Alforex™ Seeds BY DLF

2024

Product Guide – Plains/West

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 ALFalfa and FORage EXcellence. 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 BY DLF

Alforex Seeds + DLF: Seeds & Science, Delivered

We are ready to welcome you to a new era for Alforex Seeds products with our transition to DLF following DLF's acquisition of the Corteva Agriscience™ alfalfa breeding program and related assets.

DLF is a global leader in the development of innovative forage products. DLF's U.S. business is headquartered in Lebanon, Oregon together with a large portion of DLF's North American research and seed production activities. This is also the primary location from which wholesale customers are serviced. DLF also operates a distribution-focused business through our La Crosse Seed brand which focuses on dealer customer needs from our seven midwestern locations.

Still the Alforex Seeds® you know and trust, now supported by a worldwide organization with a tremendous passion for innovation and a commitment to helping deliver the absolute best forage products.

As we move forward, our goal is to provide continuity to the alfalfa products you and your customers have been accustomed to sourcing along with all the other forage, cover crop, and other specialty seed products you may require.

Serious Growers Plant ALFOREX SEEDS

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Hi-Gest® ALFALFA TECHNOLOGY

Patents Pending

- **Elite, conventional genetics with improved rate and extent of fiber digestibility**
- **Elite genetics selected for high yield and quality, with a high leaf to stem ratio and more crude protein**
- **Elite genetics with a track record of on-farm performance**

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!

* 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, Cropland Brands Legendairy XHD and Artesia Sunrise, Fertizona Brand Fertilac, S&W Seeds Brands SW6330, SW7410 and SW10, and WL Brands WL 319HQ and WL 354HQ. Also during the 2015 growing season, 32 on-farm Hi-Gest hay and silage samples were submitted to Rock River Laboratory, Inc. for forage analysis. The results for rate of digestion, extent of digestion and percent crude protein were averaged and compared to the 60 day and four year running averages for alfalfa in the Rock River database which included approximately 1,700 alfalfa hay and 3,800 silage 60 day test results and 23,000 hay and 62,000 silage tests results in the four year average.

Hi-Gest® ALFALFA TECHNOLOGY

Patents Pending

Products

PERFORMANCE

"On our farms, we are focused on producing dairy quality hay and for that reason the only Alfalfa product we grow is AFX 460 Hi-Gest®. It consistently produces high yielding, high quality hay year after year. "

Josh Hess
Revolution Soil and Seed
Fort Lupton, CO

YIELD Hi-Ton®
PERFORMANCE ALFALFA

- **Maximize productive harvests and total seasonal yield**
- **Maximize milk/meat per ton and per acre**
- **Maximize heat units and conserve soil moisture for crop growth**

Hi-Ton® Performance Alfalfa

There are five Alforex alfalfa varieties that have earned the Hi-Ton® designation. These varieties are AFX 429, AFX 439, AFX 469, AFX 579 and AFX 779. 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.

Alfalfa Recommended Seeding Rates

		Seeding Method and Pounds Per Acre				
Product	**Bag Size**	**Drilled Pure Stands**	**Broadcast Pure Stands**	**Interseeding**	**Over/Frost Seeding**	**Alfalfa/Grass Mixture**
Alforex Alfalfa	50	18-25	20-28	not recommended	not recommended	15-20

HIGH YIELD

"I have planted Alforex Seeds AFX 469 across multiple soil types and locations. It performs anywhere. Sandy soils to heavy, high pH soils, AFX 469 just yields. I sell much of my hay to an exporter. I was behind two years ago and the exporter came in and swathed one of my fields. The exporter crew lead called immediately wanting to know what variety I had. Heaviest windrows they had ever witnessed in first cutting. If you want hay that goes up nice and makes great feed, look no further than AFX 469."

Sam Krautscheid
St. Isidore Farms, Inc.
George, WA

YIELD Hi-Ton® PERFORMANCE ALFALFA

Hi-Ton® Products

Hi-Salt

SALINITY TOLERANT ALFALFA

- **Reduces seedling loss during stand establishment**
- **Increases total farm yield**
- **Helps curb and remediate salinity**

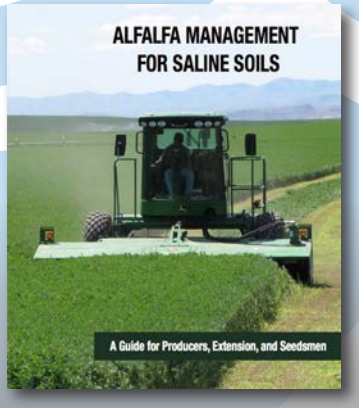
Soil salinity's impact on yield

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

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

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.



Download the Guide

To learn more about alfalfa management for saline soils, visit alforexseeds.com/seed-guides-alfalfa-forage/ for access to a 24-page guide for producers, extension agents and seedsmen.

* 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://alfalfa.ucdavis.edu for this and other Alfalfa Symposium Proceedings.)

Hi-Salt Products

SALT TOLERANT

"I choose the Rugged Alfalfa for grazing our cattle knowing that we had saline issues with the pasture and on average receive very little rainfall. We are happy with how it's performing for grazing cattle in the first year with almost no rainfall"

Willie Kist
Mandan, ND

HarvXtra® Alfalfa with Roundup Ready® Technology can increase your cutting flexibility giving you higher quality or increased yield potential. Conventional alfalfa breeding doesn't compete with those valuable xtras.

XTRA QUALITY
HarvXtra Alfalfa delivers a higher RFQ and NDFd than conventional varieties cut on the same day. On average, 14-18 percent higher forage quality (RFQ) and NDFd across cuttings than conventional varieties harvest at the same stage of maturity.[1]

XTRA YIELD POTENTIAL
If your operation needs more tonnage, you have the flexibility to achieve up to a 20% higher yield at harvest2 by extending your cutting window up to 10 days.

XTRA CLEAN FIELDS
Roundup Ready® Technology delivers unsurpassed weed control and crop safety.

XTRA TIME
HarvXtra Alfalfa with Roundup Ready Technology puts you back in charge of your cutting schedule.

Roundup Ready® Alfalfa system provides the opportunity to deliver unsurpassed weed control with superior crop safety, allowing you to grow more, higher-quality alfalfa.

Better Stand During Establishment Means Better Stand Persistence
Roundup Ready Alfalfa offers significant establishment advantage in both yield potential and quality. This is a result of improved weed control and crop safety through Roundup Ready PLUS® Crop Management Solutions.

Broadest Application Flexibility
With the broadest application timing window plus excellent crop safety, Roundup Ready Alfalfa requires minimal waiting — only 5 days before grazing or harvest.

Increased, High-Quality Yield Opportunity
Roundup Ready Alfalfa can deliver a higher percentage of pure alfalfa in hay and haylage than competitors, along with improved quality. Roundup Ready Alfalfa has low ADF (acid detergent fiber), low NDF (neutral detergent fiber) and high RFV (relative feed value).

TRAITED

HarvXtra® Products

AFX 455 HVX---------- page 14

Roundup Ready® Products

AFX 463 RR ---------- page 14

Hi-Gest ALFALFA TECHNOLOGY Hi-Salt SALINITY TOLERANT ALFALFA

AFX 670

A patent pending variety

Performance

- A high yield potential variety with Hi-Gest® Alfalfa Technology with improved fiber digestibility, intake and extent of digestion versus other semi-dormant alfalfas
- A product of conventional plant breeding
- Elite genetics with a 5-8% increase in leaf-to-stem ratio to improve quality and crude protein

Management

- Responds to today's recommended alfalfa best management practices
- Adapted to aggressive high quality or more relaxed high tonnage management systems
- Rations are easily balanced by a nutritionist with an accurate feed test to take advantage of this technology

Appearance at Harvest Maturity

- Plants are medium-tall, very leafy and have more stems per crown than most semi-dormant alfalfas
- High leaf-to-stem ratio results in more crude protein than most other conventionally bred semi-dormant alfalfa varieties at harvest maturity

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 6
Multifoliate leaf expression:	High MF
Salinity tolerance:	
Germination:	Tolerant

Pest Package

	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Bacterial wilt	●				
Fusarium wilt	●				
Phytophthora root rot	●				
Verticillium wilt	●				
Insects					
Cowpea aphid	●				
Pea aphid	●				
Nematode Resistance					
Northern root knot	●				
Southern root knot	●				
Stem nematode		●			

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

Hi-Gest ALFALFA TECHNOLOGY

AFX 460

A patent pending variety

Performance

- A high yield potential variety with Hi-Gest® Alfalfa Technology for geographies using fall dormancy 4-5 varieties
- A product of forward breeding for improved yield and forage quality
- Features improved fiber digestibility and better animal performance when compared to other conventionally bred varieties. Variety patent pending

Management

- Responds to today's recommended best management practices
- Adapted to aggressive high quality production systems or more relaxed high yield practices
- No known soil type limitations

Appearance at Harvest Maturity

- Plants are medium-tall with a dense canopy of dark green leaves up and down the stems
- A strong foliar leaf disease package contributes to a high leaf-to-stem ratio and higher crude protein

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 1.5
Multifoliate leaf expression:	93%/High MF
FastGrowth rating:	2.03cm per day/Fast

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					
Blue alfalfa aphid		●			
Cowpea aphid			●		
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot		●			
Stem nematode		●			

Hi-Gest ALFALFA TECHNOLOGY

Hi-Gest® 360

A patent pending variety

Performance

- A high yield potential variety with Hi-Gest® Alfalfa Technology with improved fiber digestibility, intake and extent of digestion versus other conventional alfalfas
- A product of traditional plant breeding with a variety patent pending
- A variety that has been meeting grower and livestock producers expectations since the 2015 growing season

Management

- Adapted to today's best alfalfa management practices
- Adapted to aggressive high quality production systems or more relaxed high yield practices
- Rations using Hi-Gest can be easily balanced by nutritionists with the results of an accurate feed test

Appearance at Harvest Maturity

- Plants are medium-tall, with a higher stem count, axillarial branching, and a dense canopy of leaves up and down each stem
- A high leaf-to-stem ratio and more crude protein than other conventionally bred, high quality, dormant alfalfa varieties at harvest maturity

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 3
Winter hardiness class:	WS 1.5
Multifoliate leaf expression:	73%/Moderate MF
FastGrowth rating:	1.83cm per day/Average
Salinity tolerance:	
Germination:	Tolerant

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid			●		
Spotted alfalfa aphid	●				
Nematode Resistance					
Northern root knot		●			
Stem nematode		●			

AFX 779

Performance

- A high yield potential, semi-dormant Hi-Ton® designated variety for California, Arizona, New Mexico and western Texas

Management

- Stable yield performance into the later production years
- Adapted to five or six cut aggressive management systems
- Features salinity tolerance and a strong aphid resistance package
- Average regrowth, green-up recovery after cutting

Appearance at Harvest Maturity

- Medium-tall plants with moderate ML expression

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 7
Multifoliate leaf expression:	Moderate MF
FastGrowth rating:	Average
Salinity tolerance:	
Germination:	Tolerant
Forage Production	Tolerant

Pest Package	HR	R	MR	LR	S
Diseases					
Anthracnose		●			
Bacterial wilt		●			
Fusarium wilt		●			
Phytophthora root rot		●			
Verticillium wilt		●			
Insects					
Blue alfalfa aphid	●				
Cow pea aphid	●				
Pea aphid	●				
Spotted alfalfa aphid	●				
Nematode Resistance					
Southern root knot	●				
Stem nematode	●				

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

AFX 579

Performance

- For growers who aggressively manage and harvest their alfalfa acres to maximize dry matter yield per acre
- FastGrowth ability shaves 3 to 5 days off the time between harvests to maximize seasonal yield
- Carries a strong, multiple-pest package to protect fast-growing plants and aggressively managed acres

Management

- Fast-growing variety for production areas that use fall dormancy 4 and 5 alfalfas, and when four or more cuts are expected each season
- Very early harvest maturity; reaches late bud or early flower 3 to 5 days ahead of most dormant alfalfas
- Very fast green-up after harvest and accelerated growth to harvest maturity

Appearance at Harvest Maturity

- Tall and showy, with large dark green leaves

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 5
Winter hardiness class:	WS 2.5
Multifoliate leaf expression:	49%/Low MF
FastGrowth rating:	2.26cm per day/Very Fast
Salinity tolerance:	
Germination:	Tolerant

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot		●			
Stem nematode	●				

AFX 469

Performance

- For growers who aggressively manage their established alfalfa acres
- A 11% yield advantage versus PGI 557
- FastGrowth ability shaves 3 to 5 days off the time between harvests to maximize seasonal yield
- A strong 1.5 winter survival rating

Management

- Fast-growing variety for production areas that use fall dormancy 4 and 5 alfalfas, and when four or more cuts are expected each season
- Average seedling year yield performance when spring direct seeded
- Very early harvest maturity; reaches late bud or early flower 3 to 5 days ahead of most dormant alfalfas
- Very fast green-up after harvest and accelerated growth to harvest maturity

Appearance at Harvest Maturity

- Tall and showy, with large dark green leaves

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 1.5
Multifoliate leaf expression:	47%/Low MF
FastGrowth rating:	2.11cm per day/Fast
Salinity tolerance:	
Germination:	Tolerant

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					
Blue alfalfa aphid		●			
Cowpea aphid			●		
Pea aphid			●		
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot		●			
Stem nematode	●				

AFX 439

Performance

- A widely adapted variety that will maximize yield and quality under aggressive management systems
- Strong disease and pest package including stem nematodes for western growers
- High performing variety with excellent yield performance when longer rotations are desired

Management

- Adapted to U.S. production zones where fall dormancy 3, 4 or 5 varieties are normally recommended
- Provides high quality forage when aggressively managed for dairy feed
- A Hi-Ton® variety with a fast green-up rate after harvest
- Expected to perform very well in mixtures with cool season grasses or other legumes

Appearance at Harvest Maturity

- Plants at bud stage will be medium-tall and feature a uniform canopy of large, medium-green leaves

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 1.5
Multifoliate leaf expression:	68% MF
FastGrowth rating:	2.01cm per day/Fast

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					
Blue alfalfa aphid		●			
Cowpea aphid	●				
Pea aphid		●			
Spotted alfalfa aphid	●				
Nematode Resistance					
Stem nematode		●			

AFX 429

Performance

- A widely adapted variety that maximizes yield and quality under aggressive or relaxed harvest management systems
- Strong multiple pest package including stem nematodes for western growers
- Features stable yield performance into the later harvest years when longer rotations are desired

Management

- Adapted to production zones all across the U.S. where fall dormancy 3, 4 or 5 varieties are normally recommended
- A milk per acre winner when aggressively managed for dairy hay
- A Hi-Ton yield variety with an average green-up rate after harvest
- Expected to perform very well in mixtures with cool season grasses or other legumes

Appearance at Harvest Maturity

- Plants at bud stage will be medium-tall and feature a uniform canopy of large, medium-green leaves

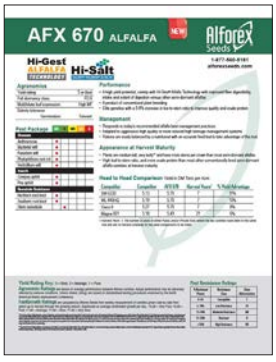
Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 2
Multifoliate leaf expression:	56%/Low MF
FastGrowth rating:	1.98cm per day/Average

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot		●			
Stem nematode		●			

"The Hi-Salt and Hi-Ton® varieties have been great products in producing high quality alfalfa in Wyoming."

Bill Candee
Candee Farms
Burlington, WY



Download a Product Sheet

Visit alforexseeds.com to view and access a printable PDF for each Alforex alfalfa variety.

Hi-Salt SALINITY TOLERANT ALFALFA

AFX 647

Performance

- Semi-dormant variety with excellent performance for high yields and forage quality
- Germination and forage salinity tolerance for tough soils
- Demonstrates a 4% yield advantage over Cisco II in alfalfa yield trials

Management

- Well adapted to the transitional zone between dormant and non-dormant alfalfas
- Fits the wide range of soil types, production practices and harvest systems found in the transitional zone
- Medium harvest maturity, fast recovery after harvest and persistence for medium and longer rotations

Appearance at Harvest Maturity

- Medium-tall plant with large medium green leaves

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 6
Winter hardiness class:	–
Multifoliate leaf expression:	Trifoliate
Salinity tolerance:	
Germination:	Tolerant
Forage production:	Tolerant

Pest Package

	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Bacterial wilt	●				
Fusarium wilt	●				
Phytophthora root rot		●			
Verticillium wilt		●			
Insects					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid			●		
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot	●				
Southern root knot	●				
Stem nematode		●			

Hi-Salt SALINITY TOLERANT ALFALFA

AFX 457

Performance

- Carries the complete package for high yield potential, persistence and forage quality when establishing and growing alfalfa on high EC fields or when using high EC irrigation water
- Adapted to all areas of the Great Plains and Intermountain West where salinity typically limits the production of dairy quality hay
- Aggressive seedling growth for rapid stand establishment with or without salinity

Management

- No yield drag when planted into non-saline soils
- Fits western production practices and geographies where fall dormancy 3, 4 or 5 alfalfas are grown
- Medium-early maturity to fit late-bud harvest systems to maximize the harvest for the area each season

Appearance at Harvest Maturity

- Medium-tall plants with large, medium-green leaves

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 2
Multifoliate leaf expression:	76%/Moderate MF
FastGrowth rating:	1.84cm per day/Average
Salinity tolerance:	
Germination:	Tolerant
Forage production:	Tolerant

Pest Package

	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Bacterial wilt	●				
Fusarium wilt	●				
Phytophthora root rot	●				
Verticillium wilt	●				
Insects					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root knot		●			
Stem nematode		●			

Hi-Salt SALINITY TOLERANT ALFALFA

RUGGED II

Performance

- Especially well adapted to the Northern Great Plains and higher elevations of the Intermountain West
- Fits irrigated or dryland crop management systems
- Improved disease package for challenging soils
- Bred for improved yield performance over Rugged and performs very well under normal or challenging environments including grazing, salinity and traffic/compaction tolerance

Management

- Variety that fits a 2-4 cut system for hay or grazing management
- Exceptional winter hardiness allows for longer rotations
- Medium-late harvest maturity

Appearance at Harvest Maturity

- Medium-short plant height and a very dense, full canopy of medium green leaves

Agronomics

Yield rating:	3
Fall dormancy class:	FD 3
Winter hardiness class:	WS 1.5
Multifoliate leaf expression:	Trifoliate
FastGrowth rating:	1.62cm per day/Very Slow
Salinity tolerance:	
Germination:	Tolerant
Forage production:	Tolerant

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					
Blue alfalfa aphid	●				
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Stem nematode		●			

Hi-Salt SALINITY TOLERANT ALFALFA

RUGGED

Performance

- Especially well adapted to the Northern Great Plains and higher elevations of the Intermountain West
- Fits irrigated or dryland crop management systems
- Features bred-in grazing, germination salinity and traffic/compaction tolerance

Management

- Versatile variety that fits 2-4 cut systems for hay or hay-graze management
- Exceptional winter hardiness helps Rugged perform in production systems where other varieties fail
- Medium-late harvest maturity

Appearance at Harvest Maturity

- Medium-short plant height and a very dense, full canopy of medium green leaves

Agronomics

Yield rating:	3
Fall dormancy class:	FD 3
Winter hardiness class:	WS 1
Multifoliate leaf expression:	Trifoliate
FastGrowth rating:	1.54cm per day/Very Slow
Salinity tolerance:	
Germination:	Tolerant
Forage production:	Tolerant

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid	●				
Spotted alfalfa aphid	●				
Nematode Resistance					
Stem nematode			●		

Roundup Ready ALFALFA

AFX 463RR

Performance

- AFX 463-RR is an alfalfa with the Roundup Ready® technology for use in multiple growing regions including areas prone to stem nematode pressure
- 33 of 35 disease resistance package and is very winterhardy
- Very good standability and high yield potential in multiple growing environments

Management

- Early season weed control with glyphosate herbicides helps improve establishment success and first year yield potential compared to conventional varieties

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 2
Multifoliate leaf expression:	Low MF
FastGrowth rating:	Average
Relative feed quality rating:	3

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		●			
Nematode Resistance					
Stem nematode	●				

HARVXTRA with Roundup Ready® Technology

AFX 455HVX

Performance

- AFX 455-HVX is an alfalfa with the HarvXtra® trait and Roundup Ready® technology used to produce high quality alfalfa forage
- Strong disease resistance package and is very winterhardy
- High yield potential in multiple growing environments

Management

- Early season weed control with glyphosate herbicides helps improve establishment success and first year yield potential compared to conventional varieties
- Choice of delaying cutting by 7-10 days or cutting for highest RFQ

Agronomics

Yield rating:	5 or Best
Fall dormancy class:	FD 4
Winter hardiness class:	WS 2
Multifoliate leaf expression:	Moderate MF
FastGrowth rating:	Average
Relative feed quality rating:	5 or Best

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		●			
Nematode Resistance					
Stem nematode		●			

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

X-Force Alfalfa

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 germplasm 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.

X-Force

NEW

X-Force 5400

- A race horse variety with exceptional yield
- Very good forage quality when managed aggressively.
- Excellent 35/35 disease package allowing it to perform exceptionally well over a wide range of environments.
- Superior winter survival
- Has High Resistance to Aphanomyces Race 2

Agronomics

Yield rating:	5 or Best
Fall dormancy class	FD 4
Winter hardiness class	1.8
FastGrowth rating	1.82

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		●			
Nematode Resistance					
Stem nematode			●		

HybriForce Alfalfa

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. We are now into the 4th generation hybrid. 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 establish 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

HybriForce
GEN-4 HYBRID ALFALFA

HybriForce-4400

- Our highest-yield potential tap-root hybrid alfalfa
- Gen-4 hybrid alfalfa using msSunstra® Hybrid Alfalfa Technology
- 6.9% yield advantage* against competitors in 502 head-to-head, side-by-side comparisons
- 5% higher yielding** than HybriForce-3400 in over 5 years of research testing
- Outstanding yield potential in the establishment year
- Racehorse-style of hybrid alfalfa with excellent disease protection
- Broadly adaptive alfalfa that excels in a wide range of environments
- Tall, dense, leafy hybrid alfalfa with fine stems
- Resistance to Aphanomyces race

Agronomics

Forage rating:	5
Fall dormancy class	FD 4
Winter hardiness class	WS 2
Forage quality	4
Early seedling growth	5
Recovery rate	5

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					
Blue alfalfa aphid	●				
Cowpea aphid	●				
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root-rot			●		
Southern root-rot					
Stem nematode	●				

HybriForce
GEN-4 HYBRID ALFALFA

HybriForce-4420/Wet

- Latest release that raises the yield potential for wet soils
- Gen-4 hybrid alfalfa using msSunstra® Hybrid Alfalfa Technology
- Our best branch-root alfalfa for tough establishment
- Excellent 35/35 disease resistance rating
- Outstanding yield potential in the seeding year
- Tall, dense, leafy hybrid alfalfa with fine stems
- Highly resistant to Aphanomyces root rot race 1 & 2
- Exhibits unique ability to modify root structure to match conditions

Agronomics

Forage rating:	5
Fall dormancy class	FD 4
Winter hardiness class	NA
Forage quality	4
Early seedling growth	5
Recovery rate	5

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					
Blue alfalfa aphid					
Cowpea aphid					
Pea aphid					
Spotted alfalfa aphid					
Nematode Resistance					
Northern root-rot					
Southern root-rot					
Stem nematode		●			

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

HybriForce-3600

HybriForce GEN-3 HYBRID ALFALFA

- 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

Forage rating:	5
Fall dormancy class	FD 6
Winter hardiness class	NA
Forage quality	4
Early seedling growth	5
Recovery rate	5

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					
Blue alfalfa aphid	●				
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid	●				
Nematode Resistance					
Northern root-rot	●				
Southern root-rot	●				
Stem nematode	●				

MAGNUM 8

- 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
- Strong aphid resistance and disease package including Aphanomyces

Agronomics

Forage rating:	4
Fall dormancy class	FD 4
Winter hardiness class	2.2
Forage quality	4
Early seedling growth	5
Recovery rate	4

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					
Blue alfalfa aphid		●			
Cowpea aphid				●	
Pea aphid			●		
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root-rot		●			
Southern root-rot					
Stem nematode		●			

MAGNUM 8/Wet

- Latest release of branch-rooted non-hybrid genetics
- Strong multi-race Aphanomyces resistance package
- Grows very aggressively in the seeding year with great yields
- Excellent yield potential and stand persistence
- Very good establishment in challenging wet conditions
- Outstanding disease resistance rating of 35/35

Agronomics

Forage rating:	4
Fall dormancy class	FD 4
Winter hardiness class	2.5
Forage quality	4
Early seedling growth	5
Recovery rate	4

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid			●		
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root-rot	NA				
Southern root-rot	NA				
Stem nematode		●			

*In 2017–2020 HybriForce-4400™ was grown in 502 on-farm HAY (Hybrid Alfalfa Yield) plot comparisons across ND, SD, MN, IA, WI, IL, IN and MI with a yield advantage of 6.9% across all cuts at all locations against competitive alfalfas. Hybrid responses are variable and subject to any number of environmental, disease and pest pressures.

**In over 5 years of research testing, our combined data from internal and 3rd party trials show HybriForce-4400™ with more than a 5% yield advantage when compared to HybriForce-3400.™

msSUNSTRA®

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

Greater Value. Good Move.

Forage First® forage grasses, legumes and mixes offer high yield potential, optimum nutritional values, improved disease resistance and increased stand persistence. Our versatile portfolio offers a variety of proven products to fit any need, created with flexibility and ease of management in mind.

For additional forage options and products visit foragefirst.com.

MAGNUM

MAGNUM 7

- A favorite of western commercial hay growers and northeast dairymen
- Great forage quality potential
- Proven management flexibility
- Consistent performance
- Resistance to nematodes

Agronomics

Forage rating:	4
Fall dormancy class	FD 4
Winter hardiness class	1.6
Forage quality	5
Early seedling growth	4
Recovery rate	4

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					
Blue alfalfa aphid		●			
Cowpea aphid		●			
Pea aphid		●			
Spotted alfalfa aphid		●			
Nematode Resistance					
Northern root-rot	●				
Southern root-rot		●			
Stem nematode	●				

Durastan Brand Alfalfa

- Blend of proprietary alfalfa varieties for fields or situations when “the best” isn’t necessary but value is
- Adapted to production geographies where fall dormancy 3 to 5 varieties are recommended
- Appearance will vary depending upon the proprietary components selected

Agronomics

Yield rating:	2
Fall dormancy class:	FD 4
Winter hardiness class:	WS 2
Multifoliate leaf expression:	Moderate MF

Pest Package	HR	R	MR	LR	S
Diseases					
Anthracnose		●			
Aphanomyces-Race 1		●			
Bacterial wilt	●				
Fusarium wilt		●			
Phytophthora root rot	●				
Verticillium wilt	●				
Insects					
Pea aphid		●			

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

AFX 324LH
BRAND

Performance
- Features genetic resistance to potato leafhopper injury to improve harvestable yield and forage quality

Management
- Adapted to production acres that annually expect potato leafhopper injury and where chemical control isn't practiced
- Best adapted to three-cut or four-cut harvest or rotational grazing systems
- Performs well in mixtures with cool-season grasses or other legumes

Appearance at Harvest Maturity
- Medium plant height, leafy canopy and medium-green leaves

Agronomics

Yield rating:	2
Fall dormancy class:	FD 3
Winter hardiness class:	WS 2
Multifoliate leaf expression:	Moderate MF

Pest Package	HR	R	MR	LR	S
Diseases					
Anthracnose	●				
Aphanomyces-Race 1	●				
Bacterial wilt	●				
Fusarium wilt	●				
Phytophthora root rot	●				
Verticillium wilt	●				
Insects					
Potato leafhopper	●				
Blue alfalfa aphid	●				
Pea aphid		●			
Spotted alfalfa aphid	●				

Yield Ratings: Based on performance between Alforex Seeds varieties
5 = Best
3 = Average
1 = Poor

Selecting the right alfalfa variety when you plant can pay back huge dividends over the life of the stand by as much as 10-12 tons more yield.

Alforex Seeds™

Plains/West Region

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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

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

** Improved Hi-Gest® alfalfa leafiness, as documented by Alforex Seeds replicated trials at West Salem, WI and Woodland, CA, versus the following commercial alfalfa varieties; America's Alfalfa Brand Ameristand 427TQ, Cropland Brands Legendairy XHD and Artesia Sunrise, Fertizona Brand Fertilac, S&W Brands SW6330, SW7410 and SW10, and WL Brands WL 319HQ and WL 354HQ.

Visit us at alforexseeds.com or call us at 1-877-560-5181

Alforex Seeds™
BY DLF