



Alforex
Seeds™
BY DLF

2026
Product Guide

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AT ALFOREX® we think you should expect more from your alfalfa and forage crops. High yields, solid agronomics, better forage quality and improved fiber digestibility are all reasonable requirements for these crops, but perhaps now is the time to reach a little higher. Time to grow your performance expectations.

That may be a bold challenge, but over the last several years we've seen the power in that type of thinking. Whether it's Hi-Ton® alfalfa, Hi-Salt salinity tolerant varieties or the industry leading Hi-Gest® family of performance alfalfas, each can make a real difference on the farm. And if you could take a peek at our pipeline, you'd see we've only just scratched the surface.

Our promise to you is that we'll continue leading the way and pushing the industry to new heights. We'll stay committed to alfalfa and forage. And we'll do our best to help you get more out of your alfalfa and forage crops.

Our name stands for **AL**falfa and **FOR**age **EX**cellence. That's our focus, and when you use our products, that commitment shines through in every bag.

FOCUSED ON PERFORMANCE

Alforex® 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.

FOCUSED ON YOU

When you choose Alforex® Seeds, 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.

ALFOREX® SEEDS + DLF + LA CROSSE SEED: SEEDS & SCIENCE, DELIVERED

DLF and La Crosse Seed are ready to welcome you to a new era in alfalfa following DLF's acquisition of the Corteva Agriscience™ alfalfa breeding program and related assets. DLF (Dansk Landbrugs Frøelskab) 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 business through La Crosse Seed which includes strategically placed warehouses across the United States.

Still the products you know and trust, now under Alforex® Seeds, 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.



GROWING WITH DLF

Our customers demand a lot from their seed: yield, forage quality, winterhardness 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



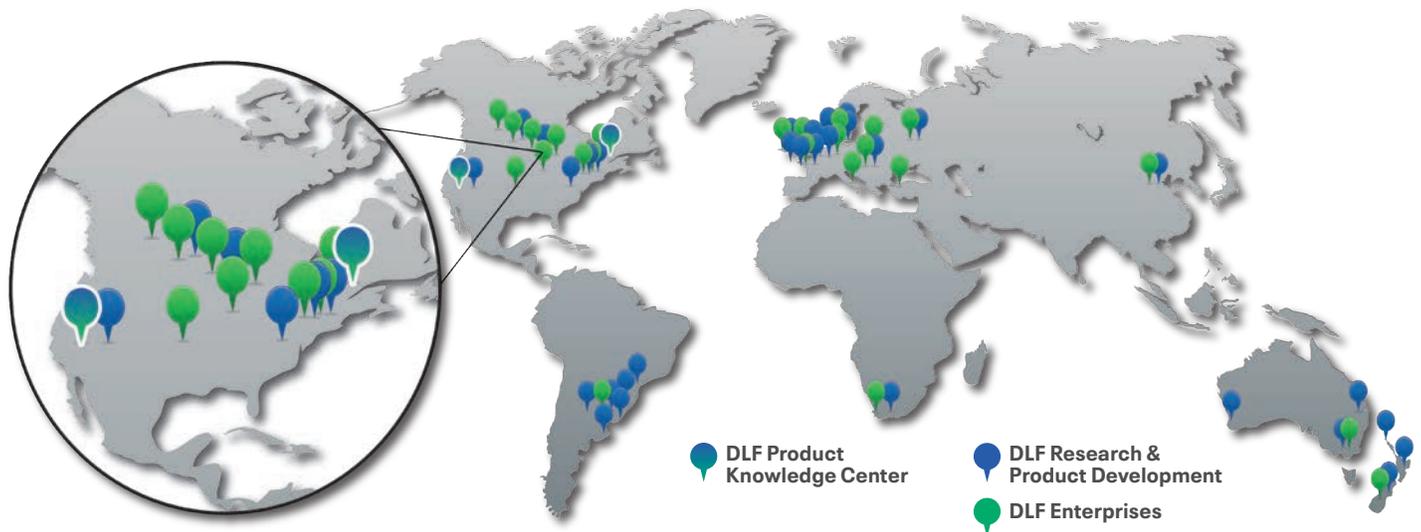
Philomath, Oregon USA



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.

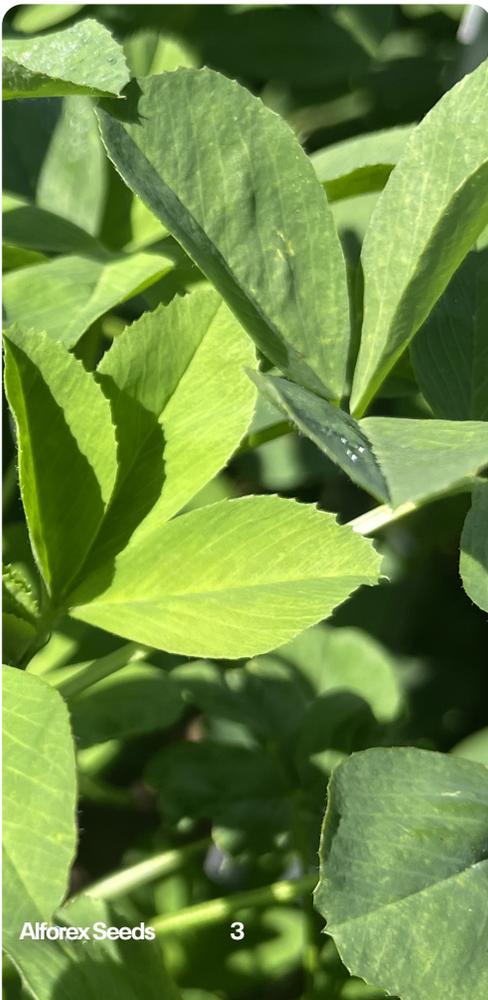
A FUTURE GROUNDED IN PURPOSE

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.

X-FORCE® IS A NEW GENERATION OF VARIETIES THAT UTILIZE SEVERAL TECHNOLOGIES TO ACHIEVE A NEW LEVEL OF PERFORMANCE. HYBRID TECHNOLOGY, HETEROSIS AMONG EXTREMELY DIVERSE GERMLASM POOLS, AN EXTENSIVE PROGENY TESTING YIELD TRIAL PROGRAM, AND A DRONE IMAGERY PROGRAM HAVE ALL CONTRIBUTED TO A NEW EXCITING LEVEL OF GENETIC GAIN. THIS COMBINATION OF TECHNOLOGIES ALLOWS TRAITS TO BE COMBINED AS NEVER BEFORE AND PROVIDES YIELD RESILIENCY AND STABILITY ACROSS ENVIRONMENTS AND WEATHER EXTREMES LIKE NEVER BEFORE.



ALFOREX® SEEDS NAMING CONVENTION

Product Naming

AFX 460

First Number = Fall Dormancy
Second Number = Arbitrary
Third Number = Trait

X-Force 5400 or X-Force 5420/Wet

First Number = Generation
Second Number = Fall Dormancy
Third Number = Trait
Fourth Number = Arbitrary

Trait Identification

- 0 = Hi-Gest with AFX Prefix or Yield for X-Force and HybriForce Products
- 2 or Wet = Branch Root Variety
- 4 = Leafhopper
- 7 = Salt Tolerance
- 9 = Hi-Ton

Agronomic Ratings are based on average performance between Alforex® varieties. Unless stated, ratings are based on standardized testing procedures endorsed by the North American Alfalfa Improvement Conference.

StandFast FastGrowth ratings are calculated by Alforex® Seeds 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

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

X-Force 5400

PERFORMANCE

- A race horse variety with exceptional yield showing a 5% yield advantage over HybriForce 4400
- Very good forage quality when managed aggressively
- Excellent 35/35 disease package allowing this variety to perform exceptionally well over a wide range of environments
- Superior winter survival

AGRONOMICS

Fall Dormancy Class:	FD 4
Winter Hardiness Class:	1.8
FastGrowth Rating:	1.82 cm/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	●				
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Nematode Resistance

Stem Nematode		●			
Northern Root Rot	●				

X-Force 5420/ Wet

PERFORMANCE

- Latest X-Force release that raises the yield potential for wet and challenging soils
- Our best branch root product exhibits the ability to modify the root structure to match soil conditions
- 3% higher yield than HybriForce 4420/Wet
- Excellent winter survival

AGRONOMICS

Fall Dormancy Class:	FD 4
Winter Hardiness Class:	1.5
Multifoliate Leaf Expression:	49%/Low MF
FastGrowth Rating:	1.86 cm/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	●				

Nematode Resistance

Stem Nematode		●			
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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 ALFOREX® SEEDS 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!



PERFORMANCE

- A very high yielding variety that replaces Hi-Gest 660 with an improved disease and pest package
- Hi-Gest® Alfalfa Technology for improved fiber digestibility, intake and extent of digestion over other conventional varieties through conventional plant breeding techniques
- Harvest flexibility with a 5-8% higher leaf to stem ratio than other conventionally bred varieties allowing producer to harvest at normal cutting schedule for higher quality or delay harvest up to 7 days to increase yield potential
- Adapted to areas where 5 to 6 cuttings are desired

AGRONOMICS

Fall Dormancy Class:	FD 6
Multifoliate Leaf Expression:	High MF
Salinity Tolerance:	
Germination:	Tolerant
Forage Production:	Tolerant
Total DRI:	25/25

PEST PACKAGE

	HR	R	MR	LR	S
Diseases					
Anthraxnose	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Cow Pea Aphid	●				
Pea Aphid	●				
Nematode Resistance					
Northern Root Rot	●				
Southern Root Rot	●				
Stem Nematode		●			

*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, Fertilzona 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.

AFX 470

A patent pending variety

PERFORMANCE

- Newest variety with Hi-Gest® Alfalfa Technology for improved fiber digestibility, intake and extent of digestion over other conventional varieties through conventional plant breeding techniques
- A very high yielding variety that replaces AFX 460 with an improved disease package with high resistance to Aphanomyces race 2
- Excellent variety with a 35/35 disease rating index and superior winter survival
- Harvest flexibility with a 5-8% higher leaf to stem ratio and higher crude protein than other conventionally bred varieties allowing producer to harvest at normal cutting schedule for higher quality or delay harvest up to 7 days to increase yield potential
- Adapted to areas where 4 to 5 cuttings are desired

AGRONOMICS

Fall Dormancy Class:	FD 4.5
Winter Hardiness Class:	WS 1.0
Multifoliate Leaf Expression:	78%/Moderate MF
FastGrowth Rating:	1.98 cm/Day - Avg
Total DRI:	35/35

PEST PACKAGE

HR R MR LR S

Diseases

Disease	HR	R	MR	LR	S
Anthraxnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Nematode Resistance

Nematode	HR	R	MR	LR	S
Stem Nematode	●				

AFX 460

A patent pending variety

PERFORMANCE

- Variety with Hi-Gest® Alfalfa Technology for improved fiber digestibility, intake and extent of digestion over other conventional varieties through conventional plant breeding techniques
- A high yield variety that performs well under dryland or irrigation in geographies using fall dormancy 4 and 5 varieties
- Harvest flexibility with a 5-8% higher leaf to stem ratio and higher crude protein than other conventionally bred varieties allowing producer to harvest at normal cutting schedule for higher quality or delay harvest up to 7 days to increase yield potential
- Adapted to areas where 4 to 5 cuttings are desired

AGRONOMICS

Fall Dormancy Class:	FD 4
Winter Hardiness Class:	WS 1.5
Multifoliate Leaf Expression:	93%/High MF
FastGrowth Rating:	2.03cm/ Day - Fast
Total DRI:	34/35

PEST PACKAGE

HR R MR LR S

Diseases

Disease	HR	R	MR	LR	S
Anthraxnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Insect	HR	R	MR	LR	S
Blue Alfalfa Aphid		●			
Cow Pea Aphid			●		
Pea Aphid		●			
Spotted Alfalfa Aphid		●			

Nematode Resistance

Nematode	HR	R	MR	LR	S
Northern Root Rot	●				
Stem Nematode	●				

Hi-Gest® 360

A patent pending variety

PERFORMANCE

- One of the first varieties with Hi-Gest® Alfalfa Technology for improved fiber digestibility, intake and extent of digestion over other conventional varieties through traditional plant breeding techniques with a variety patent pending
- A variety that has been meeting grower and livestock producers expectations since the 2015 growing season
- A high yield variety for that performs well under dryland or irrigation in geographies using fall dormancy 3 and 4 varieties
- Harvest flexibility with a 5-8% higher leaf to stem ratio and higher crude protein than other conventionally bred varieties allowing producer to harvest at normal cutting schedule for higher quality or delay harvest up to 7 days to increase yield potential
- Adapted to areas where 3 to 5 cuttings are desired

AGRONOMICS

Fall Dormancy Class:	FD 3
Winter Hardiness Class:	WS 1.5
Multifoliate Leaf Expression:	73%/Moderate MF
Fastgrowth Rating:	1.83cm/Day - Avg
Salinity Tolerance	
Germination:	Tolerant
Total DRI:	35/35

PEST PACKAGE

HR R MR LR S

Diseases

Disease	HR	R	MR	LR	S
Anthraxnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Insect	HR	R	MR	LR	S
Blue Alfalfa Aphid		●			
Cow Pea Aphid		●			
Pea Aphid			●		
Spotted Alfalfa Aphid		●			

Nematode Resistance

Nematode	HR	R	MR	LR	S
Northern Root Rot	●				
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

AFX 779

There are four Alforex® alfalfa varieties that have earned the Hi-Ton® designation. These varieties are AFX 779, AFX 589, AFX 479, and AFX 439. Each has exceeded the yield of peer experimentals, and commercial alfalfa varieties by 5% in Alforex® Seeds replicated testing, the minimum threshold for Hi-Ton® alfalfa. Alforex® alfalfa varieties carrying the Hi-Ton® designation are the first choice for the aggressive manager pushing their alfalfa acres to maximize seasonal dry matter yield.

When alfalfa fields are green and growing, chances are they are generating extra yield. The faster recovery after harvest speeds green-up by 3 to 5 days, shortening the days to harvest maturity and the next cutting. This faster growth starts with the first crop and gives a head start to each season and the number of cuts taken before the fall cutoff. Along the way, more of the season's total yield is harvested at mid-summer when heat units are at their peak and weather can be more cooperative.

To carry the FastGrowth rating, Hi-Ton varieties must average at least 1.98 cm of growth per day starting with spring green-up. Most commercial varieties range from 1.5 to 1.8 cm per day, which gives FastGrowth varieties a performance advantage in the field.



PERFORMANCE

- A high yield potential, semi-dormant Hi-Ton® designated variety for Arizona, California, New Mexico and western Texas.
- Adapted to five or six cut aggressive management systems
- Features salinity tolerance and a strong aphid resistance package
- Performs well under dryland or irrigation

AGRONOMICS

Fall Dormancy Class:	FD 7
Multifoliate Leaf Expression:	Moderate MF
Salinity Tolerance:	
Germination:	Tolerant
Forage Production:	Tolerant
Total DRI:	20/25

PEST PACKAGE

HR **R** **MR** **LR** **S**

Diseases

Anthraxnose	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid	●				
Cow Pea Aphid	●				
Pea Aphid	●				
Spotted Alfalfa Aphid	●				

Nematode Resistance

Northern Root Rot	●				
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

AFX 589

PERFORMANCE

- Excellent yield potential variety that replaces AFX 579 with a 5% yield advantage
- Fast-growing variety for production areas that use fall dormancy 4 and 5 alfalfas, and when four or more cuts are desired
- Very fast green-up after harvest and accelerated growth to harvest maturity
- Performs well under dryland or irrigated conditions

AGRONOMICS

Fall Dormancy Class:	FD 5
Winter Hardiness Class:	WS 1.5
Multifoliate Leaf Expression:	49%/Low MF
FastGrowth Rating:	2.19cm/Day - Fast
Total DRI:	34/35

PEST PACKAGE

HR	R	MR	LR	S
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Diseases

Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid				●	
Cow Pea Aphid		●			
Pea Aphid		●			

Nematode Resistance

Stem Nematode	●				
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AFX 479

PERFORMANCE

- Excellent variety for growers who aggressively manage their established alfalfa acres by harvesting at 24-25 days to maximize forage quality and seasonal yield
- Shows a 6% yield advantage over AFX 469
- 35/35 disease package with very strong winterhardiness allows alfalfa growers to improve seasonal yield with ease of mind for stand persistence
- Fast-growing variety for production areas that use fall dormancy 4 and 5 alfalfas, and when four or more cuts are desired

AGRONOMICS

Fall Dormancy Class:	FD 4
Winter Hardiness Class:	WS 1.5
Multifoliate Leaf Expression:	27%/Low MF
FastGrowth Rating:	1.97cm/Day - Avg
Total DRI:	35/35

PEST PACKAGE

HR	R	MR	LR	S
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Diseases

Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Cow Pea Aphid		●			
Pea Aphid		●			

Nematode Resistance

Stem Nematode	●				
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AFX 439

PERFORMANCE

- A widely adapted variety that will maximize yield and quality under aggressive management systems
- Adapted to production zones all across the U.S. where fall dormancy 3, 4 or 5 varieties are normally recommended
- Expected to perform very well in mixtures with cool season grasses or other legumes
- Strong performing variety with excellent yield performance when longer rotations are desired

AGRONOMICS

Fall Dormancy Class:	FD 4
Winter Hardiness Class:	WS 1.5
Multifoliate Leaf Expression:	68% MF
FastGrowth Rating:	2.01 cm/Day - Fast
Total DRI:	34/35

PEST PACKAGE

HR	R	MR	LR	S
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Diseases

Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid		●			
Cow Pea Aphid	●				
Pea Aphid		●			
Spotted Alfalfa Aphid	●				

Nematode Resistance

Stem Nematode	●				
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AFX 647

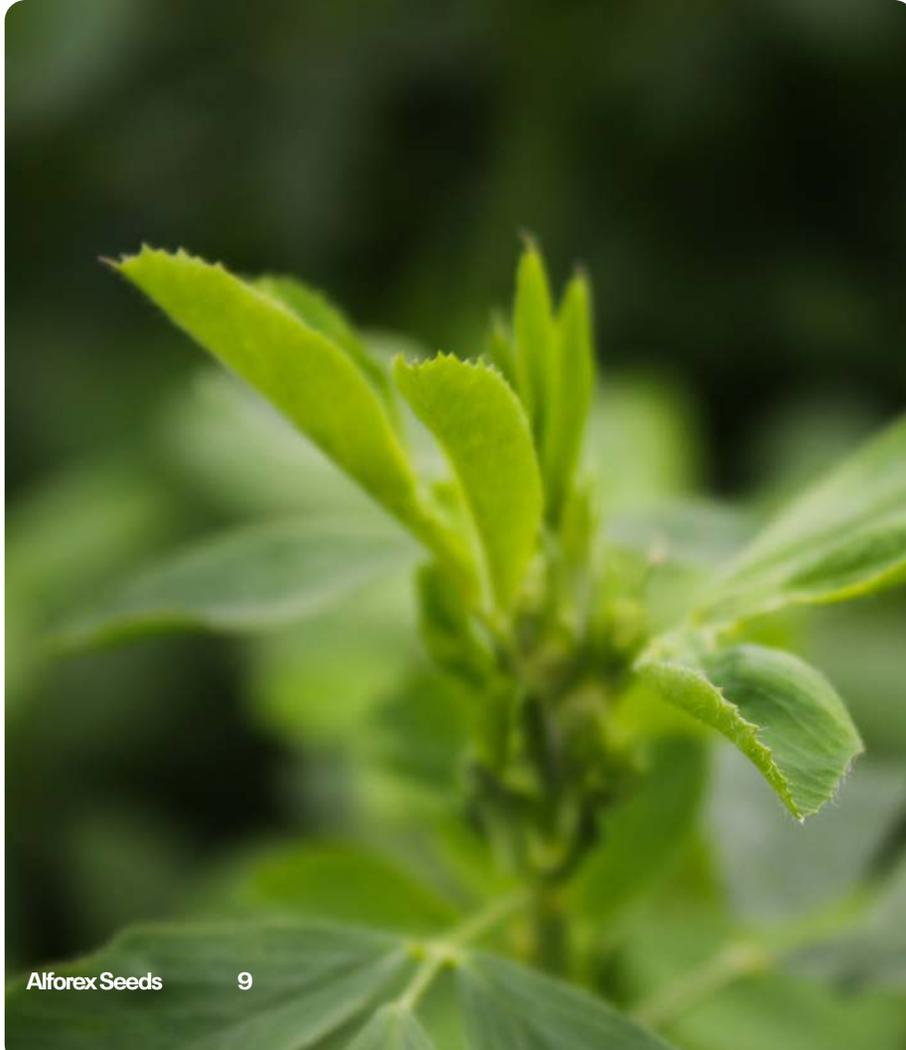
SOIL SALINITY'S IMPACT ON YIELD

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 seedling mortality by 35% and decrease yield by 15%. For every EC point above a variety's salinity threshold, yield decreases by 7.5%.*

ALFOREX® SALINITY TOLERANT ALFALFA

Through focused breeding, Alforex® has developed 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.



PERFORMANCE

- Semi-dormant variety with excellent performance for high yields and forage quality
- Demonstrates a 4% yield advantage over Cisco II in alfalfa yield trials
- Adapted to five or six cut management systems
- Germination and forage salinity tolerance for tough soils

AGRONOMICS

Fall Dormancy Class	FD 6
Multifoliate Leaf Expression	Trifoliate
Salinity Tolerance	
Germination	Tolerant
Forage Production	Tolerant
Total DRI	23/25

PEST PACKAGE

	HR	R	MR	LR	S
Diseases					
Anthraxnose	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot		●			
Verticillium Wilt		●			
Insects					
Blue Alfalfa Aphid		●			
Cow Pea Aphid		●			
Pea Aphid			●		
Spotted Alfalfa Aphid		●			
Nematode Resistance					
Northern Root Rot	●				
Southern Root Rot	●				
Stem Nematode		●			

* 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://alfalfacdavis.edu> for this and other Alfalfa Symposium Proceedings.)

AFX 467

PERFORMANCE

- Salinity tolerant variety with excellent performance with high yield potential, persistence and quality when planted in tough soils
- Excellent choice for the Great Plains and Intermountain West where salinity can limit production due to high EC fields or high EC irrigation water
- Adapted to four or five cut management systems
- No yield drag when planted in non-saline soils

AGRONOMICS

Fall Dormancy Class	FD 4
Winter Hardiness Class	WS 2
Multifoliate Leaf Expression	53%/Low MF
FastGrowth Rating	1.85cm /Day-Avg
Salinity Tolerance	
Germination	Tolerant
Forage Production	Tolerant
Total DRI	34/35

PEST PACKAGE

	HR	R	MR	LR	S
Diseases					
Anthraxnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				
Insects					
Pea Aphid		●			
Nematode Resistance					
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

AFX 327

PERFORMANCE

- New generation variety for salinity tolerance that Replaces Rugged and Rugged II
- Variety that fits a 2-4 cut system for hay, silage or grazing management
- Adapted to all areas of the Great Plains, Intermountain West and higher elevations where salinity limits production
- Performs well under dryland or irrigation

AGRONOMICS

Fall Dormancy Class	FD 3
Winter Hardiness Class	WS 2
FastGrowth Rating	2.0cm /Day-Avg
Salinity Tolerance	
Germination	Tolerant
Forage Production	Tolerant
Total DRI	32/35

PEST PACKAGE

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

AFX 317

PERFORMANCE

- Adapted to the Northern Great Plains and higher elevations of the Intermountain West where salinity may limit production
- Excellent yield potential with or without limits of salinity
- 35/35 disease and pest package for challenging soils

AGRONOMICS

Fall Dormancy Class	FD 3
Winter Hardiness Class	WS 1.5
Multifoliate Leaf Expression	78%/High MF
FastGrowth Rating	1.92cm /Day-Avg
Salinity Tolerance	
Germination	Tolerant
Total DRI	35/35

PEST PACKAGE

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



HybriForce-3600

HybriForce alfalfa varieties, unique to DLF, are alfalfa hybrids that are developed similarly to corn where the first generation cross between two unique parents are put in the bag on the farm providing that extra level of performance. Cytoplasmic male sterility is used in female parent seed and hybrid commercial production to control pollination and ensure the first generation cross ends up in the bag at a level greater than 75%.

The first generation hybrid was released in 2001. Before we release a new generation hybrid we must have at least a 5% yield increase over the previous generation hybrid!

Here are some key attributes of hybrid alfalfa:

- Excellent combination of forage yield and forage quality
- Hybrids have established extremely well
- The added seedling vigor of hybrids provide uniform stands that leave little room for weeds to get established
- Hybrid has excellent leaf retention in addition to yield
- If cutting is delayed, hybrids tend to keep growing and forage quality declines less
- Fine stems of hybrids dry down better than large stemmed varieties
- Hybrids tend to maintain their quality better than non-hybrids throughout the season



PERFORMANCE

- Gen-3 hybrid using msSunstra® Hybrid Alfalfa Technology
- 5% higher yield than HybriForce 2600 in head-to-head trials
- Very strong yield performance over the life of the stand
- Excellent pest resistances

AGRONOMICS

Fall Dormancy Class	FD6
Winter Hardiness Class	NA
Total DRI	22/25

PEST PACKAGE

	HR	R	MR	LR	S
Diseases					
Anthraxnose	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot		●			
Verticillium Wilt		●			
Insects					
Blue Alfalfa Aphid	●				
Cow Pea Aphid		●			
Pea Aphid		●			
Spotted Alfalfa Aphid	●				
Nematode Resistance					
Northern Root Rot	●				
Southern Root Rot	●				
Stem Nematode	●				



HybriForce alfalfas are products of DLF exclusive patented msSunstra® Hybrid Alfalfa Technology.

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

NEW

AFX 334 LH BRAND

Durastan BRAND

PERFORMANCE

- Features genetic resistance to potato leafhopper injury to improve yield and forage quality that replaces AFX 324LH
- Adapted to production areas that annually expect potato leafhopper injury and where chemical control isn't desired
- Adapted to areas where 3 to 4 cuttings are desired or rotational grazing systems
- Performs well with mixtures of cool season grasses

AGRONOMICS

Fall Dormancy Class	FD 3
Winter Hardiness Class	WS 2
Multifoliate Leaf Expression	Moderate MF
FastGrowth Rating:	1.98cm/Day - Avg
Total DRI	30/30

PEST PACKAGE

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

PERFORMANCE

- Blend of proprietary alfalfa varieties for fields or situations when "the best" isn't necessary but value is
- Appearance will vary depending upon the proprietary components selected
- Adapted for three to five cutting management systems

AGRONOMICS

Fall Dormancy Class	FD 4
Winter Hardiness Class	WS 2
Multifoliate Leaf Expression	Moderate MF
Total DRI	27/30

PEST PACKAGE

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

Agronomic Ratings are based on average performance between Alforex® varieties. Unless stated, ratings are based on standardized testing procedures endorsed by the North American Alfalfa Improvement Conference.

StandFast FastGrowth ratings are calculated by Alforex® Seeds 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



MAGNUM

Magnum 8

PERFORMANCE

- Continues the Magnum tradition of establishment vigor, high yield potential, forage quality and persistence
- Tall, showy, eye-catching variety with a dense canopy of dark green leaves
- Average green-up rate following harvest
- Excellent choice for three to five cutting management systems

AGRONOMICS

Fall Dormancy Class	FD 4
Winter Hardiness Class	2.2
FastGrowth Rating	1.73cm /Day -Avg
Total DRI	34/35

PEST PACKAGE

Diseases

	HR	R	MR	LR	S
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid		●			
Cow Pea Aphid				●	
Pea Aphid			●		
Spotted Alfalfa Aphid		●			

Nematode Resistance

Northern Root Rot	●				
Stem Nematode	●				

MAGNUM

Magnum 8/Wet

PERFORMANCE

- Latest release of branch-rooted non-hybrid genetics
- Grows very aggressively in seeding year with great yields in challenging wet soils
- Excellent yield potential and stand persistence
- Adapted for four to five cutting management systems

AGRONOMICS

Fall Dormancy Class	FD 4
Winter Hardiness Class	2.5
FastGrowth Rating	1.92cm /Day -Avg
Total DRI:	35/35

PEST PACKAGE

Diseases

	HR	R	MR	LR	S
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2	●				
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid	●				
Cow Pea Aphid	●				
Pea Aphid		●			
Spotted Alfalfa Aphid	●				

Nematode Resistance

Stem Nematode	●				
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MAGNUM

Magnum 7

PERFORMANCE

- A favorite of western commercial hay growers and northeastern dairyman
- Great forage quality potential
- Proven management flexibility
- Adapted for three to five cutting management systems

AGRONOMICS

Fall Dormancy Class	FD 4
Winter Hardiness Class	1.6
FastGrowth Rating	1.71 cm /Day -Avg
Total DRI	34/35

PEST PACKAGE

Diseases

	HR	R	MR	LR	S
Anthracnose	●				
Aphanomyces-Race 1	●				
Aphanomyces-Race 2		●			
Bacterial Wilt	●				
Fusarium Wilt	●				
Phytophthora Root Rot	●				
Verticillium Wilt	●				

Insects

Blue Alfalfa Aphid		●			
Cow Pea Aphid		●			
Pea Aphid		●			
Spotted Alfalfa Aphid		●			

Nematode Resistance

Northern Root Rot	●				
Southern Root Rot		●			
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

ALFOREX® ALFALFA COMPARISON CHART

DISEASE & PEST CONTROL

	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	APHANOMYCES ROOT ROT - EVOLVING STRAINS	FEAAPHID	BLUE APHID	COWPEA APHID	SPOTTED ALFALFA APHID	POTATO LEAFHOPPER	STEM NEMATODE	NORTHERN ROOT KNOT NEMATODE	SOUTHERN ROOT KNOT NEMATODE
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X-Force ELITE ALFALFA PERFORMANCE

X-Force 5400		4.0	1.8	1.82	35/35	HR	HR	HR	HR	NA	HR	HR	HR	°	R	°	°	°	°	MR	R	°
X-Force 5420/Wet	NEW 	4.0	1.5	1.86	35/35	HR	HR	HR	HR	NA	HR	HR	HR	°	°	S	°	°	°	R	°	°

Hi-Gest ALFALFA TECHNOLOGY

Hi-Gest® 360		3.0	1.5	1.83	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	MR	R	R	HR	°	°	R	R
AFX 460		4.0	1.5	2.03	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	R	MR	R	°	R	R	°
AFX 470	NEW 	4.0	1.0	1.98	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	°	°	°	°	°	R	°	°
AFX 670	 	6.0	°	°	25/25	HR	HR	HR	HR	°	HR	°	°	°	HR	°	HR	°	°	R	°	HR

YIELD Hi-Ton PERFORMANCE ALFALFA

AFX 439		4.0	1.5	2.01	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	R	HR	HR	°	R	°	°
AFX 479		4.0	1.5	1.97	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	R	S	R	°	°	R	°	°
AFX 589		5.0	1.5	2.19	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	LR	R	°	°	R	°	°
AFX 779		7.0	°	°	20/25	R	R	R	R	°	R	°	°	°	HR	R	HR	HR	°	R	°	HR

Hi-Salt SALINITY TOLERANT ALFALFA

AFX 317		3.0	1.5	1.92	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	HR	LR	R	°	°	R	°	°
AFX 327	NEW 	3.0	2.0	2.00	32/35	HR	HR	HR	HR	°	HR	HR	LR	°	R	°	°	°	°	°	°	°
AFX 467		4.0	2.0	1.85	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	S	°	°	°	R	°	°
AFX 647		6.0	°	°	23/25	HR	HR	R	HR	°	R	°	°	°	MR	R	R	R	°	R	HR	HR

HybriForce GEN-4 HYBRID ALFALFA

Hybri-Force 3600	HYBRID	6.0	°	°	23/25	HR	HR	R	HR	°	R	°	°	°	R	HR	°	HR	°	HR	HR	HR
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OTHER ALFALFA

AFX 334LH	NEW 	3.0	2.0	1.98	30/30	HR	HR	HR	HR	°	HR	HR	°	°	R	°	°	HR	HR	°	°	°
Magnum 8		4.0	2.2	1.73	34/35	HR	HR	HR	HR	°	HR	HR	R	°	MR	R	LR	R	°	R	R	°
Magnum 8/Wet		4.0	2.5	1.92	35/35	HR	HR	HR	HR	°	HR	HR	HR	°	MR	R	R	R	°	R	°	°
Magnum 7		4.0	1.6	1.71	34/35	HR	HR	HR	HR	°	HR	HR	R	°	R	R	R	R	°	HR	HR	R
Durastan		4.0	2.0	°	27/30	HR	R	HR	R	°	HR	R	°	°	R	°	°	°	°	°	°	°

ICON KEY

- Leafhopper
- Fast Recovery
- Salt Tolerant
- Very High Quality
- Branch Root
- Disease & Pest Resistance

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.



6442HVX.RR

6374R



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	●			
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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





6423R



6427R



6430R



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		●			

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	●				

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



6517R.ST



6720R



NEXTECT RR



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	●				

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	●				

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

NEXGROW® ALFALFA	DISEASE & PEST CONTROL			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	APHANOMYCES ROOT ROT - EVOLVING STRAINS	PEAAAPHID	BLUE APHID	COWPEAAPHID	SPOTTED ALFALFA APHID	POTATO LEAFHOPPER	STEM NEMATODE	NORTHERN ROOT KNOT NEMATODE	SOUTHERN ROOT KNOT NEMATODE
	FALL DORMANCY	WINTER SURVIVAL	WINTERSURVIVAL																		
6442HVX.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®

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.

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
- Nutritional information
- Herbicide interactions
- And much more!
- Livestock safety

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 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.

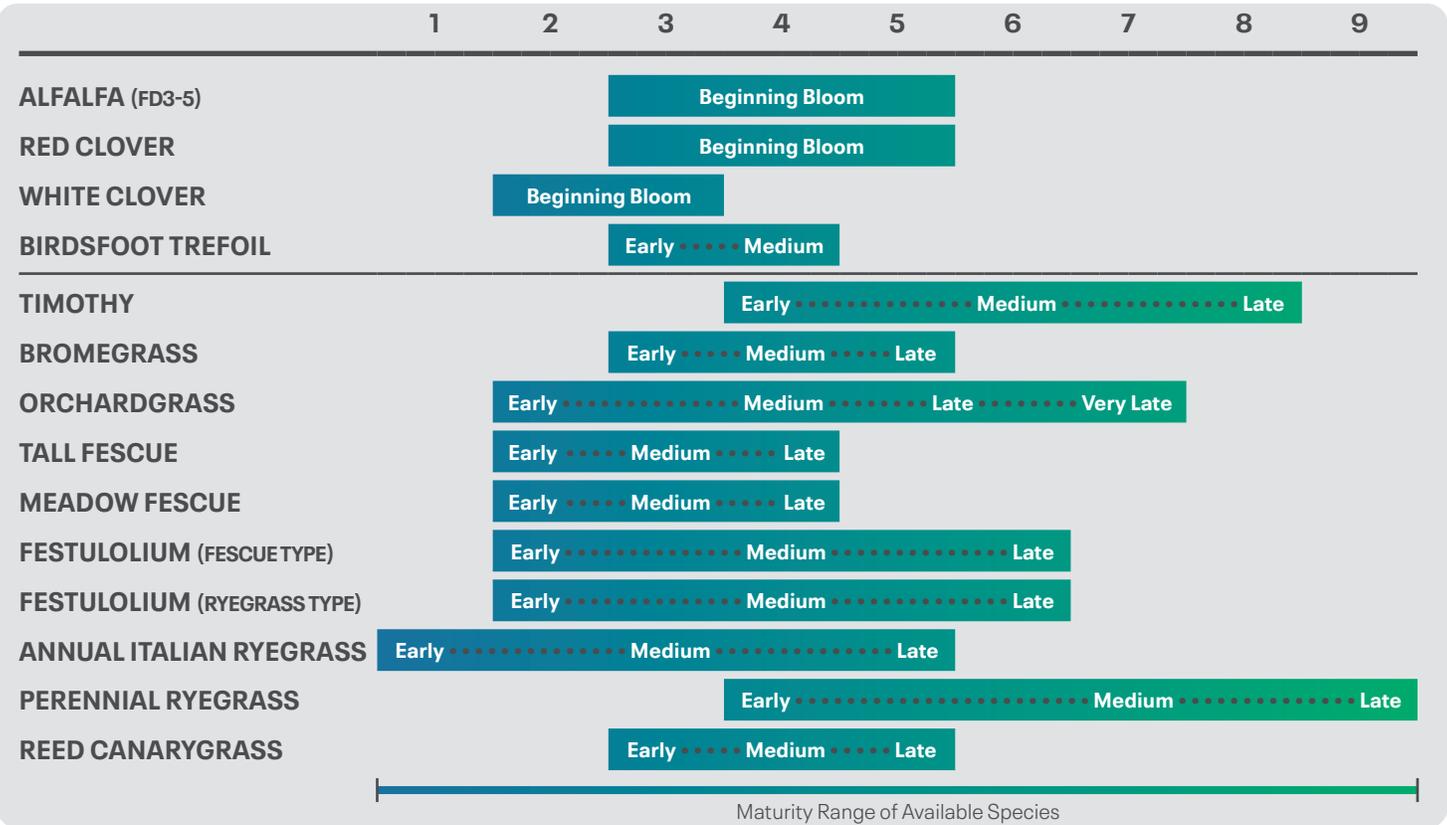


FORAGE MATURITY MATRIX

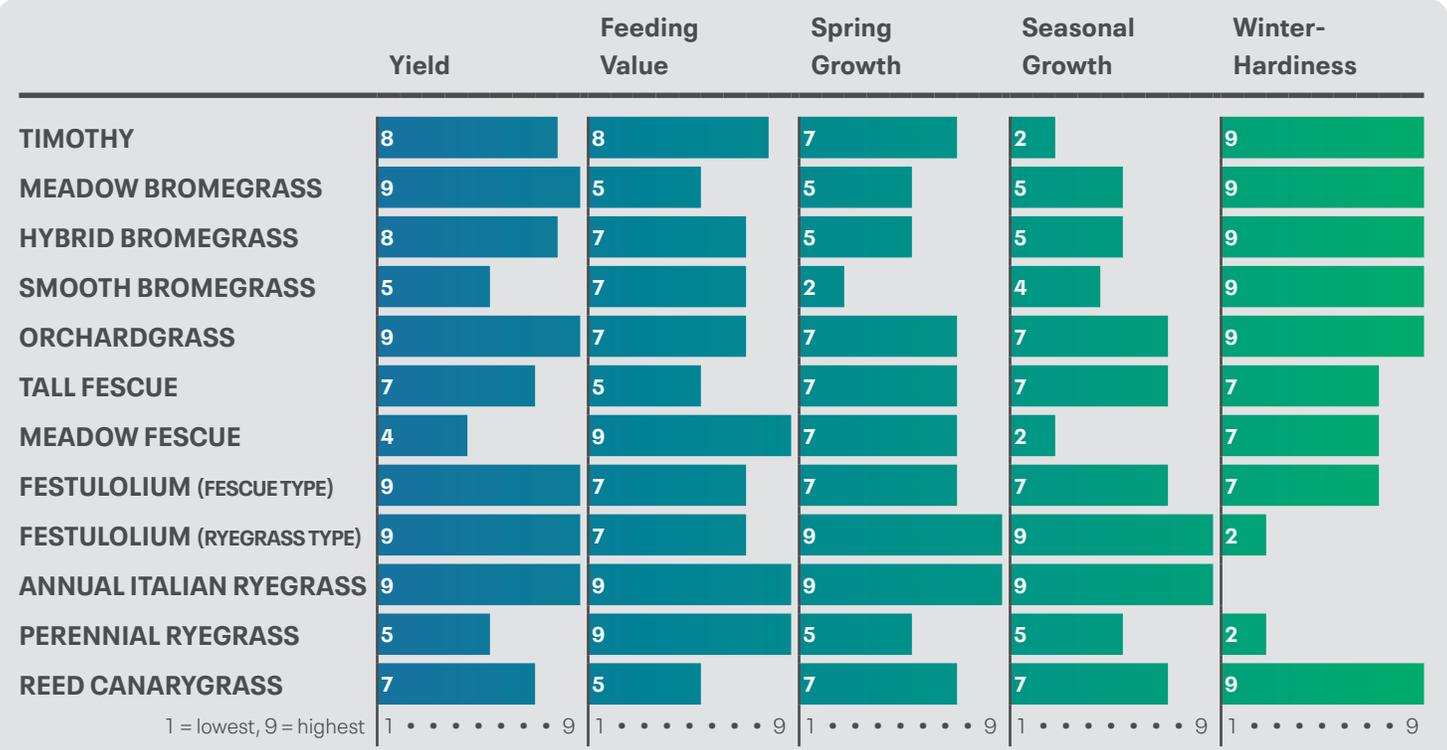
DLF's Forage Maturity Index has been designed to accommodate the broader range of species and maturities utilized in the North American forage industry. It has a 9 point index with a maturity difference of approximately 3 days per unit, reflecting Oregon conditions. Variance with this index may occur 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	  	<ul style="list-style-type: none"> • Selected for persistence & disease resistance • 3 year yield performance 	<ul style="list-style-type: none"> • High forage quality & yield potential
RED CARPET® XL 990	 	<ul style="list-style-type: none"> • Best utilized for silage or spring hay • Increased disease resistance to southern anthracnose & downy mildew 	<ul style="list-style-type: none"> • May produce 3 cuttings on second-year stands • Works well in rotational grazing programs

ALSIKE CLOVER

RADIUM XL	 	<ul style="list-style-type: none"> • Withstands heavy grazing pressure, but merits management for success (see "What Forages are Safe for Animals" at foragefirst.com) 	<ul style="list-style-type: none"> • Tolerant to poorly drained soils • Survives in poor pH soils
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BALANSA CLOVER

FIXATION		<ul style="list-style-type: none"> • High yield and quality potential • Excellent palatability and digestibility 	<ul style="list-style-type: none"> • Tolerant of a variety of soil types
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BERSEEM CLOVER

FROSTY		<ul style="list-style-type: none"> • Excellent companion to alfalfa • Quick establishment 	<ul style="list-style-type: none"> • High forage quality • Similar dry down to alfalfa
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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

ICON KEY

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

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

INTERMEDIATE WHITE CLOVER

RIESLING



- 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



- 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



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

- Uniform plant type

BIRDSFOOT TREFOIL

LOTUS 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



- 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



- 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



- 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



- 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



- 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		<ul style="list-style-type: none"> • Italian Ryegrass x Meadow Fescue • Ideal in winter-damaged alfalfa or where emergency forage is needed 	<ul style="list-style-type: none"> • Increased summer performance & drought tolerance • Fast germination & establishment • High yielding & very palatable
FOJTAN		<ul style="list-style-type: none"> • Perennial Ryegrass x Tall Fescue • Looks & grows like Tall Fescue • Higher forage quality & very palatable 	<ul style="list-style-type: none"> • Excellent for grazing, silage & dry hay • Good rust resistance & winter hardiness

KENTUCKY BLUEGRASS

BALIN		<ul style="list-style-type: none"> • Good disease resistance • Suitable in mixes for intensive & extensive use 	<ul style="list-style-type: none"> • Establishes fast with high yields • Persistence & high yields in permanent pastures
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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		<ul style="list-style-type: none"> • Medium maturity • Improved disease resistance 	<ul style="list-style-type: none"> • Very good summer production • Well suited for grazing
HAYMATE XL		<ul style="list-style-type: none"> • Medium-late maturity • Great companion for alfalfa 	<ul style="list-style-type: none"> • Improved disease resistance • Maturity allows for more flexibility with first harvest in spring
ECHELON		<ul style="list-style-type: none"> • Very late maturing, maintains forage quality longer between harvests • Superior leaf disease resistance 	<ul style="list-style-type: none"> • Perfect companion for alfalfa or clover mixes • Excellent persistence & vigor • Increased palatability & stand persistence
CAPTUR		<ul style="list-style-type: none"> • Very late maturing (4 - 6 days later than Echelon), maintains forage quality longer between harvests • High yield, improved rust resistance, high salt tolerance 	<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • Well adapted for the Midwest, Mid-Atlantic & Northeast • Suitable for both pastures or hay production 	<ul style="list-style-type: none"> • Slightly earlier maturing than KY31 • Good yielder with excellent persistence
TOWER TALL FESCUE		<ul style="list-style-type: none"> • Broadly adapted with improved tolerance to extreme conditions • Late maturing variety suitable for intense grazing & hay environments 	<ul style="list-style-type: none"> • Improved disease resistance (rust & other leaf diseases) • Maturity helps maintain higher RFQ at harvest
MARTIN 2 PROTEK® TALL FESCUE	 	<ul style="list-style-type: none"> • Adapted to the entire US tall fescue market • Medium maturity • Endophyte defends against surface feeding insects 	<ul style="list-style-type: none"> • Increased forage productivity compared to non-inoculated plants of same variety • Improved tolerance to heat and drought
LAURA MEADOW FESCUE		<ul style="list-style-type: none"> • Very quick to establish & very aggressive • Excellent for cold & wet areas 	<ul style="list-style-type: none"> • High yielding first cuts with excellent regrowth • Very good winter hardiness & persistence
HYPERBOLA MEADOW FESCUE	 	<ul style="list-style-type: none"> • Increased disease tolerance • Increased persistence between cuttings & year over year 	<ul style="list-style-type: none"> • Very quick to establish & very aggressive • High yielding first cuts with excellent regrowth

REED CANARYGRASS

DEFIANT XL		<ul style="list-style-type: none"> • Performs well on poorly-drained soils & overly wet environments • Low alkaloid 	<ul style="list-style-type: none"> • Can be used for hay, silage or pasture • Performs well on low pH soils • Widely adapted & extremely drought tolerant
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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.

Alforex Seeds 25

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 varieties 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		<ul style="list-style-type: none"> • High-yielding with rapid establishment • Excellent high quality forage in spring & fall 	<ul style="list-style-type: none"> • Extremely palatable
DEXTER 1	 	<ul style="list-style-type: none"> • Early spring growth with high dry matter yield • Very high yield with extremely fast recovery • High cold tolerance 	<ul style="list-style-type: none"> • Very high leaf to stem ratio • Tolerates intensive grazing
KENTAUR		<ul style="list-style-type: none"> • Excellent resistance to leaf spot & crown rust • High sugar content • Excellent forage quality & consistency 	<ul style="list-style-type: none"> • 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		<ul style="list-style-type: none"> • Early maturity blend • Excellent with clover or alfalfa for hay or pasture 	<ul style="list-style-type: none"> • 1 - 2 weeks earlier to boot stage than Climax in most environments
ERECTA		<ul style="list-style-type: none"> • Late maturing • Very winter-hardy 	<ul style="list-style-type: none"> • Known for its palatability & digestibility
VALOR DT	 	<ul style="list-style-type: none"> • Early maturing with excellent early spring vigor • Very winter-hardy 	<ul style="list-style-type: none"> • 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)

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

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

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

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

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

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)

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

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

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

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

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

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

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

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 & 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

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



ALL GRASS MIXES

VERSAGRASS™
SPECIAL WATERWAY
BLM #4
MARE & FOAL
GRASS MASTER
JUMP START
FESCUE BASED MIX

GRASS + LEGUME MIXES

ALFALFA BASED
ALFALFA HAY & PASTURE
ALL PURPOSE
BEEF
TRIPLE CROWN
CLOVER-BASED

CHARACTERISTICS

RATE FOR PURE STAND	15 - 20	10 - 15
RATE IN MIX	5 - 10	4 - 10
ESTABLISHMENT	SLOW	SLOW
PERSISTENCE	HIGH	HIGH
DROUGHT TOLERANCE	MED	MED
WINTER HARDINESS	HIGH	HIGH
PALATABILITY	HIGH	HIGH
YIELD POTENTIAL	HIGH	MED
GRAZING TOLERANCE	HIGH	HIGH

ADDITIONAL ELITE VARIETIES & OTHER FORAGE FIRST® PRODUCTS

PAGE #

SOD FORMING		COOL SEASON GRASSES			
SMOOTH BROME	KENTUCKY BLUEGRASS	NON-SOD FORMING			
BIG TON XL		TALL FESCUE	MEADOW FESCUE	ORCHARD	TIMOTHY
		STARGRAZER XL		HAYMATE XL	TOP TIM XL
25%				25%	25%
65%		20%			
	15%	20%			15%
	10%			50%	25%
		35%		35%	
		40%	30%		
					15%
				20%	15%
				15%	20%
15%		15%			5%
	15%				20%
					25%
		25 - 30	25 - 30	15 - 25	12 - 15
		6 - 12	6 - 12	3 - 10	2 - 6
		MED	MED	MED	SLOW
		HIGH	HIGH	HIGH	MED
		HIGH	HIGH	MED	LOW
		MED	HIGH	HIGH	HIGH
		MED	HIGH	HIGH	HIGH
		HIGH	HIGH	HIGH	MED
		HIGH	HIGH	HIGH	MED
	BALIN GINGER	TOWER	LAURA HYPERBOLA	INAVALE ECHELON CAPTUR	ERECTA VALORDT
23	24	25	25	24	26

SUMMER ANNUALS

SPECIES	VARIETY	MATURETY	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	SPECIAL FEATURES	
											BMR 6	BD
MULTI-CUT SPECIES	SORGHUM X SUDANGRASS	QUICKDRY BMR T/TS	14,000 - 15,000	20 - 25	35 - 50	4	4	3	2	3	BMR 6	
		DENSE TONNAGE BMR BD T	14,000 - 15,000	15 - 25	25 - 35	4	4	1	4	2	BMR 6	BD
		EVERGROW BMR PPS T	14,000 - 15,000	20 - 25	35 - 50	3	5	2	3	2	BMR 6	PPS
		GREENSUGAR TR T	16,000 - 20,000	20 - 25	50 - 60	3	3	2	2	2		
		GREENSUGAR MS T	16,000 - 20,000	20 - 25	50 - 60	3	4	1	2	2	MS	
		GREENSUGAR PF T	15,000	20 - 25	50 - 60	4	3	2	2	2	PF	
SUDANGRASS	BALEMORE	EARLY MED	35,000 - 40,000	15 - 25	20 - 35	3	3	1	2	4		
PEARL MILLET	HERCULES BMR BD T	MED	50,000 - 60,000	10 - 12	15 - 20	5	5	5	4	4	BMR 6	BD
		PERFORM T	MED	50,000 - 60,000	10 - 12	15 - 20	5	4	5	4	4	
TEFF GRASS	REPRIEVE XL	NA	650,000	8 - 10	8 - 10	4	3	5	NA	4	CC	
SINGLE-CUT SPECIES	FORAGE SORGHUM	94 MS TS	17,000 - 19,000	4 - 6	5 - 7	4	2	3	4	4	MS	
		95 BMR TS	16,000 - 18,000	4 - 6	5 - 7	4	3	3	5	5	BMR 12	BD

	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

<ul style="list-style-type: none"> Widely adapted Traditional growth habit with wide, long leaves 	<ul style="list-style-type: none"> Increased sugar content = improved digestibility Fast establishment & regrowth = more productivity
<ul style="list-style-type: none"> Management friendly hybrid with greater harvest flexibility Dwarf hybrid = improved standability & higher leaf:stem ratio 	<ul style="list-style-type: none"> Increased sugar content = improved digestibility
<ul style="list-style-type: none"> Widely adapted with improved disease resistance PPS hybrids remain vegetative until mid-Sept (day length < 12h, 20m) 	<ul style="list-style-type: none"> PPS allows for wider window of harvest Build tonnage without sacrificing quality
<ul style="list-style-type: none"> Broad adaptation in a traditional, non-BMR package 	<ul style="list-style-type: none"> High yielding; increase population for improved quality
<ul style="list-style-type: none"> Higher levels of sugar/protein in vegetative portion of plant Increased disease resistance 	<ul style="list-style-type: none"> MS = no anthers, thus no pollen for self-fertilization Improved standability
<ul style="list-style-type: none"> Prussic Acid (HCN) free - can be grazed after drought or freeze event Extended grazing season 	<ul style="list-style-type: none"> Harvest flexibility
<ul style="list-style-type: none"> Best summer annual option when dry hay production is planned Can also be used for grazing or green chop 	<ul style="list-style-type: none"> Strong emergence & quick regrowth
<ul style="list-style-type: none"> Versatile hybrid suitable for silage, grazing & dry hay Dwarf gene increases leaf:stem ratio & improves standability 	<ul style="list-style-type: none"> Enhanced palatability, digestibility & overall utilization No prussic acid or sugarcane aphid concerns
<ul style="list-style-type: none"> Versatile hybrid suitable for silage, grazing & dry hay Quicker regrowth compared to sorghum x sudangrass 	<ul style="list-style-type: none"> No prussic acid or sugarcane aphid concerns Shorter stature = improved standability
<ul style="list-style-type: none"> Great rotational crop between alfalfa & perennial stands Superior quality - ideal for horses & other livestock 	<ul style="list-style-type: none"> Well adapted to dry climates

YIELD FOR MATURITY	LEAF DISEASE RESISTANCE		
4	3	<ul style="list-style-type: none"> Good disease resistance Excellent yield for Male Sterile 	<ul style="list-style-type: none"> Male Sterile = increased sugar accumulation
5	5	<ul style="list-style-type: none"> Early maturing dwarf BMR Excellent leaf disease resistance 	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Forage type millets primarily Many so called "varieties" <ul style="list-style-type: none"> Pasture only before heads form (not ideal)
2 - 4'	Little regrowth	<ul style="list-style-type: none"> VERY fast growing Used primarily for hay production; seeds for wildlife <ul style="list-style-type: none"> Mid-late maturing Shallow rooted - not as drought tolerant
2 - 2½'	Little to no regrowth	<ul style="list-style-type: none"> VERY fast growing Earlier maturing <ul style="list-style-type: none"> Shorter stature Best suited in Northern Plains
3 - 4'	Poor at best	<ul style="list-style-type: none"> Dual purpose - hay & grain Late maturing <ul style="list-style-type: none"> Heavy stem & taller than most foxtail types
2 - 2½'	Poor at best	<ul style="list-style-type: none"> Usually grown for seed - bird seed or livestock feed <ul style="list-style-type: none"> Not tolerant of drought - keep off sandy soils
2 - 4'	Leave 6 - 8" for adequate regrowth	<ul style="list-style-type: none"> Grazing / hay potential on wet soils (no prussic acid) Ideal for waterfowl / wildlife feed <ul style="list-style-type: none"> Tolerant of waterlogged soils & flooding Also used for erosion control
3 - 6' (depending on variety)	Leave 8 - 10" for adequate regrowth	<ul style="list-style-type: none"> Very resilient - handles a variety of soil types No prussic acid concerns <ul style="list-style-type: none"> More drought tolerant than japanese / foxtail millets Increased forage quality offered in BMR types
2 - 4'	Leave 6 - 8" for adequate regrowth	<ul style="list-style-type: none"> Fast growing for seed mostly - wildlife Seed shatters easily - reseed potential very high <ul style="list-style-type: none"> Best suited for Southeast US (needs adequate water) Tolerant of acidic soils & low fertility

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

 <ul style="list-style-type: none"> • Turf seed • Turf mixes • Custom turf mixes • Conservation mixes • Erosion control 	 <h2>SUMMER ANNUALS</h2> <ul style="list-style-type: none"> • Sorghum x Sudan • Sudangrass • Forage Sorghum • Millets • Teffgrass
 <h2>COVER CROPS</h2> <ul style="list-style-type: none"> • Cover crop seed • Cover crop mixes • Custom cover crop mixes • Seed inoculants 	 <h2>WILDLIFE</h2> <ul style="list-style-type: none"> • Food plot seed • Food plot mixes • Custom wildlife mixes
<h2>NATIVES & WILDFLOWERS</h2> <ul style="list-style-type: none"> • Native grasses • Conservation seed mixes • Wildflowers/forbs • Custom conservation seed mixes » (NRCS, CRP, Pollinator) 	<h2>SMALL GRAINS</h2> <ul style="list-style-type: none"> • 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



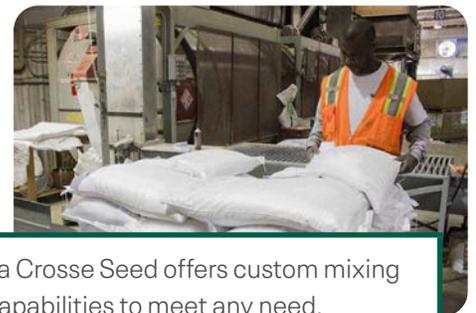
CUSTOM SEED MIXING

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**

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



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

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

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/PERENNIAL	SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
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PERENNIAL MIXES

HORN HONEY

PERENNIAL	8* (Drilled)	10 (Brdcast)	5 & 10		
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- 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 1/4" Depth



PREMIUM WHITE CLOVERS

PERENNIAL	8* (Drilled)	10 (Brdcast)	5 & 10		
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- 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 1/4" Depth



BEES N BUCKS

PERENNIAL	10* (Drilled)	12 (Brdcast)	5 & 10		
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- 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 1/4" Depth



NO-TILL WILDLIFE CLOVER

PERENNIAL	15* (Drilled)	20-25 (Brdcast)	5 & 10		
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- 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 Bulder 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 1/4" Depth



LOGGERS TRAIL MIX

PERENNIAL	20* (Drilled)	25 (Brdcast)	25		
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- 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 1/4" 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 lacroseed.com for planting windows and other useful information.

SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
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ANNUAL /PERENNIAL MIXES

BUCK'S BANQUET						SPRING GREENS ELITE								
ANNUAL/ PERENNIAL	8* (Drilled)	10 (Brdcast)	5 & 10				ANNUAL/ PERENNIAL	40* (Drilled)	50 (Brdcast)	25				

<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> 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
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*Seed at 1/4" Depth

*Seed at 1/4" Depth

BUFFER & BEDDING MIXES

ANNUAL HABITAT HIDE-A-WAY				PERENNIAL HABITAT HIDE-A-WAY					
ANNUAL	10* (Drilled)	10 (Brdcast)	10		PERENNIAL	9*	9 & 50		

<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> 34% Summer Select® Forage Sorghum 33% Wildlife Grain Sorghum 33% Egyptian Wheat 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> 34% Switchgrass 33% Indiangrass 33% Big Bluestem
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*Seed at 1" Depth

*Seed at 1/4" Depth

See Natives Guide for establishment guidelines

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	FORBS	MIXES
<ul style="list-style-type: none"> • Big Bluestem • Blue Grama • Buffalograss • Canada Wildrye • Eastern Gamagrass • Green Needlegrass • Indiangrass • Intermediate Wheatgrass • Junegrass • Little Bluestem 	<ul style="list-style-type: none"> • Prairie Cordgrass • Pubescent Wheatgrass • Sand Lovegrass • Sand Dropseed • Sideoats Grama • Slender Wheatgrass • Switchgrass • Tall Wheatgrass • Western Wheatgrass 	<ul style="list-style-type: none"> • Black-Eyed Susan • Ox-Eye Sunflower • Maximilan Sunflower • Partridge Pea • Purple Coneflower • Showy Tick Trefoil • Wild Bergamot • Yellow Coneflower
		<ul style="list-style-type: none"> • 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



SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS	ANNUAL/ PERENNIAL	SEEDING RATE (LBS/ACRE)	BAG SIZE (LBS)	BRASSICAS	LEGUMES	GRASSES	FORBS
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ANNUAL MIXES

QUAD PRO BEAN

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

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 building

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

*Seed at ¼" Depth



GAME BIRD MIX

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

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

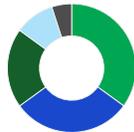
ANNUAL 25* (Drilled) 35 (Brdcast) 25



- 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



SEEDING RATE
(LBS/ACRE)

BAG SIZE
(LBS)

BRASSICAS

LEGUMES

GRASSES

FORBS

ANNUAL/
PERENNIAL

SEEDING RATE
(LBS/ACRE)

BAG SIZE
(LBS)

BRASSICAS

LEGUMES

GRASSES

FORBS

ANNUAL MIXES

RUT N READY

ANNUAL 6* (Drilled) 8 (Brdcast) 4 & 8



- 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 1/4" Depth



HARVEST MOON

ANNUAL 40* (Drilled) 50 (Brdcast) 25



- 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 1/4" Depth



ALL SEASON MIX

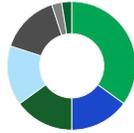
ANNUAL 50* 25



- 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 1/4" Depth



BEET & SWEETS

ANNUAL 8* (Drilled) 10 (Brdcast) 5 & 10



- 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 1/4" Depth



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	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			40	40				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 Varieties



A-List Approved



Shade Tolerant

ST

Spreading Technology

XRE+

Extreme Rhizome Expression +

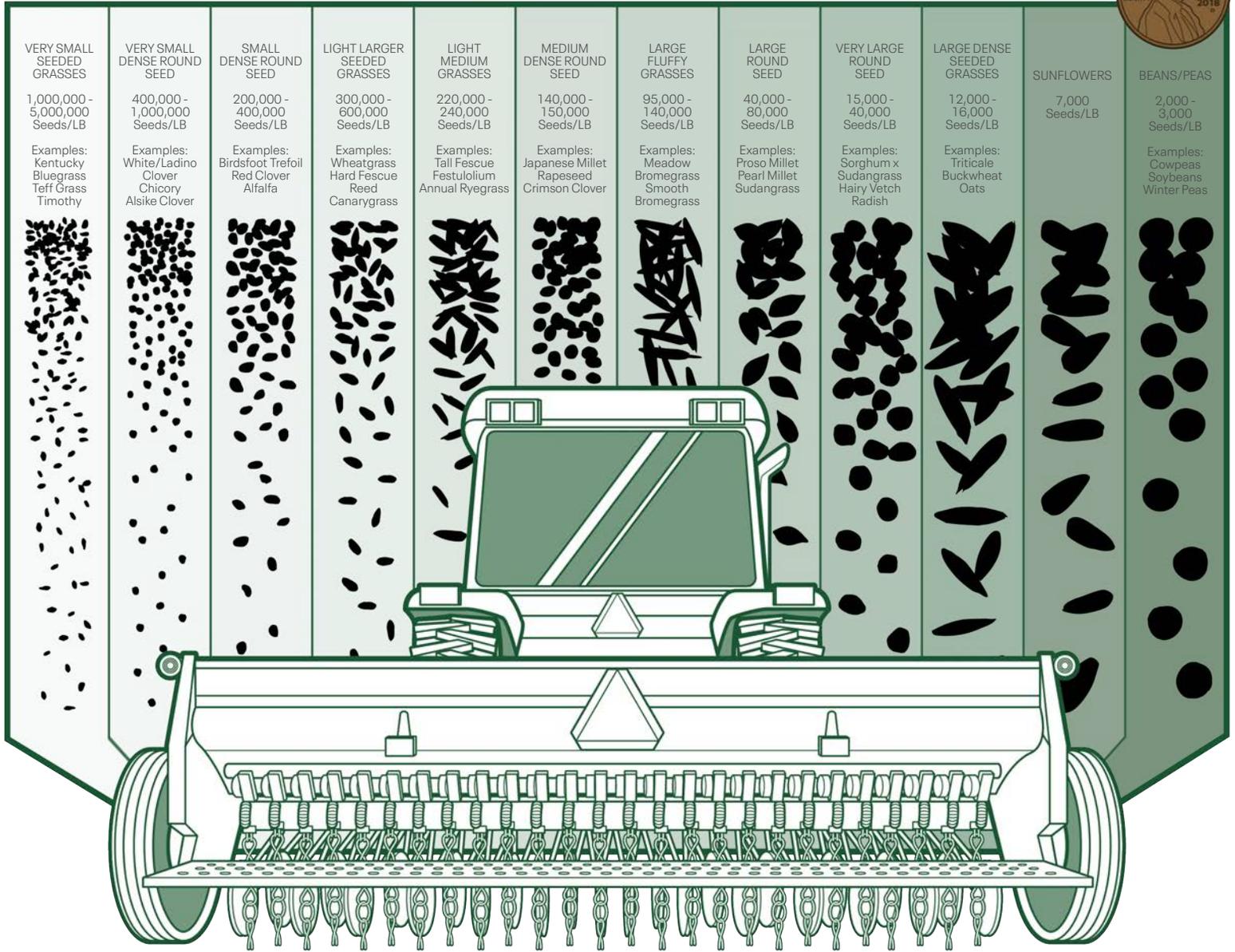


Branded Components

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



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

ALFALFA & CLOVER

SEED 2 RUMEN® ALPHAJOLE	Liquid, seed applied in-plant inoculant for alfalfa and clover
LEAF 2 RUMEN® ALPHAJOLE	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
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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	⅝" - ¾"	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	⅝" - ¾"	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	⅝" - ¾"	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	⅝" - ¾"	Feb - May, Aug - Oct	7 - 10	Pasture	Perennial
Clover, White Dutch	768,000	60	6 - 8	2 - 4	⅝" - ¾"	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" - ⅓"	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

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