FORAGE FIRST®
WHEN YIELD AND QUALITY MATTER®

LA CROSSE SEED

5 SERIES™

PRODUCT GUIDE | 2025

Forage First® describes how we view the importance of our products when planted on your farm. We have you in mind when yield and quality matter in your farming operation; through our leading research program we provide a higher standard of forage to maximize return on investment. We take pride in delivering proven products that will exceed your expectation with high yields, solid agronomics, improved forage quality and fiber digestibility. Our promise to you is that we will continue leading the way by moving the alfalfa and forage industry to new heights. We will do our best to help you get more out of your alfalfa and forage crops.

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, stress tolerance, persistence, disease and pest resistance to suit your operation. Every top-performing variety is tested in many trials before being advanced and available to you. From the latest genetics to new seed treatments and technologies, we have you covered.

MAXIMUM FLEXIBILITY

We provide a diverse selection of products for producing high quality forage for your dairy and livestock 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.

FOCUSED ON YOU

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

FORAGE FIRST + DLF: 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 Frøselskab) which translates to the "Danish Farmers Organization's Seed Supplier" was founded in 1872. DLF is owned by 3,000 growers specializing in growing and developing forage and turf seeds.

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

Still the products you know and trust, now under Forage First, 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 other specialty seed products you may require.

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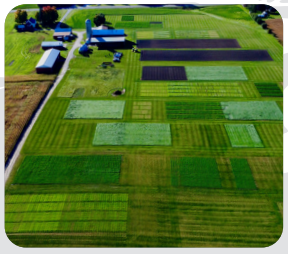
GROWING WITH DLF

Our customers demand a lot from their seed: yield, forage quality, winterhardiness and disease resistance. That is why we invest heavily in global R&D and our field trials. Roughly 11% (1 in 9) of DLF's over 2,000 worldwide employees are involved in breeding programs and product development. For more than 30 years, DLF breeding and product development has 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.

Connell, Washington USA

Port Hope, Ontario Canada



West Salem, Wisconsin USA

Philomath, Oregon USA

Berry, Kentucky USA

THE WORLD OF DLF

TESTING

- DLF head-to-head comparisons test current products against competitor check and experimental varieties
- This rigorous testing gives an ability to identify varieties with superior yield, persistence, faster regrowth, exceptional forage quality and superior disease resistance

DLF's Research trials provide the ability to select varieties that have improved disease resistance, superior yield, improved winterhardiness, faster regrowth and high forage quality based on true head to head comparisons!

DLF is the proven leader in developing forage grass and clover varieties that are adapted to diverse climatic and soil conditions. Our intensive breeding program is constantly developing new varieties of grass and clover species that will out-perform older generation genetics in yield, palatability, and forage quality.

NO 1

World market leader **within temperate forage and turf seeds.** Supplying to more than 100 countries.

Leading research and development program in sustainable and green crops of the future

7TH

7th largest seed company in the world

FORAGE FIRST®

Featured Alfalfa

5 SERIES™

54Q16

Cutting System: 3 - 5

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**HR**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**	Stem Nematode	**HR**
Fusarium Wilt	**HR**		

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**35/35**

54Q29

Cutting System: 3 - 5

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**R**
Anthracnose	**HR**	Pea Aphid	**HR**
Bacterial Wilt	**HR**	Spotted Alfalfa Aphid	**R**
Fusarium Wilt	**R**	Stem Nematode	**HR**

Fall Dormancy	**4.0**
Winter Survival	**1.8**
Total DRI	**33/35**

54VQ52

Cutting System: 3 - 5

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**HR**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**	Spotted Alfalfa Aphid	**R**
Fusarium Wilt	**R**	Stem Nematode	**HR**

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**34/35**

54VQ56

Cutting System: 3 - 5 **NEW**

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**HR**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**	Stem Nematode	**MR**
Fusarium Wilt	**HR**		

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**35/35**

54H98 BRAND

Cutting System: 3 - 5

NEW

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Potato Leafhopper	**HR**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**	Blue Aphid	**HR**
Fusarium Wilt	**HR**	Spotted Alfalfa Aphid	**HR**

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**30/30**

LEAFHOPPER PROTECTION

54HG25 BRAND

Cutting System: 3 - 5

NEW

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**R**
Anthracnose	**HR**	Pea Aphid	**MR**
Bacterial Wilt	**HR**	Blue Aphid	**R**
Fusarium Wilt	**HR**	Spotted Alfalfa Aphid	**R**
		Stem Nematode	**R**

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**34/35**

Hi-Gest ALFALFA TECHNOLOGY

54VS72 BRAND

Cutting System: 3 - 5

NEW

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**HR**
Verticillium Wilt	**HR**	Aphanomyces Race 2	**R**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**	Stem Nematode	**R**
Fusarium Wilt	**HR**	Salt Tolerance	**G/F**

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**34/35**

SALT TOLERANT

54B66 BRAND

Cutting System: 3 - 5

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

DISEASE & PEST CONTROL

Phytophthora Root Rot	**HR**	Aphanomyces Race 1	**R**
Verticillium Wilt	**R**	Aphanomyces Race 2	**MR**
Anthracnose	**HR**	Pea Aphid	**R**
Bacterial Wilt	**HR**		
Fusarium Wilt	**R**		

Fall Dormancy	**4.0**
Winter Survival	**2.0**
Total DRI	**32/35**

RESISTANCE RATINGS:

HR = Highly Resistant, 51% or more resistant plants
R = Resistant, 31 - 50% resistant plants
G/F = Salt Tolerance Germination (G), Forage (F)
MR = Moderately Resistant, 15 - 30% resistant plants
LR = Low Resistance, 6 - 14% resistant plants
S = Susceptible, 0 - 5% resistant plants
◦ = Not Rated/Not Tested

5 SERIES™ Comparison

		FALL DORMANCY	WINTER SURVIVAL	TOTAL DRI	CUTTING SYSTEM	DISEASE & PEST CONTROL: PHYTOPHTHORA ROOT ROT	VERTICILLIUM WILT	ANTHRACNOSE	BACTERIAL WILT	FUSARIUM WILT	APHANOMYCES RACE 1	APHANOMYCES RACE 2	PEA APHID	BLUE APHID	SPOTTED ALFALFA APHID	POTATO LEAFHOPPER	STEM NEMATODE	SALT TOLERANCE
54Q16		4.0	2.0	35/35	3 - 5	HR	HR	HR	HR	HR	HR	HR	R	○	○	○	HR	○
54Q29		4.0	1.8	33/35	3 - 5	HR	HR	HR	HR	R	HR	R	HR	○	R	○	HR	○
54VQ52		4.0	2.0	34/35	3 - 5	HR	HR	HR	HR	R	HR	HR	R	○	R	○	HR	○
54VQ56	NEW	4.0	2.0	35/35	3 - 5	HR	HR	HR	HR	HR	HR	HR	R	○	○	○	MR	○
54H98 BRAND	NEW	4.0	2.0	30/30	3 - 5	HR	HR	HR	HR	HR	HR	○	R	HR	HR	HR	○	○
54HG25 BRAND	NEW Hi-Gest ALFALFA TECHNOLOGY	4.0	2.0	34/35	3 - 5	HR	HR	HR	HR	HR	HR	R	MR	R	R	○	R	○
54VS72 BRAND	NEW	4.0	2.0	34/35	3 - 5	HR	HR	HR	HR	HR	HR	R	R	○	○	○	R	G/F
54B66 BRAND		4.0	2.0	32/35	3 - 5	HR	R	HR	HR	R	R	MR	R	○	○	○	○	○

Featured Forage First® Clover & Grasses

RED CARPET® XL (XL)
Red Clover
- Best utilized for silage or spring hay
- Increased disease resistance to southern anthracnose & downy mildew
- May produce 3 cuttings on second-year stands
- Works well in rotational grazing programs

ECHELON (DLF)
Orchardgrass
- Extremely late maturing, maintains forage quality longer between harvests
- Superior leaf disease resistance
- Perfect companion for alfalfa or clover mixes
- Excellent persistence & vigor
- Increased palatability & stand persistence

STARGRAZER XL (XL)
Tall Fescue
- Well adapted for the Midwest, Mid-Atlantic & Northeast
- Suitable for both pastures or hay production
- Slightly earlier maturing than KY31
- Good yielder with excellent persistence

TOP TIM XL (XL)
Timothy
- Early maturity blend
- Excellent with clover or alfalfa for hay or pasture
- 1 - 2 weeks earlier to boot stage than Climax in most environments

Featured Forage First® Grass Mixes

SEEDING RATE (LBS/ACRE)

VERSAGRASS™ MIX — 25 - 30

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

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

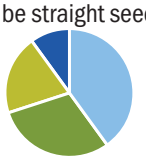
BLM #4 MIX — 30 - 40

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

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

FESCUE BASED MIX — 30 - 40

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



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

SEEDING RATE (LBS/ACRE)

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

SEE YOUR REGIONAL SALES MANAGER FOR LIST OF ADDITIONAL ALFALFA AND FORAGE OPTIONS.

Leafhopper Protection · Salt Tolerant
XL Brand · Hi-Gest · DLF Variety

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

FORAGES

- Forage grasses
- Forage legumes
- Forage mixes
- Seed inoculants
- Conservation seed/mixes
- Small grains
- Custom forage mixes

TURF

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

SUMMER ANNUALS

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

COVER CROPS

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

NATIVES & WILDFLOWERS

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

WILDLIFE

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

CUSTOM SEED MIXING

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

SEED OPTIONS

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
- 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

Contact your Regional Sales Manager

SUMMER SELECT™ SUMMER ANNUALS

MULTI-CUT SPECIES

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

SINGLE-CUT SPECIES

			DAYS TO HARVEST (SOFT DOUGH STAGE)	APPROX. HARVEST HEIGHT (FT)	APPROX. SEEDS PER POUND*	SEEDING 30" ROWS (LBS)	SEEDING NARROW (LBS)	RECOVERY AFTER CUTTING	STANDABILITY	SUGARCANE APHID TOLERANCE	DOUBLE CROP	OVERALL ADAPTABILITY
FORAGE SORGHUM	94 MS TS	MS	MS	6 - 8	17,000 - 19,000	4 - 6	10 - 15	3	4	2	3	4
	95 BMR TS	BMR 12, DWARF	85 - 95	5 - 7	16,000 - 18,000	5 - 7	NR	2	4	3	3	5

		PANICLE TYPE	GRAIN COLOR	MID-BLOOM (DAYS)	GRAIN MATURITY (DAYS)	APPROX. HEIGHT (IN)	APPROX. SEEDS PER POUND*	DRYLAND POPULATION / ACRE	IRRIGATED POPULATION / ACRE	HEAD EXERTION	STANDABILITY	SUGARCANE APHID TOLERANCE	PRE-FLOWER STRESS TOLERANCE	ANTHRACNOSE TOLERANCE
GRAIN SORGHUM	79 B TS	OPEN	BRONZE/RED	48 - 51	80 - 85	36 - 42	13,000	25,000 - 40,000	60,000 - 75,000	5	4	4	5	2
	94 R TS	SEMI-CLOSED	RED	68 - 71	110 - 115	50 - 56	16,000	25,000 - 40,000	60,000 - 75,000	5	4	5	4	3

	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, **BMR** = Brown Mid-Rib, **MS** = Male Sterile, **PPS** = Photo Period Sensitive, **T** = Base Treatment, **TS** = Base Treatment/Safened

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

• Widely adapted • Traditional growth habit with wide, long leaves	• Increased sugar content = improved digestibility • Fast establishment & regrowth = more productivity
• Management friendly hybrid with greater harvest flexibility • Dwarf hybrid = improved standability & higher leaf:stem ratio	• Suitable for grazing environments or 1-cut silage systems • Increased sugar content = improved digestibility
• Widely adapted with improved disease resistance • PPS hybrids remain vegetative until mid-Sept (day length < 12h, 20m)	• PPS allows for wider window of harvest • Build tonnage without sacrificing quality
• Broad adaptation in a traditional, non-BMR package	• High yielding; increase population for improved quality
• Higher levels of sugar/protein in vegetative portion of plant • Increased disease resistance	• MS = no anthers, thus no pollen for self-fertilization • Improved standability
• Best summer annual option when dry hay production is planned • Can also be used for grazing or green chop	• Strong emergence & quick regrowth
• Versatile hybrid suitable for silage, grazing & dry hay • Dwarf gene increases leaf:stem ratio & improves standability	• Enhanced palatability, digestibility & overall utilization • No prussic acid or sugarcane aphid concerns
• Versatile hybrid suitable for silage, grazing & dry hay • Quicker regrowth compared to sorghum x sudangrass	• No prussic acid or sugarcane aphid concerns • Shorter stature = improved standability
• Great rotational crop between alfalfa & perennial stands • Superior quality - ideal for horses & other livestock	• Well adapted to dry climates

YIELD FOR MATURITY	LEAF DISEASE RESISTANCE		
4	3	• Good disease resistance • Excellent regrowth for a forage sorghum	• Male Sterile = increased sugar accumulation
5	5	• Early maturing dwarf BMR • High grain yield for maturity	• Excellent leaf disease resistance • Widely adapted with excellent standability

HEAD SMUT TOLERANCE	FUSARIUM TOLERANCE	MAIZE DWARF MOSAIC TOLERANCE	DOWNY MILDEW TOLERANCE		
3	4	4	3	• Widely adapted - can go anywhere! • Ultra early hybrid	• Exceptional drought tolerance
5	4	5	5	• Widely adapted hybrid that yields • Medium maturity	• Excellent sugarcane aphid tolerance & disease resistance

*Refer to seeds per lb on seed tag

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

Soil First® PREMIUM COVER CROP SEED

COVER CROP MIXES

Soil First® Mixes Work Great for Food Plots!

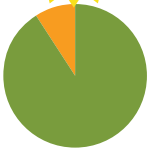
SOIL FIRST® 101 COVER STARTER

Simple. Practical. A low-risk option for early adopters and 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®



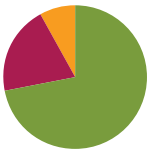
SOIL FIRST® 102 COVER STARTER +

Building nitrogen and root mass while improving soil tilth and 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 and 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®

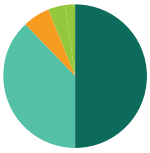
SOIL FIRST® 140 MULTI-PURPOSE

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



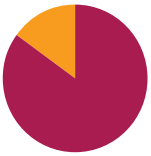
SOIL FIRST® 142 CLASSIC - NEW FORMULA

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 and 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

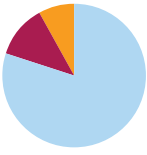
Coated clover and ryegrass creates spread patterns and broadcast germination.

- 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



Planting Information Chart

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

FORAGE FIRST®

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Alfalfa

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

La Crosse Seed Headquarters
2541 Commerce Street
La Crosse, WI 54603

800.356.SEED
lacrosseseed.com
info@laxseed.com

Contact your Regional Sales Manager