	4	3	5	NA	4

SINGLE-CUT SPECIES

			DAYS TO HARVEST (SOFT DOUGH STAGE)	APPROX. HARVEST HEIGHT (FT)	APPROX. SEEDS PER POUND*	SEEDING 30" ROWS (LBS)	SEEDING NARROW (LBS)	STANDABILITY	SUGARCANE APHID TOLERANCE	DOUBLE CROP	OVERALL ADAPTABILITY
FORAGE SORGHUM	94 MS TS	MS	MS	6 - 8	17,000 - 19,000	4 - 6	5 - 7	4	2	3	4
	95 BMR TS	BMR 12, BD	85 - 95	5 - 7	16,000 - 18,000	4 - 6	5 - 7	4	3	3	5

	MILLET	PRIMARY FORAGE USE	PLANTING DATE	SEEDING RATE (LBS, BROADCAST - ADD 30%)	DAYS TO GRAIN MATURITY
FOXTAIL	Common Foxtail Millet	Hay or silage	May - July	20 - 25	60 - 100
	German Millet	Dry hay in 55 - 60 days	May - July	20 - 25	75 - 90
	Siberian Millet	Dry hay in 40 - 50 days	May - July	20 - 25	60 - 80
	White Wonder Millet	Dry hay in 50 - 55 days	May - July	20	70 - 90
	White Proso Millet	NR	May - July	20 - 25	70 - 90
GRAZING	Japanese Millet	Grazing; dry hay in 45 - 50 days	April - July	15 - 20	60 - 70
	Pearl Millet	Grazing in 35 - 40 days; dry hay in 40-50 days; can ensile or green-chop also	May - July	12 - 20	60 - 70
	Brown Top Millet	Thin stems make dry hay more suitable	May - July	20 - 25	60

BD = Brachytic Dwarf
MS = Male Sterile
PPS = Photo Period Sensitive
T = Base Treatment
BMR = Brown Mid-Rib
PF = Prussic Acid Free
CC = Crossecoat Technology
TS = Base Treatment/Safened

Unless otherwise indicated, a standard 5 point rating system is used. Ratings are based on comparison with other products of like maturity/product use.
1 = POOR, 5 = EXCELLENT

		• Widely adapted • Traditional growth habit with wide, long leaves	• Increased sugar content = improved digestibility • Fast establishment & regrowth = more productivity
		• Management friendly hybrid with greater harvest flexibility • Dwarf hybrid = improved standability & higher leaf:stem ratio	• Increased sugar content = improved digestibility
		• Widely adapted with improved disease resistance • PPS hybrids remain vegetative until mid-Sept (day length < 12h, 20m)	• PPS allows for wider window of harvest • Build tonnage without sacrificing quality
		• Broad adaptation in a traditional, non-BMR package	• High yielding; increase population for improved quality
		• Higher levels of sugar/protein in vegetative portion of plant • Increased disease resistance	• MS = no anthers, thus no pollen for self-fertilization • Improved standability
		• Prussic Acid (HCN) free - can be grazed after drought or freeze event • Extended grazing season	• Harvest flexibility
		• Best summer annual option when dry hay production is planned • Can also be used for grazing or green chop	• Strong emergence & quick regrowth
		• Versatile hybrid suitable for silage, grazing & dry hay • Dwarf gene increases leaf:stem ratio & improves standability	• Enhanced palatability, digestibility & overall utilization • No prussic acid or sugarcane aphid concerns
		• Versatile hybrid suitable for silage, grazing & dry hay • Quicker regrowth compared to sorghum x sudangrass	• No prussic acid or sugarcane aphid concerns • Shorter stature = improved standability
		• Great rotational crop between alfalfa & perennial stands • Superior quality - ideal for horses & other livestock	• Well adapted to dry climates
YIELD FOR MATURITY	LEAF DISEASE RESISTANCE		
4	3	• Good disease resistance • Excellent yield for Male Sterile	• Male Sterile = increased sugar accumulation
5	5	• Early maturing dwarf BMR • Excellent leaf disease resistance	• Widely adapted with excellent standability

*Refer to seeds per lb on seed tag

TYPICAL HEIGHT & STATURE	REGROWTH AFTER CUTTING/HARVEST	ATTRIBUTES	
2 - 4′	Little to no regrowth	• Forage type millets primarily • Many so called "varieties"	• Pasture only before heads form (not ideal)
2 - 4′	Little regrowth	• VERY fast growing • Used primarily for hay production; seeds for wildlife	• Mid-late maturing • Shallow rooted – not as drought tolerant
2 - 2½′	Little to no regrowth	• VERY fast growing • Earlier maturing	• Shorter stature • Best suited in Northern Plains
3 - 4′	Poor at best	• Dual purpose – hay & grain • Late maturing	• Heavy stem & taller than most foxtail types
2 - 2½′	Poor at best	• Usually grown for seed – bird seed or livestock feed	• Not tolerant of drought - keep off sandy soils
2 - 4′	Leave 6 - 8″ for adequate regrowth	• Grazing / hay potential on wet soils (no prussic acid) • Ideal for waterfowl / wildlife feed	• Tolerant of waterlogged soils & flooding • Also used for erosion control
3 - 6′ (depending on variety)	Leave 8 - 10″ for adequate regrowth	• Very resilient - handles a variety of soil types • No prussic acid concerns	• More drought tolerant than japanese / foxtail millets • Increased forage quality offered in BMR types
2 - 4′	Leave 6 - 8″ for adequate regrowth	Fast growing for seed mostly – wildlife Seed shatters easily - reseed potential very high	Best suited for Southeast US (needs adequate water) Tolerant of acidic soils & low fertility

LA CROSSE SEED
A DLF DIVISION

LA CROSSE SEED PROVIDES A FULL RANGE OF PRODUCTS TO MEET YOUR NEEDS:

EARTH CARPET® BY DLF — TURF

- Turf seed
- Turf mixes
- Custom turf mixes
- Conservation mixes
- Erosion control

SUMMER SELECT™ BY DLF — SUMMER ANNUALS

- Sorghum x Sudan
- Sudangrass
- Forage Sorghum
- Millets
- Teffgrass

SOIL FIRST® BY DLF — COVER CROPS

- Cover crop seed
- Cover crop mixes
- Custom cover crop mixes
- Seed inoculants

DEER CREEK® SEED BY DLF — WILDLIFE

- Food plot seed
- Food plot mixes
- Custom wildlife mixes

NATIVES & WILDFLOWERS

- Native grasses
- Conservation seed mixes
- Wildflowers/forbs
- Custom conservation seed mixes
  - » (NRCS, CRP, Pollinator)

SMALL GRAINS

- Spring cereals
- Winter cereals
- Pea mixes

SWEET CORN

Some varieties are sweeter than others, depending on whether one or both of their parents were sugary enhanced. Varieties that get the 'se' gene from both their parents are homozygous for that trait, or 'double se,' and all of their kernels have the se characteristics. Typically a homozygous se will have better eating quality than a heterozygous se.

Sweet corn comes in three colors: yellow, white and bicolor (yellow and white). Cross pollination of yellow kernel varieties with white kernel varieties will result in production of bicolor corn. If a bicolor is cross pollinated with a yellow variety, kernel color will be mostly yellow. Although there are regional preferences for certain kernel colors, there is no relationship between color and sweetness.

CONVENTIONAL VARIETIES	MATURITY DAYS	COLOR
Trinity	70	bicolor
Sugar Buns	72	yellow
Ambrosia	75	bicolor
Bodacious	75	yellow
Delectable	84	bicolor
Incredible	85	yellow

CUSTOM SEED MIXING

La Crosse Seed offers a vast portfolio of seed designed for many conservation applications. A partial list available through La Crosse Seed includes seed for:

- **Conservation cover – including CRP and pollinator habitat seeds**
- **Contour buffer strips**
- **Filter strips**
- **Field borders**
- **Forage and biomass plantings**
- **Grassed waterways**
- **Stream bank protection**

La Crosse Seed offers custom mixing capabilities to meet any need. Contact us at **info@laxseed.com** or visit our website to learn more.

CONSIDERATIONS WHEN CREATING CUSTOM SEED MIXES:

- Think about seed sizes – will the different size and shape of certain seeds prohibit specific application methods?
  - » **Aerial:** too large of seed might struggle to get adequate seed-to-soil contact
  - » **Drilling or Ground Seeding:** seed size usually affects seeding depth. Different seeding depths become a real challenge with numerous species all in the same bag
- Different cover crops often perform best when planted at different times
- Not all crops are beneficial to the next crop in the rotation
- Select species carefully, making sure all species are adapted to the field's soil, drainage and crop rotation

SOIL FIRST®
BY DLF

COVER CROP MIXES

Soil First® Mixes Work Great for Food Plots!

SOIL FIRST® 101 COVER STARTER

Simple. Practical. A low-risk option for early adopters & growers looking for flexibility.

- For multiple regions & marginal soil environments
- Winter-hardy rye will sequester excess nitrogen

SEEDING RATE (LBS/ACRE) Drill: 30 - 35 Broadcast: 35 - 40 Aerial: 30 - 40 Forage: 40 - 50

91% GUARDIAN® WINTER RYE
9% TILLAGE RADISH®

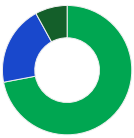
SOIL FIRST® 102 COVER STARTER +

Building nitrogen & root mass while improving soil tilth & biomass potential

- Perfect before both corn or soybeans
- Ideal for Southern Corn Belt & beyond

SEEDING RATE (LBS/ACRE) Drill: 30 - 35 Broadcast: 35 - 40 Aerial: 30 - 40 Forage: 40 - 50

72% GUARDIAN® WINTER RYE
20% CRIMSON CLOVER
8% TILLAGE RADISH®



SOIL FIRST® 121 BRASSICA BOOST

Pairing with other species is great for forage or grazing & providing high biomass potential

- Perfect supplement for cereal grains like rye & oats
- Will scavenge for excess nutrients left in the soil

SEEDING RATE (LBS/ACRE) Drill: 6 - 8 Broadcast: 8 - 10 Aerial: 10 - 15 Supplemental: 2 - 4

50% PURPLE TOP TURNIPS
50% TILLAGE RADISH®

SOIL FIRST® 125 N-HANCER

Heavy legume mix intended for adding Nitrogen

- Strong nitrogen fixing mix
- Ideal as fall forage mix

SEEDING RATE (LBS/ACRE) Drill: 35 - 40 Broadcast: 40 - 50 Aerial: NR Forage: 40 - 50

30% DEFENDER OATS
25% SPRING PEAS
20% BALANSA CLOVER
20% CRIMSON CLOVER
5% TILLAGE RADISH®

SOIL FIRST® 140 MULTI-PURPOSE

For livestock grazers providing soil protection & biomass from fall through spring

- Early seeding/late fall silage opportunity
- Ideal forage for beef/non-lactating dairy

SEEDING RATE (LBS/ACRE) Drill: 35 - 40 Broadcast: 40 - 50 Aerial: NR Forage: 40 - 50

50% NITROUS® WINTER TRIT
38% WINTER PEAS
6% TILLAGE RADISH®
6% FORAGE BRASSICA

SOIL FIRST® 142 CLASSIC

For early planting windows – double-crop, prevent plant, interseeding

- Ideal for acres going to corn or other grass crops
- Plant early to maximize production

SEEDING RATE (LBS/ACRE) Drill: 12 - 15 Broadcast: 15 - 20 Aerial: 20 - 25 Forage: 15 - 20

85% CRIMSON CLOVER
15% TILLAGE RADISH®

SOIL FIRST® 150 FIELD FIT

Straightforward & flexible mix with very minimal spring management

- Winterkills in most northern climates
- Great for sequestering leftover nutrients

SEEDING RATE (LBS/ACRE) Drill: 30 - 35 Broadcast: 35 - 40 Aerial: 30 - 40 Forage: 40 - 50

90% DEFENDER OATS
10% TILLAGE RADISH®

SOIL FIRST® 160 ROOTING

Blend of radish & ryegrass maximizes root mass & captures nutrients

- Best for breaking up compaction & catching nutrients
- Perfect in manure systems

SEEDING RATE (LBS/ACRE) Drill: 15 - 20 Broadcast: 20 - 25 Aerial: 20 - 25 Forage: 20 - 25

88% ANNUAL RYEGRASS
12% TILLAGE RADISH®

SOIL FIRST® 167 SUMMER BIOMASS

Base of 50% warm-season annual grasses is optimized for biomass & is uniquely suited for grazing

- Tolerates poor soil, low pH, & drought environments
- Species diversity helps soil aggregate stability

SEEDING RATE (LBS/ACRE) Drill: 15 - 20 Broadcast: 20 - 25 Aerial: NR Forage: 25 - 30

25% SORGHUM x SUDANGRASS
20% IRON & CLAY COW PEAS
15% PEARL MILLET
10% GERMAN MILLET
10% DEFENDER OATS
5% SUNN HEMP
5% FORAGE COLLARDS
5% PEREDOVIK SUNFLOWER
5% HYBRID BRASSICA

SOIL FIRST® 175 ACCUSPREAD

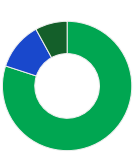
Coated clover & ryegrass creates spread patterns & broadcast germination

- Great compaction alleviation & nutrient scavenging
- Facilitates more accurate broadcast seeding patterns

SEEDING RATE (LBS/ACRE) Drill: 20 - 25 Broadcast: 25 - 30 Aerial: 25 - 30 Forage: 25 - 30

80% ANNUAL RYEGRASS*
12% CRIMSON CLOVER*
8% TILLAGE RADISH®

*COATED



DEER CREEK® SEED
BY DLF

Deer Creek Seed products have been formulated to provide superior performance in establishing, attracting and keeping those trophy bucks, turkeys and upland birds on your property.

PERENNIAL MIXES

HORN HONEY

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
	8* (Drilled)	10 (Brdcast)					
PERENNIAL			5 & 10		✓		✓

- Spring/fall planted perennial mix offering year-round food source
- Performs well on medium to heavy soil types in light shade to full sun
- Includes high energy legumes that will thrive in various geographical locations
- Chicory will thrive during summer months
- Replaces DC Perennial Plus Clovers

25% Orion XL Ladino White Clover
25% Red Carpet XL 990 Red Clover
25% Intermediate White Clover
15% Radium XL Alsike White Clover
10% Chicory

**Seed at ¼" Depth*

PREMIUM WHITE CLOVERS

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
	8* (Drilled)	10 (Brdcast)					
PERENNIAL			5 & 10		✓		

- Spring/fall/frost planted perennial mix offering year-round food source
- Performs well on medium to heavy soil types in moderate shade to full sun
- Includes high energy legumes that will thrive in various geographical locations
- White clovers will fill in areas of overgraze due to stolon root system

25% Radium XL Alsike White Clover
25% Dutch White Clover
25% Orion XL Ladino White Clover
25% Intermediate White Clover

**Seed at ¼" Depth*

BEES N BUCKS

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
	10* (Drilled)	12 (Brdcast)					
PERENNIAL			5 & 10		✓		

- Spring/fall planted perennial dual purpose mix offering year-round food source
- Performs well on light to heavy soil types in light shade to full sun
- All purpose pollinator to create a bee and pollinator sanctuary if left to flower
- Replaces Deer Country Field and DC Bee Clover

25% Premium Brand Alfalfa
20% Orion XL Ladino White Clover
20% Red Carpet XL 990 Red Clover
20% Yellow Blossom Sweet Clover
15% Radium XL Alsike White Clover

**Seed at ¼" Depth*

NO-TILL WILDLIFE CLOVER

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
	15* (Drilled)	20 - 25 (Brdcast)					
PERENNIAL			5 & 10		✓	✓	

- Spring/fall/frost planted perennial mix offering year-round food source
- Performs well on medium to heavy soil types in light shade to full sun
- Balance of high energy grasses/ legumes that will thrive in various geographical locations
- Easy to establish with minimal preparation
- Replaces DC Wildlife Clover Mix/ Point Bulider Plus

15% Intermediate White Clover
15% Radium XL Alsike White Clover
15% Med Red Clover
15% Orion XL Ladino White Clover
15% Dutch White Clover
15% Coldsnap® Annual Ryegrass
10% High Sugar Perennial Ryegrass

**Seed at ¼" Depth*

LOGGERS TRAIL MIX

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
	20* (Drilled)	25 (Brdcast)					
PERENNIAL			25		✓	✓	

- Spring/fall planted perennial mix quick to establish and produce cover
- Performs well on light to heavy soil types in light shade to full sun
- Will persist in low-fertility, acidic, or wet soils and areas with minimal sunlight
- Replaces Deer Country Trail Mix

30% Stargrazer XL Tall Fescue
15% Coldsnap® Annual Ryegrass
15% Orion XL Ladino White Clover
10% Radium XL Alsike White Clover
10% Creeping Red Fescue
10% Intermediate White Clover
10% High Sugar Perennial Ryegrass

**Seed at ¼" Depth*

DEER CREEK SPECIES OFFERED IN SMALL PACKS (5 LB)

LEGUMES	GRASSES	BROADLEAVES
Med Red Clover	Egyptian Wheat	Buckwheat
Alsike Clover	RC Big Rock Switchgrass	Chicory
Berseem Clover		Tillage Radish
Ladino Clover		Rapeseed
Alfalfa PI		Rutabaga
		Sugar Beet
		Peredovik Black Oilseed Sunflower
		Purple Top Turnip

ONLINE RESOURCES

Go to lacrosseseed.com for planting windows and other useful information.

ANNUAL /PERENNIAL MIXES

BUCK'S BANQUET

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE) 8* (Drilled)	10 (Brdcast)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
			5 & 10				

- Early fall planted annual & perennial species offering early/late fall food source
- For medium to heavy soil types in light shade to full sun
- Clover/chicory remain perennial after brassicas winterkill
- Portion remains green until air temps reach 10 - 15°F
- Optimally planted 6 - 8 weeks prior to killing frost
- Replaces Autumn Buffet

20% Orion XL Ladino White Clover
20% Rapeseed
15% Purple Top Turnips
15% Tillage Radish®
10% Intermediate White Clover
10% Radium XL Alsike White Clover
10% Chicory

**Seed at ¼" Depth*

SPRING GREENS ELITE

ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE) 40* (Drilled)	50 (Brdcast)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
			25				

- Late spring/summer/fall planted annual/perennial mix offering multi-year food source
- Performs well on light to heavy soil types in light shade to full sun
- Multiple species for maximum grazing quality & protects soil from nutrient loss

10% Balansa Clover
10% Buckwheat
10% Rapeseed
10% Forage Soybean
10% Intermediate White Clover
10% Med Red Clover
10% Peredovik Black Sunflower
10% Sunn Hemp
10% Green Sugar Sorghum Sudangrass
10% Tetrabana XL Italian Ryegrass

**Seed at ¼" Depth*

BUFFER & BEDDING MIXES

ANNUAL HABITAT HIDE-A-WAY

NEW FORMULA

ANNUAL	SEEDING RATE (LBS/ACRE) 10* (Drilled)	10 (Brdcast)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
			10				

- Summer annual mix planted as bedding/buffer source
- Performs well on light to heavy soil types in light shade to full sun
- Quick to establish, requires 60 - 65°F soil temps for planting/ germination, annual alternative to Perennial Habitat Hide-A-Way
- Can reach heights up to 8 ft tall
- Replaces DC Silver Screen

34% Summer Select® Forage Sorghum
33% Wildlife Grain Sorghum
33% Egyptian Wheat

**Seed at 1" Depth*

PERENNIAL HABITAT HIDE-A-WAY

PERENNIAL	9*	BAG SIZE (LBS) 9 & 50	BRASSICAS	LEGUMES	GRASSES	FORBS

- Spring/fall planted native grass perennial mix offering year-round bedding/buffer source
- Performs well on light to heavy soil types in light shade to full sun
- Maintenance needed during slow establishment period; alternative to Annual Habitat Hide-A-Way
- Will reach heights up to 8 ft tall

34% Switchgrass
33% Indiangrass
33% Big Bluestem

See Natives Guide for establishment guidelines

**Seed at ¼" Depth*

NATIVE GRASSES & WILDFLOWERS

La Crosse Seed conservation seed, including native grass and wildflower mixes, pair clean, quality native seed with sound agronomics and management support to ensure the right product and right approach for your conservation or CRP planting. Our conservation seed portfolio includes annual and perennial wildflower pollinator mixes, native grasses, forbs and custom CRP mixes.

A PARTIAL LIST OF NATIVE SEED OPTIONS AVAILABLE THROUGH LA CROSSE SEED INCLUDES:

GRASSES

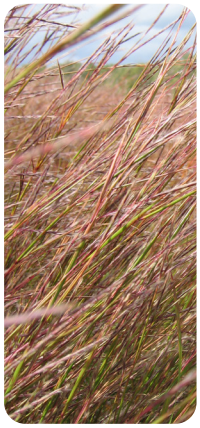
- Big Bluestem
- Blue Grama
- Buffalograss
- Canada Wildrye
- Eastern Gamagrass
- Green Needlegrass
- Indiangrass
- Intermediate Wheatgrass
- Junegrass
- Little Bluestem
- Prairie Cordgrass
- Pubescent Wheatgrass
- Sand Lovegrass
- Sand Dropseed
- Sideoats Grama
- Slender Wheatgrass
- Switchgrass
- Tall Wheatgrass
- Western Wheatgrass

FORBS

- Black-Eyed Susan
- Ox-Eye Sunflower
- Maximilan Sunflower
- Partridge Pea
- Purple Coneflower
- Showy Tick Trefoil
- Wild Bergamot
- Yellow Coneflower

MIXES

- Midwest Wildflower Mix
- Color Iowa Wild Mix
- Knee-High Wildflower Mix
- North American Shade Wildflower Mix
- Native Wildflower Mix for Pollinators
- All Perennial Wildflower Mix
- Upland Native Mix
- Lowland Native Mix (Tall)
- EcoGrass Short Mix
- EcoGrass Tall Mix



DEER CREEK® SEED
BY DLF

ANNUAL MIXES

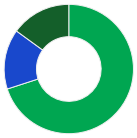
QUAD PRO BEAN

	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
ANNUAL	40* (Drilled)	50 (Brdcast)	25		●		

- Spring/fall planted annual
- Performs well on light to heavy soil types in light shade to full sun
- Fast growing, high protein mix with forage and vining soybeans
- Matures in approximately 60 days

70% 2 Forage Soybean Varieties
15% Lablab
15% Cowpea

**Seed at 1" Depth*



TRIPLE TREAT

	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
ANNUAL	8* (Drilled)	10 (Brdcast)	5		●		

- Spring/fall planted annual clover blend
- Performs well on medium to heavy soil types in light shade to full sun
- Nitrogen fixing and biomass producing mix excellent for plot rotation
- Triple purpose food source, soil health, nitrogen builing

40% Balansa Clover
40% Berseem Clover
20% Crimson Clover

**Seed at ¼" Depth*

GAME BIRD MIX

	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
ANNUAL	15* (Drilled)	20-25 (Brdcast)	25		●	●	●

- Late spring/summer planted annual
- Performs well on light to heavy soil types in light shade to full sun
- Quick to establish, requires 60-65° F soil temps for planting/germination
- Ideal attractant for upland game birds and other avian species

25% Peredovik Black Sunflower
25% Wildlife Grain Sorghum
15% Forage Soybean
10% Buckwheat
10% Japanese Millet
10% Pearl Millet
5% Proso Millet

**Seed at ½" Depth*

WETLAND WATERFOWL

	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
ANNUAL	15* (Drilled)	20-25 (Brdcast)	25		●	●	●

- Late spring/summer planted annual and perennial blend
- Performs well on light to heavy soil types in light shade to full sun
- Quick to establish, requires 60-65° F soil temps for planting/germination
- Ideal attractant for waterfowl and other avian species

35% Japanese Millet
20% Wildlife Grain Sorghum
20% Defender 265 Brand Spring Oat
10% Buckwheat
10% Proso Millet
5% Radium XL Alsike Clover

**Seed at ¼-½" Depth*

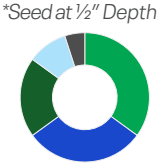
SANDY SURE SHOT

	SEEDING RATE (LBS/ACRE)		BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
ANNUAL	25* (Drilled)	35 (Brdcast)	25	●	●		●

- Late spring/summer/fall planted annual
- Formulated to persist in light sandy and dryland soil conditions
- Attracts deer and other avian wildlife

35% Peredovik Black Sunflower
30% Forage Soybean
20% Buckwheat
10% Berseem Clover
5% Winfred Forage Brassica

**Seed at ½" Depth*



ANNUAL MIXES

RUT N READY

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL
6* (Drilled) 8 (Brdcast)	4 & 8	✓				ANNUAL

- Early fall planted annuals offer early/late fall food source
- For light to heavy soil types in light shade to full sun
- Brassicas remain green until air temps reach 10 - 15°F
- Optimally planted 6 - 8 weeks prior to killing frost, sugars flush vegetative growth after frost for appealing food source
- Brassicas attract deer early fall & after killing frost
- Replaces DC Brassica Blend & DC Prime Time Brassica

30% Tillage Radish®
20% Rapeseed
20% Purple Top Turnips
10% Forage Kale
10% Twister Hybrid Brassica
10% Forage Collards

**Seed at ¼" Depth*

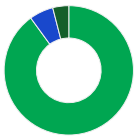
HARVEST MOON

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL
40* (Drilled) 50 (Brdcast)	25	✓		✓		ANNUAL

- Early fall planted annual species offering early/late fall food source
- Performs well on light to heavy soil types in light shade to full sun
- Portion remains green until air temps reach 10 - 15°F
- Optimally planted 6 - 8 weeks prior to killing frost
- Replaces DC Succulent Succotash/ Autumn Energy

90% Arctic Brand Forage Oats
6% Tillage Radish®
4% Purple Top Turnips

**Seed at ¼" Depth*



ALL SEASON MIX

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL
50*	25	✓	✓	✓	✓	ANNUAL

- Early fall planted annuals offer early/ late fall food source
- Performs well on light to heavy soil types in light shade to full sun
- Winter Rye will overwinter providing additional food source the following spring
- Optimally planted 6-8 weeks prior to killing frost, large biomass production for food source early and into late fall/winter for areas of heavy feeding pressure

35% Guardian® Winter Rye
15% Barley
15% Buckwheat
15% Forage Pea
15% Defender 265 Brand Spring Oats
2.5% Rapeseed
2.5% Forage Turnip

**Seed at ¼" Depth*

BEET & SWEETS

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL
8* (Drilled) 10 (Brdcast)	5 & 10	✓	✓			ANNUAL

- Early fall planted annuals offer early/ late fall high sugar food source
- Performs well on light to heavy soil types in light shade to full sun
- Quick to establish brassicas remain green until air temps reach 10 - 15° F
- Optimally planted 6 - 8 weeks prior to killing frost, sugars flush vegetative growth after frost for appealing food source early and into late fall/winter

45% Sugar Beet
20% Swiss Chard
15% Forage Turnip
10% Forage Kale
10% Berseem Clover

**Seed at ¼" Depth*

EARTH CARPET®
BY DLF

MIX PERCENTAGES

	KENTUCKY BLUEGRASS		PERENNIAL RYEGRASS		ANNUAL RYEGRASS	CREEPING RED FESCUE		CHEWINGS FESCUE	HARD FESCUE	SHEEP FESCUE	TALL FESCUE	SEEDING LBS/1,000 SQ FT	
	ELITE	LXQ QUALITY STANDARD	ELITE	LXQ QUALITY STANDARD	LXQ QUALITY STANDARD	ELITE	LXQ QUALITY STANDARD	ELITE	ELITE	ELITE	ELITE	NEW	OVER
PROFESSIONAL LANDSCAPE MIXES													
CHOICE SUN & SHADE	40		30			15		15				4-6	2-4
MADISON PARKS®	50		25			25						4-6	2-4
SPARTAN® GRADE A	40		20			20		20				4-6	2-4
WEAR-N-TEAR®	40		40			10		10				4-6	2-4
GENERAL LANDSCAPE MIXES													
PARK PLACE®		50		25			25					4-6	2-4
SUNNY PLACE®		33		34			33					4-6	2-4
QUICK-2-GRO		25		25	25		25					4-6	2-4
MICHIGAN GREEN®		15		15	35		35					4-6	2-4
KENTUCKY BLUEGRASS & PERENNIAL RYEGRASS BASED MIXES													
BLUE CARPET®	100											2-4	1-3
PRO-SPORTS®	80		20									3-5	2-3
SPORTS PARK OS	50		50									3-5	2-3
CHAMPION			100									6-8	3-5
SLOPE & SHADE MIXES													
CARE-FREE						35		25	25	15		6-8	3-4
SHADY PLACE®	10		10			30		30	20			5-8	3-4
TALL FESCUE BASED MIXES													
GREEN RESISTOR® 5-WAY											100	8-10	4-8
TUFF-STUFF®	10										90	8-10	4-8
SURVIVOR	15		15			15		15			40	8-10	4-8

ELITE Elite Varieties

A-LIST® A-List Approved

Shade Tolerant

ST Spreading Technology

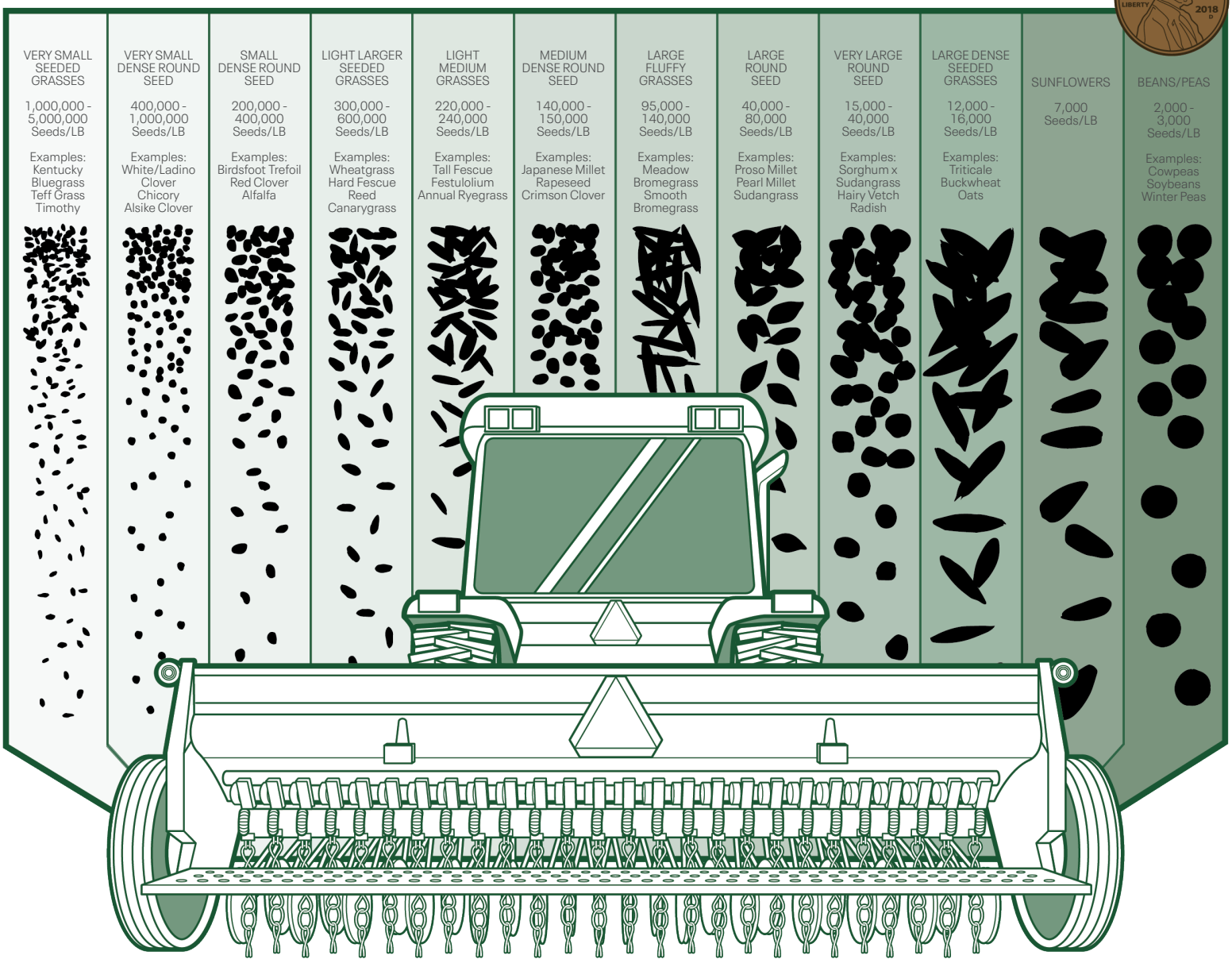
XRE+ EXtreme Rhizome Expression +

LXQ QUALITY STANDARD Branded Components

HEAT	WEAR	DROUGHT	TRAFFIC	SPREADING TECHNOLOGY	EXTREME RHIZOME EXPRESSION	SHADE TOLERANCE	GENETICS	A-LIST	IDEAL FOR:
4	4	3	4	ST			ELITE		Establishing premium lawns or upgrading existing turf
4	4	3	4	ST			ELITE		Establishing premium lawns or upgrading existing turf
4	4	3	4	ST			ELITE		Establishing premium lawns or upgrading existing turf
4	4	3	4	ST			ELITE		Establishing premium lawns or upgrading existing turf
4	4	3	3				LXQ QUALITY STANDARD		Home lawns, parks & school grounds
3	3	3	3				LXQ QUALITY STANDARD		Home lawns & commercial landscapes
3	3	3	3				LXQ QUALITY STANDARD		Areas needing quick establishment
3	3	3	3				LXQ QUALITY STANDARD		Areas needing quick establishment
4	5	3	5				ELITE		Golf course tees, fairways & fine home lawns
4	5	3	5	ST			ELITE		New installs or sports field renovation & other high performance areas
4	5	3	4	ST			ELITE		Renovating & repairing athletic fields
4	5	3	4	ST			ELITE		Renovating & repairing athletic fields
3	2	4	3				ELITE	A-LIST	Cabin sites, hillsides or where minimal maintenance is desired
3	2	3	3	ST			ELITE		Home lawns with moderate to densely shaded areas
5	5	5	5		XRE+		ELITE		Home lawns, athletic fields & golf course roughs
5	5	5	5		XRE+		ELITE	A-LIST	Low input sustainability, home lawns, high traffic, athletic fields & golf course roughs
4	4	5	5	ST	XRE+		ELITE	A-LIST	All-around low input, sustainable turf

DRILL CALIBRATION SUGGESTIONS

The below graphic is only a suggestion, helping identify seeds with like size and density.



INOCULANTS

novozymes · Visjon BIOLOGICS · AGROVIVE BIOLOGICALS

Our goal is to offer our customers the best the inoculant industry has to offer. La Crosse Seed has selected Agrovive, Novozymes and Visjon Biologics as our preferred inoculant partners. These companies provide cutting edge inoculant technologies with elite performance, ease of application and excellent technical support.

SILAGE, GRAIN CORN & FORAGE SORGHUM

SEED 2 RUMEN® ION$_{FX}$™	Dry, seed applied in-plant inoculant for corn and forage sorghum grown for silage
LEAF 2 RUMEN® ION$_{FX}$™	Liquid, foliar applied in-plant inoculant for corn and forage sorghum grown for silage

ALFALFA & CLOVER

SEED 2 RUMEN® ALPHAJOULE	Liquid, seed applied in-plant inoculant for alfalfa and clover
LEAF 2 RUMEN® ALPHAJOULE	Liquid, foliar applied in-plant inoculant for alfalfa and clover

CEREALS

SEED 2 RUMEN® CROWN$_{FX}$™	Liquid, seed applied in-plant inoculant for cereal crops and forage grasses grown for forage harvest
LEAF 2 RUMEN® CROWN$_{FX}$™	Liquid, foliar applied in-plant inoculant for cereal crops and forage grasses grown for forage harvest
GRAZE 2 RUMEN® CROWN$_{FX}$™	Liquid, foliar applied in-plant inoculant for cereal crops and forage grasses grown for forage harvest

SOYBEANS

TAGTEAM® LCO XC	MultiAction® phosphate-solubilizing, nitrogen fixing liquid inoculant with LCO Promoter Technology® for retail application
OPTIMIZE® FXC	Nitrogen fixing liquid inoculant with LCO Promoter Technology® for retail application
CELL-TECH® LIQUID	Liquid seed applied single-action nitrogen fixing inoculant for grower application
EXCEED® SAR	Nitrogen fixing liquid inoculant. Systemic Acquired Resistance (SAR) is a mechanism of plant defense that provides broad spectrum protection against multiple pathogens including both disease and nematodes. For retail application.
EXCEED® TRADITIONAL	Liquid seed applied single-action nitrogen fixing inoculant for grower application
EXCEED® PEAT	Peat based, seed applied nitrogen fixing inoculant for soybeans

OTHER FORAGE AND COVER CROP LEGUMES

EXCEED® PEAT	Peat based seed applied nitrogen fixing inoculants for alfalfa, all clovers, birdsfoot trefoil, pea, vetches, lentils, cowpeas and sunn hemp

PLANTING INFORMATION CHART

KIND OF SEED	APPROX. SEEDS/LB	LBS/ BU	PLANTING RATE LBS/ ACRE	PLANTING RATE LBS/ACRE IN MIXES	SEEDING DEPTH	SUGGESTED PLANTING DATES	EMERGENCE TIME (DAYS)	PRIMARY USE	LIFE
Alfalfa	227,000	60	15 - 20	8 - 10	¼" - ½"	Mar - May, Aug - Sep	7	Hay, Silage, Pasture	Perennial
Barley	14,000	48	30 - 100	20 - 40	¾" - 1"	Mar - Apr, Aug - Oct	6 - 8	Pasture, Silage	Annual
Bermudagrass (Hulled)	2,071,000	40	5 - 10	N/A	⅛"	Apr - Jun, Aug - Sep	21	Hay, Pasture	Perennial
Birdsfoot Trefoil	370,000	60	8 -10	4 - 5	¼"	Feb - May, Aug - Sep	7	Pasture	Perennial
Bluegrass, Kentucky	2,177,000	14	10 - 15	4 - 10	¼"	Feb - May, Aug - Sep	28	Pasture	Perennial
Brassicas, Hybrid	165,000	N/A	4 - 6	2 - 3	¼"	Jul - Sep	4 - 6	Cover Crop	Annual
Brome, Meadow	93,000	N/A	12 - 20	5 - 10	¼" - ½"	Mar - May, Aug - Sep	14	Hay, Pasture	Perennial
Brome, Smooth	138,000	14	15 - 20	5 - 10	¼" - ½"	Mar - May, Aug - Sep	14	Hay, Pasture	Perennial
Buckwheat	15,000	52	40 - 55	5 - 20	½" - 1"	Jun - Jul	7	Cover Crop	Annual
Cereal Rye	18,000	56	30 - 80	20 - 40	¾" - 1"	Mar - Apr, Aug - Oct	5 - 8	Cover Crop, Silage, Pasture	Annual
Chicory	426,000	N/A	4 - 5	2 - 3	⅛" - ¼"	Apr - May, Aug - Sep	7 - 21	Pasture, Wildlife	Perennial
Clover, Alsike	728,000	60	7 - 8	1 - 3	¼" - ½"	Feb - May, Aug - Oct	7	Hay, Pasture	Perennial
Clover, Arrowleaf	400,000	60	5 - 10	N/A	⅛" - ½"	Aug - Oct	7	Hay, Pasture	Annual
Clover, Balansa	500,000		3 - 6	1 - 4	¼"	Feb - Mar, Aug - Sep	14	Cover Crop, Hay	Annual
Clover, Berseem	207,000	60	8 - 20	5 - 10	¼"	May - Jun, Aug - Oct	5 - 8	Cover Crop, Hay	Annual
Clover, Crimson	150,000	60	10 - 15	4 - 8	¼"	Aug - Oct	7 - 10	Cover Crop, Hay	Annual
Clover, Kura	227,000	60	10	4 - 6	¼" - ½"	Apr - May, Aug	7	Hay, Pasture	Perennial
Clover, Ladino White	768,000	60	4 - 6	2 - 4	⅛" - ¼"	Feb - May, Aug - Oct	7 - 10	Hay, Pasture	Perennial
Clover, Mammoth Red	272,000	60	8 - 12	6 - 8	¼" - ½"	Feb - May, Aug - Oct	7	Hay, Silage, Pasture	Biennial
Clover, Medium Red	272,000	60	8 - 12	6 - 8	¼" - ½"	Feb - May, Aug - Oct	7	Hay, Silage, Pasture	Biennial
Clover, New Zealand White	768,000	60	4 - 6	2 - 4	⅛" - ¼"	Feb - May, Aug - Oct	7 - 10	Pasture	Perennial
Clover, White Dutch	768,000	60	6 - 8	2 - 4	⅛" - ¼"	Feb - May, Aug - Oct	7 - 10	Pasture	Perennial
Crownvetch	138,000	60	20 - 40	5 - 10	½"	Mar - May, Aug - Sep	14	Erosion Control	Perennial
Fescue, Hard	592,000	N/A	5 - 10	N/A	¼" - ½"	Feb - May, Aug - Sep	14	Erosion Control	Perennial
Fescue, Tall	227,000	25	25 - 30	6 - 12	¼" - ½"	Mar - May, Aug - Sep	14	Hay, Pasture, Erosion Control	Perennial
Festulolium	227,000	N/A	30 - 40	15 - 20	¼"	Mar - May, Aug - Sep	14	Hay, Pasture	Biennial
Hairy Vetch	16,000	60	15 - 30	10 - 20	1"	Aug - Oct	14	Cover Crop	Annual
Kale	200,000	N/A	3.5 - 4	2 - 3	½"	May - Jul	7	Cover Crop	Annual
Lespedeza, Korean (Hulled)	238,000	25	25 - 35	N/A	¼" - ½"	Mar - Apr	14	Hay, Pasture, Erosion Control	Annual
Lespedeza, Striate (Kobe)	200,000	25	25 - 35	N/A	¼" - ½"	Mar - Apr	14	Hay, Pasture, Erosion Control	Annual
Millet, Browntop	142,000	50	10 - 30	N/A	½" - 1"	May - Jul	10	Hay, Pasture	Annual
Millet, Foxtail (German)	220,000	50	20 -25	N/A	1"	May - Jul	10	Hay	Annual
Millet, Japanese	143,000	35	15 - 30	8 - 12	1"	Apr - Jul	10	Hay, Wildlife, Erosion Control	Annual
Millet, Pearl	60,000	52	10 - 30	5 - 20	½" - 1"	May - Jul	3 - 5	Pasture, Silage	Annual
Millet, Proso	80,000	56	20 - 30	5 - 20	1"	May - Jul	3 - 5	Grain, Wildlife	Annual
Oats, Spring, Fall	16,000	32	30 - 50	20 - 40	¾" - 1"	Mar - Apr, Aug - Sep	5 - 8	Cover Crop, Silage, Hay	Annual
Orchardgrass	416,000	14	20 - 30	3 - 10	¼" - ½"	Mar - May, Aug - Sep	18	Hay, Pasture	Perennial
Peas, Austrian Winter	2,000	60	30 - 80	10 - 30	1" - 1 ½"	Aug - Sep	9	Cover Crop	Annual
Peas, Cow	3,000	60	75 - 120	N/A	¼" - ½"	May - Jul	8	Cover Crop, Silage	Annual
Phacelia	230,000	N/A	8	1 - 2	¼"	Jun - Sep	10 - 14	Cover Crop	Annual
Radish	35,000	N/A	3 - 8	1 - 3	¼" - ½"	Aug - Sep	14	Cover Crop	Annual
Rapeseed	145,000	50	4 - 6	2 - 4	¼" - ½"	Apr - May, Aug - Sep	4 - 10	Cover Crop	Annual
Red Top	4,990,000	14	4 - 5	1 - 2	¼"	Mar - May, Aug - Sep	10	Pasture, Erosion Control	Perennial
Reed Canarygrass	480,000	47	5 - 10	3 - 5	¼" - ½"	Mar - May, Aug - Sep	21	Hay, Pasture	Perennial
Ryegrass, Annual	227,000	24	15 - 30	10 - 15	¼"	Mar - Apr, Aug - Oct	7	Cover Crop, Silage, Pasture	Annual
Ryegrass, Perennial	227,000	24	30 - 40	6 - 10	¼" - ½"	Feb - May, Aug - Sep	14	Hay, Pasture	Perennial
Sainfoin	30,000	55	20	15	½" - ¾"	Mar - Apr	10	Hay, Pasture, Wildlife	Perennial
Sorghum, Forage	17,000	56	6 - 15	N/A	¾" - 1 ½"	May - Jul	10	Silage	Annual
Sorghum, Forage BMR	17,000	56	4 - 6	N/A	1"	May - Jul	10	Silage	Annual
Sorghum, Grain	15,000	50	3 - 10	N/A	1"	May - Jul	10	Grain, Wildlife	Annual
Sorghum x Sudangrass	21,000	56	25 - 50	5 - 20	¾" - 1 ½"	May - Jul	10	Silage	Annual
Sorghum x Sudangrass BMR	21,000	56	15 - 35	N/A	1"	May - Jul	10	Silage	Annual
Sudangrass	43,000	40	20 - 45	N/A	½" - 1"	May - Jul	10	Hay, Pasture	Annual
Sunn Hemp	15,000	N/A	15	5 - 8	½" - 1"	Jul - Sep	3 - 7	Cover Crop	Annual
Sunflower	7,000	32	8 - 5	1 - 2	¾" - 1"	May - Aug	4 - 10	Wildlife	Annual
Sweetclover	259,000	60	12 - 15	6 - 8	¼" - ½"	Feb - May, Aug - Oct	7	Pasture, Wildlife	Biennial
Switchgrass	389,000	55	5 - 8 PLS	N/A	½"	Apr - May	21	Hay, Pasture, CRP	Perennial
Timothy	1,152,000	45	12 - 15	2 - 6	¼" - ½"	Mar - May, Aug - Sep	10	Hay, Pasture	Perennial
Teffgrass	1,300,000	N/A	8 - 12	N/A	¼"	May - Jul	3 - 5	Hay, Pasture	Annual
Triticale	15,000	48	30 - 100	20 - 40	¾" - 1"	Mar - Apr, Aug - Oct	6 - 8	Hay, Pasture	Annual
Turnips	220,000	55	2 - 6	1 - 4	¼"	Aug - Sep	4 - 10	Cover Crop	Annual
Weeping Lovegrass	1,482,320	60	3 - 5	1 - 2	½"	May - Jun	7	Hay, Pasture	Perennial
Wheat	11,000	60	90 - 120	60 - 90	¾" - 1 ½"	Mar - Apr, Aug - Oct	7	Pasture, Silage	Annual

FORAGE FIRST®
BY DLF

5S 5 SERIES™

Alfalfa
NAFA U.S. Alfalfa Farmer Research Initiative

La Crosse Seed Supports the U.S. Alfalfa Farmer Research Initiative managed by the National Alfalfa and Forage Alliance (NAFA). The goal of the initiative is to raise funds via a checkoff to invest in public research for alfalfa and alfalfa systems. The purchase of Forage First® alfalfa contributes $1.50 from each bag of seed to the U.S. Alfalfa Farmer Research Initiative for public research.

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