



SEED GUIDE | 20 24



HARVXTRA[®]

with Roundup Ready[®] Technology

HarvXtra[®] Alfalfa is one of the most advanced alfalfa traits in the industry, giving you flexibility — not limits. It does this by modifying the amount of lignin in the alfalfa plant beyond what is possible with conventional alfalfa breeding. This gives you the ability to maintain harvest for higher-quality forage or extend harvest to optimize yield potential without sacrificing quality.

HarvXtra[®] Alfalfa with Roundup Ready[®] technology is now available in NEXGROW[®] 6439HVXR and 6957HVXR Brand varieties. HarvXtra[®] alfalfa with Roundup Ready[®] technology gives you unprecedented flexibility by widening cutting windows. This gives you the ability to better manage the yield-versus-quality trade-off. It also adds unsurpassed weed control with Roundup Ready[®] technology.

- Choose to maintain your current harvest schedule for higher quality forage, OR
- Delay harvest a few days for increased tonnage potential without sacrificing forage quality.

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 6424R and 6516R for help achieving a weed-free field.



Seed Treatment

All alfalfa varieties offered by NEXGROW® alfalfa include seed 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.

Disease and Pest Protection

NEXGROW varieties like 6439HVXR, 6423R and 6435Q that include our UltraCut™ alfalfa disease package offer growers the ability to help protect yield and quality potential. NEXGROW alfalfa also provides the latest generation of potato leafhopper resistance with excellent agronomic performance, and operates a premier alfalfa development program for the selection of stem nematode resistant varieties.



¹Includes 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.

²Includes race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

ALFALFA TRAITS

	Seed Guide Page Number	Winterhardness	Fall Dormancy	Stand Persistence	Early Seeding Growth	Recovery After Cutting	Drought Stress	Forage Quality	Leafiness	Bacterial Wilt	Verticillium Wilt	Fusarium Wilt	Anthracnose (Race 1)	Anthracnose (Race 5) ²	Phytophthora Root Rot	Aphanomyces Root Rot (Race 1)	Aphanomyces Root Rot (Race 2)	Evolving Aphanomyces Strains ¹	Disease Index Rating	Pea Aphid	Spotted Aphid	Blue Aphid	Leafhopper Yellowing	Stem Nematode	Northern Root Knot Nematode	Salt Tolerance		
HarvXtra[®] Alfalfa with Roundup Ready[®] Technology																												
6439HVXR	10	4.4	1.6	D	VG	VG	VG	F	EX	VH	HR	HR	HR	HR	R	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR
6957HVXR Brand	11	9.0	N/A	ND	EX	EX	EX	F	EX	H	MR	R	HR	HR	-	HR	-	-	-	-	-	HR	HR	-	-	R	-	G
Roundup Ready[®] Alfalfa																												
6373R	12	3.2	1.0	D	EX	VG	EX	MF	EX	VH	HR	HR	HR	HR	-	HR	HR	R	-	34/35	HR	R	-	-	MR	-	G	
6497R	13	4.0	2.0	D	EX	VG	VG	F	EX	VH	HR	HR	HR	HR	-	HR	HR	-	-	30/30	R	-	-	-	R	R	G	
NEXTECT [™] RR Brand	14	4.0	2	D	EX	VG	VG	M-F	VG	-	HR	HR	HR	R	-	HR	R	-	-	28/30	-	-	-	-	-	-	-	
6427R	15	4.1	1.0	D	EX	VG	VG	F	EX	VH	HR	HR	HR	HR	-	HR	HR	R	-	34/35	R	R	-	-	HR	-	G	
6424R	16	4.2	1.8	D	EX	VG	VG	F	EX	VH	HR	HR	HR	HR	-	HR	HR	HR	-	35/35	R	MR	-	-	R	-	-	
6423R	17	4.0	1.0	D	EX	VG	VG	F	EX	VH	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	
6516R	18	4.5	VH	D	VG	EX	VG	VF	EX	VH	HR	HR	HR	HR	-	HR	HR	-	-	30/30	HR	HR	-	-	HR	HR	G	
6829R	19	7.5	N/A	ND	VG	EX	G	VF	EX	H	R	R	R	HR	-	HR	HR	-	-	-	HR	HR	R	-	HR	HR	G	
6830R Brand	20	8.3	N/A	ND	VG	EX	G	VF	EX	-	R	R	R	R	-	HR	R	-	-	-	HR	HR	-	-	HR	-	G	
6902R	21	9.4	N/A	ND	VG	EX	G	VF	VG	H	R	R	HR	HR	-	HR	LR	-	-	-	HR	HR	R	-	HR	-	G	
Conventional Alfalfa																												
Spredor 5	22	1.9	1.0	D	EX	VG	EX	MF	VG	H	HR	HR	HR	HR	-	HR	HR	R	-	34/35	R	R	-	-	R	-	G	
6305Q	23	3.2	1.0	D	EX	VG	EX	MF	EX	VH	HR	HR	HR	HR	-	HR	HR	-	-	30/30	R	HR	-	-	R	-	-	
6480H Brand	24	3.9	2.0	D	VG	EX	EX	VF	VG	H	HR	HR	HR	HR	-	HR	HR	R	-	34/35	HR	MR	-	HR	-	-		
6401N	25	4.0	VH	D	EX	VG	VG	F	EX	VH	HR	HR	HR	HR	-	HR	R	-	-	29/30	HR	R	-	-	HR	HR	G	
6422Q	26	4.5	1.0	D	EX	EX	VG	VF	EX	VH	HR	HR	HR	HR	-	HR	HR	-	-	30/30	R	R	-	-	R	-	-	
6453Q	27	4.4	1.6	D	VG	EX	VG	VF	EX	VH	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	HR	G	
6585Q	28	5.0	1.9	D	EX	EX	G	VF	EX	VH	HR	HR	HR	HR	-	HR	HR	R	-	34/35	R	-	-	-	HR	R	G	
6906N	29	8.9	N/A	ND	VG	EX	G	VF	VG	H	MR	-	HR	R	-	R	-	-	-	-	HR	HR	HR	-	HR	-	G	

Resistance Ratings

- S** Susceptible (0-5%)
- LR** Low Resistance (6-14%)
- MR** Moderate Resistance (15-30%)
- R** Resistance (31-51%)
- HR** High Resistance (>50%)

Agronomic Ratings

- G** Good
- VG** Very Good
- EX** Excellent

Winterhardness

- H** Hardy
- VH** Very Hard

Fall Growth

- D** Dormant
- ND** Non-Dormant
- SD** Semi-Dormant

Recovery After Cutting

- MF** Moderately Fast
- F** Fast
- VF** Very Fast

Salt Tolerance

- G** Germination
- F** Forage

¹Includes 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.
²Includes race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

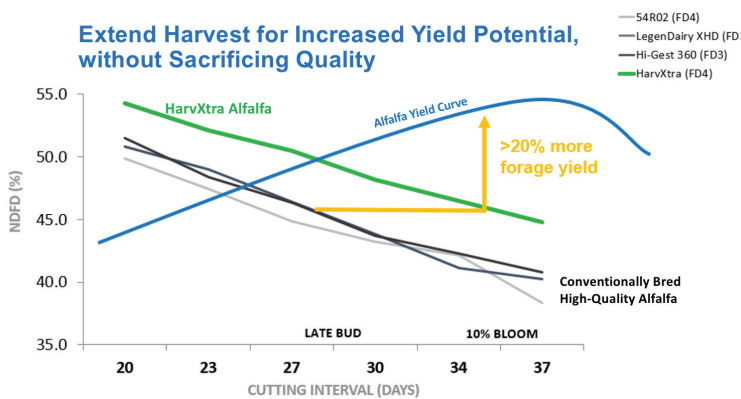
HARVXTRA[®] ALFALFA

AN ALFALFA THAT GIVES YOU OPTIONS. NOT LIMITS.

The genetically enhanced HarvXtra[®] technology fundamentally changes the relationship between forage quality and stage of maturity by modifying lignin content (ADL) beyond what is possible with conventional breeding techniques.

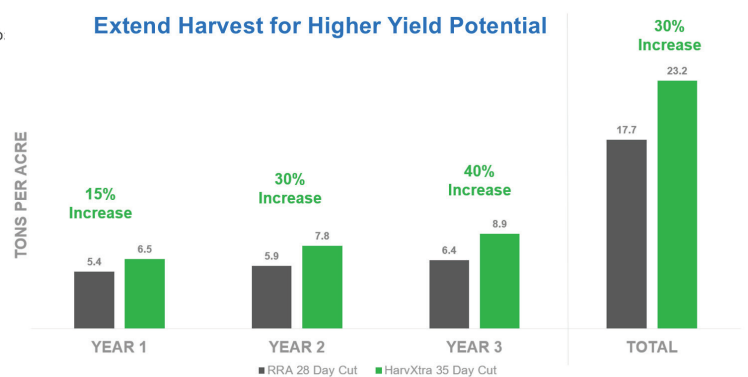
OPTION 1

Extend Harvest for Increased Yield Potential, without Sacrificing Quality



2015 and 2016 data. 4 locations: PA, WI, ID, WA.

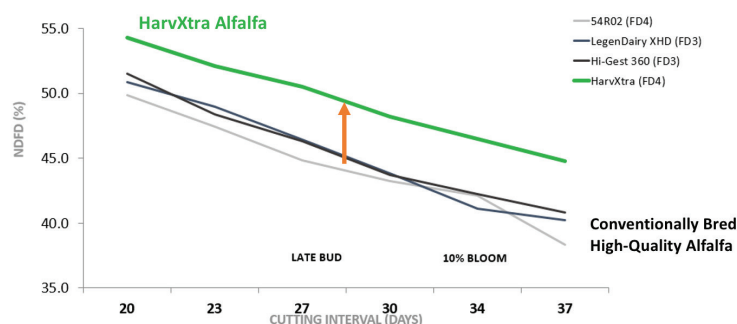
Extend Harvest for Higher Yield Potential



2013 seeding, 2014, 2015, 2016 data. West Salem, WI.

OPTION 2

HarvXtra[®] Alfalfa Delivers Exceptional Forage Quality



Fewer cuttings have the potential for more yield over time, increased persistence, and lower harvest costs.

The HarvXtra[®] Alfalfa trait lets growers delay harvest for up to 10 days to increase tonnage without sacrificing forage quality.

By reducing the amount of lignin in the plant, the HarvXtra[®] Alfalfa trait technology fundamentally changes the relationship between forage quality and stage of maturity. Less acid detergent lignin (ADL) and higher neutral detergent fiber digestibility (NDFD) improves digestibility and can command a higher price per ton come harvest.

To learn more about HarvXtra[®] alfalfa with Roundup Ready[®] technology, visit harvxtra.com.

SEED TREATMENTS & COATINGS

STANDARD SEED TREATMENT PACKAGE OFFERINGS

Treatment Options	Treatment Description	Stamina®	Apron XL®	Nitragin Gold®	Optimize Gold®	Micronutrients	OMRI Listed
34% Nutrient Coat	COS	X	X	X	X	X	NO
Apex Green 34% Organic Coat (Only available on specific products)	OC			X			YES

ADVANTAGES OF GROZONE® GOLD SEED TREATMENT PACKAGE

BETTER EMERGENCE IN WET OR DRY CONDITIONS

- Up to 20% better emergence than preinoculated uncoated seed (U of MN and CA data)
- Micronutrients surrounding the seed increases germination and emergence
- Controls early season diseases that attack new seedlings in wet environments

OPTIMAL AND EARLIER NODULE FORMATION FOR IMPROVED NITROGEN FIXATION

- Unique mix of Rhizobium strains improves nodulation and promotes nitrogen-fixation

OPTIMAL STAND ESTABLISHMENT

- Root and shoot development is enhanced and independent of soil conditions
- Early start improves plant health with multi-season benefits of greater yield potential
- Smooth finish and uniform seed size improves planting accuracy
- Ideal for reduced tillage

PROPRIETARY GROZONE® PACKAGE INCLUDES:

Optimize® Gold with LCO Promoter Technology® for alfalfa

- When present at the time of planting, LCO Promoter Technology® enables your crop to achieve its full genetic potential by enhancing nutritional capabilities that drive natural growth processes, maximizing plant health and crop performance.

Stamina® Fungicide

- Helps protect seed and new seedlings from fungal disease and enhance plant health, especially under tough soil conditions with elevated disease pressure. May result in higher germination rates, increased nodulation, healthier roots and larger plants.

Nitragin® Gold

- Specially selected natural rhizobia strains (pre-inoculant) result in high levels of nitrogen fixation for maximum yields

Apron XL® Fungicide

- Helps protect against seedling damping-off diseases, especially in cool wet soils

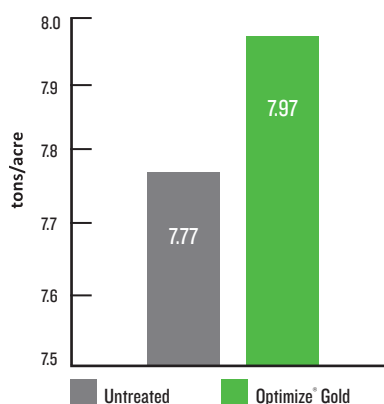
Micronutrients

- Assists in early vigor and stand establishment

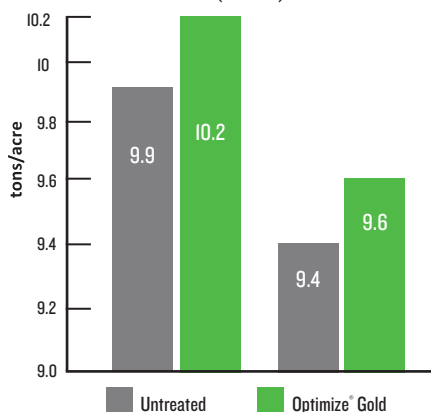
Protective Coating

- Preserves and extends shelf life of active rhizobia within seed treatment

Yield Summary
Solid ROI-Multi-year (43 Trials)



Continued returns with 2nd year crop
(4 trials)



Improved Root System



STAMINA® FUNGICIDE BENEFITS

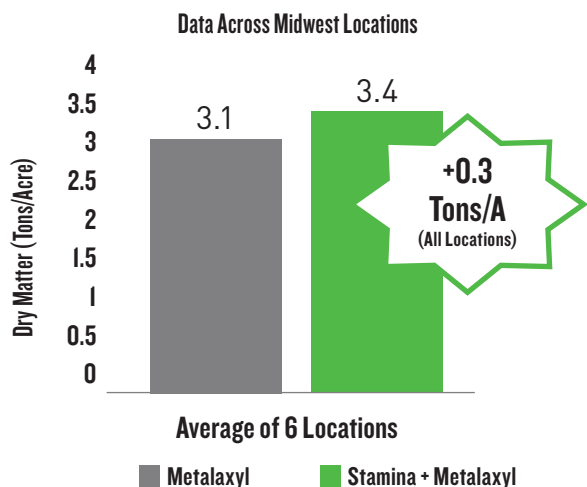
WHY USE STAMINA® FUNGICIDE?

- Powered by F500® fungicide, the same active ingredient that is in Headline® fungicide
- Stamina® is a broad spectrum, seed-applied fungicide that provides suppression of seed and emerging seedling disease caused by these target diseases:
 - Aphanomyces euteiches
 - Rhizoctonia solani
 - Fusarium spp.
 - Phytophthora medicaginis
- Seed treated with Stamina® can result in:
 - A healthy stand with fast developing plants
 - Increased forage yield potential
 - Rapid and increased emergence of seedlings even under certain cold conditions

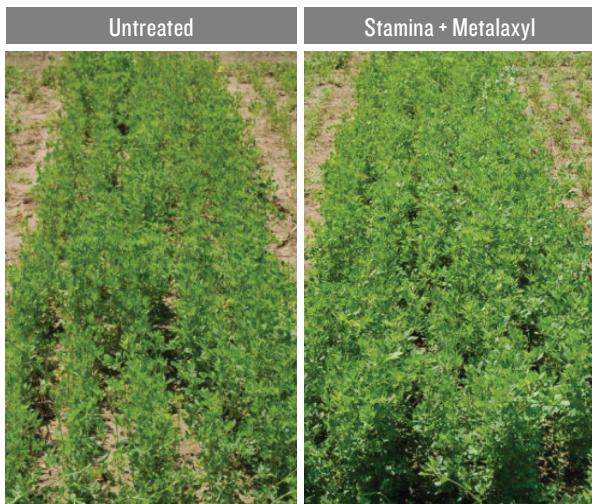


Seedlings inoculated with (A) Aphanomyces euteiches Race 1, (B) Aphanomyces euteiches Race 2 (C) Phytophthora medicaginis. Stamina applied at 3.1 fl oz/cwt & metalaxyl applied at 0.91 fl oz/cwt. 2011 Laboratory test conducted by an independent third party researcher.

Summary of Alfalfa Forage Yield, Seeding Year



Stamina applied at 3.1 fl oz/cwt. Metalaxyl applied at 0.91 fl oz/ cwt. 2013 replicated trials conducted in West Salem, WI.



Alfalfa spring seeded May 6, 2013. Photos taken on June 29, 2013 in West Salem, WI. 54 Days After Seeding. Stamina 3.1 fl oz/cwt, metalaxyl 0.91 fl oz/cwt.

APEX™ GREEN SEED COATING

PROVEN PERFORMANCE

OMRI SSC-2409



Independent field studies and University testing have shown:

- Apex™ Green Seed Coating encapsulates each seed with a specifically formulated mix of OMRI listed and NOP approved minerals and nutrients.
- The natural color of Apex™ Green Seed Coating improves monitoring of the seeded area and seeding rates. The change in color also disguises the seed from natural predators, such as birds, increasing the seeds survivability.
- Seeds coated with Apex™ Green Seed Coating are larger and distribute more evenly. The added size increases spread width up to 40% and helps seed penetrate stubble or thatch for maximum seed-soil contact, a crucial step to a seeds germination.
- Every seed planted with Apex™ Green Seed Coating is surrounded with a natural micronutrient rich environment, stimulating vigorous growth in young seedlings. When applied to legumes Apex™ Green Seed Coating allows very high numbers of Nitrogen fixing rhizobia, helping ensure crucial nodulation.
- The hygroscopic nature of Apex™ Green Seed Coating helps pull and hold moisture, aiding in germination. Our new Apex™ Green HydroLoc contains an organic hydration component that helps maximize water absorption for enhanced germination and accelerated growth.



ULTRACUT™ ALFALFA DISEASE PACKAGE



ULTRACUT™ ALFALFA DISEASE PACKAGE OFFERS PROTECTION AND YIELD POTENTIAL

The best way to protect against evolving Anthracnose and Aphanomyces (A/A) threats in your alfalfa stands is to plant a variety with more advanced resistance. The UltraCut™ alfalfa disease package helps you grow a healthy alfalfa crop even in field conditions susceptible to A/A disease strains. Its protection can help deliver an advantage through improved agronomic performance and yield potential.

Crown, stem and root diseases can cause significant impact on alfalfa yield, quality and persistence. The UltraCut alfalfa disease package enables strong stand establishment through unmatched seedling genetic disease resistance. Without disease-resistant seed, if your plants are subjected to these diseases, the damage can be yield limiting and sometimes fatal. You may have to terminate your stand and start over in soil that's possibly still contaminated with the disease strains.

See healthier stands and more yield in your fields* by planting varieties with the UltraCut alfalfa disease package.

UltraCut alfalfa disease package is available in 6439HVXRR, 6423R and 6453Q.



UltraCut™ alfalfa disease package varieties (in the middle) compared to susceptible competitive check varieties (on outsides), Photo taken at FGI Research Facility, June 2018, West Salem, WI

*Compared to varieties without the UltraCut alfalfa disease package in fields with disease pressure.

6439HVXR

HARVXTRA® ALFALFA WITH ROUNDUP READY® TECHNOLOGY

- 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.
- Has shown a 20% reduction in lignin vs. competitive checks thus a greater RFQ of 20% and 17% higher NDFD.
- Top choice for poorly drained soils.
- Features industry leading UltraCut™ alfalfa disease package that offers enhanced protection against evolving Aphanomyces¹ strains and our patented Anthracnose² technology.



Agronomic Features

Fall Growth	Dormant
Stand Persistence	Very Good
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracnose (Race 1)	High Resistance
Anthracnose (Race 5) ²	Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	High Resistance
Evolving Aphanomyces Strains ¹	High Resistance
Disease Rating Index	39/40

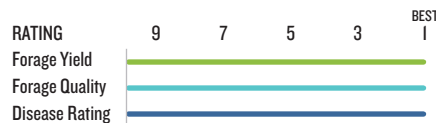
Pest Resistance

Pea Aphid	Resistance
Spotted Aphid	Resistance
Stem Nematode	Resistance

¹Includes 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.

²Includes race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

Fall Dormancy: 4.4 / Winter Hardiness: 1.6



Variety Yield Performance: East

Variety	Multi-Year % of Checks
6439HVXR	108
54Q29	102
54HVX42	99
AFX 579	99
54HVX4I	97
L-45IAPH2+	96
HYBRIFORCE-3400	93

Data from FGI Trials in Wisconsin, Iowa and Pennsylvania from 2019-2022

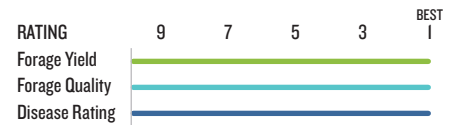
6957HVXR BRAND

LATEST NON-DORMANT RELEASE OF HARVXTRA® ALFALFA IN FD9



- Winter-active, non-dormant FD=9.0.
- HarvXtra® Alfalfa gives growers the ability to better manage the yield-versus-quality trade-off. It offers more flexibility in cutting schedule to achieve improved forage quality or greater yield potential, when compared to conventional alfalfa at the same stage of maturity.
- The HarvXtra® technology provides unprecedented flexibility by widening cutting windows, which gives growers the option at each cutting to:
 - » Maintain their normal harvest schedules for higher-quality forage, or
 - » Delay harvest for 5-7 days for increased yield potential, without sacrificing forage quality, compared to conventional alfalfa at the same stage of maturity.
- Non-dormant HarvXtra® Alfalfa has on average 12-14% less lignin and 8-10% higher neutral detergent fiber digestibility (NDFD) than conventional alfalfa harvested at the same stage of maturity.
- HarvXtra® Alfalfa is stacked with the Roundup Ready® Technology for unsurpassed weed control with excellent crop safety.

Fall Dormancy: 9



Agronomic Features	
Stand Persistence	Excellent
Early Seeding Vigor	Excellent
Recovery After Harvest	Fast
Leaf Retention	Excellent
Plant Color	Dark Green
Salt Tolerance	Germination

Disease Tolerance	
Bacterial Wilt	Moderate Resistance
Fusarium Wilt	High Resistance
Verticillium Wilt	Resistance
Anthraxnose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance

Pest Resistance	
Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Stem Nematode	Resistance

Variety Yield Performance

Variety	Davis	Los Banos	Maricopa
6957HVXR BRAND	106	129	108
RRALF 9R100	107	109	96
6829R	94		101
HVX840RR BRAND	101	115	
6015R		108	

FGI Trial locations: 2018 Davis, CA; 2018 Los Banos, CA; 2018 Maricopa, AZ

6373R

TOP QUALITY FOR DAIRY AND CASH HAY PRODUCERS

- Perfect variety for the producer that wants quality with a 2-4 cut system.
- Excellent disease package.
- Best choice for stand persistence and winterhardiness.
- 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.



Fall Dormancy: 3.2 / Winter Hardiness: 1.0



Agronomic Features	
Fall Growth	Dormant
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Excellent
Recovery After Cutting	Moderately Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance	
Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	Resistance
Disease Rating Index	34/35

Pest Resistance	
Pea Aphid	High Resistance
Spotted Aphid	Resistance
Stem Nematode	Moderate Resistance

Variety Yield Performance: East

Variety	Multi-Year % of Checks
6373R	106
PGI 459	102
54V09	96
LEGACY 449 APH2	96
HYBRIFORCE-3400	95

Data from FGI Trials in Wisconsin from 2016-2019

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6373R	104
54QR04	98

Data from FGI Trials in Washington and Idaho from 2018-2020

6497R

TOP QUALITY FOR DAIRY AND CASH HAY PRODUCERS

- Herbicide-tolerant replacement for Liberator and 6443RR.
- Maximum yield potential, quality and/or milk per acre potential.
- High multifoliate expression for maximum quality.
- 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.



Fall Dormancy: 4.0 / Winter Hardiness: 2.0



Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	High Resistance
Disease Rating Index	30/30

Pest Resistance

Pea Aphid	Resistance
Stem Nematode	Resistance
N. Root Knot Nematode	Resistance

NEXTECT™ RR BRAND



EXCEPTIONAL QUALITY FOR AN EXCEPTIONAL VALUE

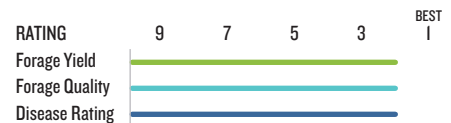
- An economical Roundup Ready® alfalfa blended for dependable forage yield potential and good quality
- Good winterhardiness and pest package with resistance to key diseases
- Moderate to fast recovery after cutting for optimum yield potential

UTILIZING THE ROUNDUP READY® WEED CONTROL SYSTEM PROVIDES MANY BENEFITS

- Weed control at both stand establishment and in established stands means fewer weeds and higher quality hay and haylage
- Optimal crop safety at all growth stages provides increased yield potential in both the establishment and subsequent years
- Flexibility in timing of application allows growers to spray when necessary; no carryover or crop rotation limitations
- Minimal wait (5 days) after Roundup® application before haying/feeding



Fall Dormancy: 4 / Winter Hardiness: 2



Agronomic Features

Cuttings/Season	3-5
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Moderate to Fast
Forage Quality	Very Good

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race I)	Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	Resistance
Disease Rating Index	28/30

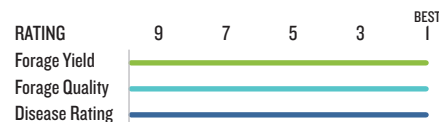
6427R

TOP YIELD POTENTIAL VARIETY WITH HIGH RESISTANCE TO STEM NEMATODES

- Broadly adapted variety with high resistance to stem nematode.
- High tolerance to salt at germination.
- Replaces Mutiny with better winterhardiness.
- High multifoliate expression for maximum quality.
- 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.



Fall Dormancy: 4.1 / Winter Hardiness: 1.0



Agronomic Features	
Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance	
Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	Resistance
Disease Rating Index	34/35

Pest Resistance	
Pea Aphid	Resistance
Spotted Aphid	Resistance
Stem Nematode	High Resistance

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6427R	107
55VR05	101
54R02	100
54QR04	100

Data from FGI Trials in Washington from 2015-2016

Variety	Multi-Year % of Checks
6427R	106
55VR08	103
HYBRIFORCE-3400	102
54VR10	100
54Q29	97
AFX 579	96

Data from FGI Trials in Kansas from 2019-2021

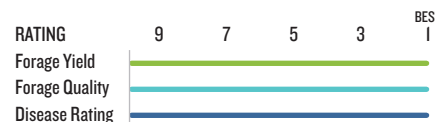
6424R

TOP YIELD POTENTIAL VARIETY WITH HIGH RESISTANCE TO RACE 1 & 2 APHANOMYCES

- Highly resistant to Aphanomyces Race 2.
- High multifoliate expression for maximum quality.
- 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.



Fall Dormancy: 4.2 / Winter Hardiness: 1.8



Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	High Resistance
Disease Rating Index	35/35

Pest Resistance

Pea Aphid	Resistance
Spotted Aphid	Moderate Resistance
Stem Nematode	Resistance

Variety Yield Performance: East

Variety	Multi-Year % of Checks
6424R	105
54Q29	104
SW4107	101
L-45IAPH2+	98
HI-GEST 360	95
AFX 579	94
HYBRIFORCE-4400	92

Data from FGI Trials in Wisconsin, Iowa and Pennsylvania from 2019-2022

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6424R	109
54QR04	100
HYBRIFORCE-3400	100
54V09	95

Data from FGI Trials in Idaho from 2017-2020

6423R



TOP ULTRACUT™ ALFALFA DISEASE PACKAGE VARIETY IN THE ROUNDUP READY® LINEUP WITH EXTREME COLD TOLERANCE

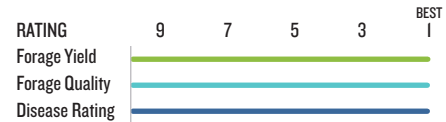
- Highly resistant to multiple races of Aphanomyces for protection during establishment and early season cool and wet soil conditions
- Highly resistant to multiple races of Anthracnose for protection during warm and humid weather conditions
- Top choice for heavy, compacted and saturated soils
- Extremely winterhardy providing superb cold tolerance
- Salt tolerance at germination
- High multifoliate expression for maximum quality
- 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.



Agronomic Features

Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent

Fall Dormancy: 4.0 / Winter Hardiness: 1.0



Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracnose (Race 1)	High Resistance
Anthracnose (Race 5) ²	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	High Resistance
Evolving Aphanomyces Strains ¹	High Resistance
Disease Rating Index	40/40

Variety Yield Performance: East

Variety	Multi-Year % of Checks
6423R	108
54VR10	105
54Q29	103
L-451APH2+	99
AFX 579	98
HYBRIFORCE-4400	94

Data from FGI Trials in Wisconsin from 2021-2022

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6423R	104
DKA40-5IRR	100
WL 356HQ.RR	95

Data from FGI Trials in Idaho from 2021-2022

Pest Resistance

Pea Aphid	High Resistance
Spotted Alfalfa Aphid	Resistance
Stem Nematode	Resistance

¹Includes 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.

²Includes race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

6516R



STEP CHANGE IN YIELD POTENTIAL AND FORAGE QUALITY

- Rapid recovery after cutting enables maximum number of harvests.
- High resistance to Stem Nematode.
- Latest generation fall dormancy 5 variety.
- 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.

Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Very Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent
Salt Tolerance	Germination

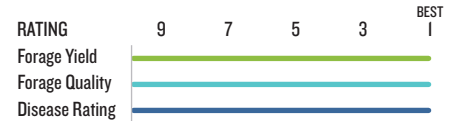
Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	High Resistance
Disease Rating Index	30/30

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Stem Nematode	High Resistance
N. Root Knot Nematode	High Resistance

Fall Dormancy: 4.5 / Winter Hardiness: Very Hardy



Variety Yield Performance: West

Variety	Multi-Year % of Checks
6516R	105
55VR05	99

Data from FGI Trials in Washington from 2015-2019

6829R



ROUNDUP READY® NON DORMANT VARIETY

- Strong performance in the presence of stem nematode.
- Tolerant to saline conditions during germination.
- Strong aphid resistance package.
- 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.

Agronomic Features

Fall Growth	Non-Dormant
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	Resistance
Verticillium Wilt	Resistance
Fusarium Wilt	Resistance
Anthracnose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	High Resistance

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Blue Aphid	Resistance
Stem Nematode	High Resistance
N. Root Knot Nematode	High Resistance

Fall Dormancy: 7.5



Variety Yield Performance: West

Variety	Multi-Year % of Checks
6829R	107
RRALF 8R100	93

Data from FGI Trials in California from 2011-2016

6830R BRAND

IMPROVED SALT TOLERANCE AND STRONG APHID RESISTANCE IN THE ROUNDUP READY® LINEUP

- Improved salt tolerance of germinating seeds over replacement variety.
- Strong aphid resistance.
- Combination of salt tolerance and high resistance to Phytophthora Root Rot provides improved establishment success.
- 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.



Fall Dormancy: 8.3



Agronomic Features

Fall Growth	Non-Dormant
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	Resistance
Verticillium Wilt	Resistance
Fusarium Wilt	Resistance
Anthraco nose (Race I)	Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	Resistance

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Stem Nematode	High Resistance

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6830R BRAND	126
6829R	92
RRALF 9R100	108

Data from FGI Trials in California from 2021-2023

6902R BRAND



NEW ROUNDUP READY® NON DORMANT VARIETY

- Strong performance in the presence of stem nematode.
- Tolerant to saline conditions during germination.
- Strong aphid resistance package.
- 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.

Agronomic Features

Fall Growth	Non-Dormant
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Good
Recovery After Cutting	Very Fast
Forage Quality	Very Good
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	Resistance
Verticillium Wilt	Resistance
Fusarium Wilt	High Resistance
Anthraco nose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	Low Resistance

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Blue Aphid	Resistance
Stem Nematode	High Resistance

Fall Dormancy: 9.4



Variety Yield Performance: West

Variety	Multi-Year % of Checks
6902R BRAND	125
RRALF 9R100	108

Data from FGI Trials in California from 2014-2020

SPREDOR 5

FIFTH GENERATION SPREDOR WITH CREEPING ROOT SYSTEM

- Creeping variety is well suited to rangeland environments.
- Well adapted as a legume for pasture renovation.
- Tested and proven yields in salt-tolerant trials.



Fall Dormancy: 1.9 / Winter Hardiness: 1.0



Agronomic Features

Fall Growth	Early Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Excellent
Recovery After Cutting	Moderate
Forage Quality	Very Good
Salt Tolerance	Germination

Pest Resistance

Pea Aphid	Resistance
Spotted Aphid	Resistance
Stem Nematode	Resistance

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	Resistance
Disease Rating Index	34/35

6305Q



PERFORMS UNDER INTENSE HARVEST TRAFFIC

- Great quality and yield potential in a fall dormancy 3 product.
- Exceptional winterhardness and persistence.
- Top disease rating for defensive capability.

Agronomic Features

Fall Growth	Medium Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Excellent
Recovery After Cutting	Moderately Fast
Forage Quality	Excellent

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	High Resistance
Disease Rating Index	30/30

Pest Resistance

Pea Aphid	Resistance
Spotted Aphid	High Resistance
Stem Nematode	Resistance

Fall Dormancy: 3.2 / Winter Hardiness: 1.0



Variety Yield Performance: East

Variety	Multi-Year % of Checks
6305Q	106
HYBRIFORCE-2400	98
HYBRIFORCE-440	93
ATTENTION II	89
54HII	88

Data from FGI Trials in Wisconsin from 2011-2015

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6305Q	102
HYBRIFORCE-400	99
54Q53	97

Data from FGI Trials in Idaho from 2007-2008

6480H BRAND

LATEST GENERATION LEAFHOPPER RESISTANCE

- Step-change in yield potential with highest level of Leafhopper protection.
- Disease Resistance Index of 34/35.
- Outstanding winterhardness for Leafhopper varieties.



Fall Dormancy: 3.9 / Winter Hardiness: 2.0



Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Excellent
Recovery After Cutting	Very Fast
Forage Quality	Very Good

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	Moderate Resistance
Leafhopper Yellowing	High Resistance

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthraxnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	Resistance
Disease Rating Index	34/35

6401N



PROVEN YIELDS IN HIGH PH SOILS

- Tolerant to salt at germination.
- Excellent under high pH soils.
- High resistance to Stem Nematode.

Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Very Good
Drought Stress	Very Good
Recovery After Cutting	Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracoese (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	Resistance
Disease Rating Index	29/30

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	Resistance
Stem Nematode	High Resistance
N. Root Knot Nematode	High Resistance

Fall Dormancy: 4.0 / Winter Hardiness: Very Hardy



Variety Yield Performance: West

Variety	Multi-Year % of Checks
6401N	110
HYBRIFORCE-3400	102

Data from FGI Trials in Washington and Idaho from 2015-2021

Variety	Multi-Year % of Checks
6401N	108
55V50	100

Data from FGI Trials in Washington and Idaho from 2013-2019

6422Q



TOP-PERFORMING VARIETY

- Six-time commercial hay champion at World Forage Analysis Superbowl.
- Outstanding winterhardiness in a full-season variety.
- Very fast recovery for multiple cut systems.

Agronomic Features

Yield Cuts	4-5
Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Excellent
Drought Stress	Very Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracoese (Race I)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race I)	High Resistance
Disease Rating Index	30/30

Pest Resistance

Pea Aphid	Resistance
Spotted Aphid	Resistance
Stem Nematode	Resistance

Fall Dormancy: 4.5 / Winter Hardiness: 1.0



Variety Yield Performance: East

Variety	Multi-Year % of Checks
6422Q	107
HYBRIFORCE-3400	96
LEGACY 449 APH2	96

Data from FGI Trials in Wisconsin and Iowa from 2017-2021

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6422Q	108
55V50	100
HYBRIFORCE-2400	97

Data from FGI Trials in Washington and Idaho from 2013-2015

6453Q

ULTRACUT™ ALFALFA DISEASE PACKAGE UPS ANTE ON YIELD AND PERSISTENCE LEADER

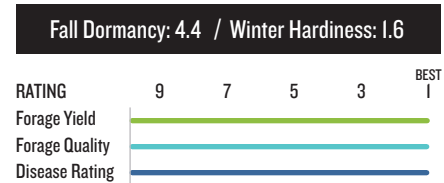
- Outstanding yield potential and agronomic performance under 4 to 5-cut harvest management systems (FD=4.4) in various locations throughout dormant alfalfa use areas.
- A new day in disease resistance, 6453Q's perfect Disease Resistance Index includes our UltraCut™ alfalfa disease package which offer growers the ability to help protect yield and quality potential.
- Superb winterhardiness (WH=1.6); 6453Q delivers excellent cold tolerance and persistence.
- 6453Q contains high-quality feed value levels highly desirable for dairy and cash hay producers.



Agronomic Features	
Fall Growth	Dormant
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Very Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance	
Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracoese (Race 1)	High Resistance
Anthracoese (Race 5) ²	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	High Resistance
Evolving Aphanomyces Strains ¹	High Resistance
Disease Rating Index	40/40

Pest Resistance	
Pea Aphid	Resistance
Spotted Alfalfa Aphid	Resistance
Stem Nematode	Resistance



Variety Yield Performance: East

Variety	Multi-Year % of Checks
6453Q	113
54Q29	104
L-45IAPH2+	99
HYBRIFORCE-4400	90

Data from FGI Trials in Wisconsin and Pennsylvania from 2020-2022

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6453Q	107
HYBRIFORCE-3400	98

Data from FGI Trials in Washington and Idaho from 2017-2022

Variety	Multi-Year % of Checks
6453Q	105
AFX 579	96
HYBRIFORCE-3400	94

Data from FGI Trials in Washington and Idaho from 2020-2022

¹Includes 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. ²Includes race 1 protection, along with Anthracnose Race 5 protection, which is patented by FGI.

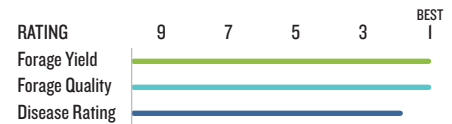
6585Q

HIGH-YIELD POTENTIAL COMPANION TO 6422Q

- A leading fall dormancy 5 variety for maximum cuttings.
- High yield potential variety selected for top forage quality.
- Fast recovery for 4-6 cuttings season.



Fall Dormancy: 5.0 / Winter Hardiness: 1.9



Agronomic Features

Fall Growth	Late Fall Dormancy
Stand Persistence	Excellent
Early Seedling Growth	Excellent
Drought Stress	Good
Recovery After Cutting	Very Fast
Forage Quality	Excellent
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	High Resistance
Verticillium Wilt	High Resistance
Fusarium Wilt	High Resistance
Anthracnose (Race 1)	High Resistance
Phytophthora Root Rot	High Resistance
Aphanomyces Root Rot (Race 1)	High Resistance
Aphanomyces Root Rot (Race 2)	Resistance
Disease Rating Index	34/35

Pest Resistance

Pea Aphid	Resistance
Stem Nematode	High Resistance
N. Root Knot Nematode	Resistance

Variety Yield Performance: East

Variety	Multi-Year % of Checks
6585Q	109
AFX 579	101
54Q29	100
L-45IAPH2+	97
HYBRIFORCE-3400	94

Data from FGI Trials in Wisconsin and Pennsylvania from 2019-2022

Variety Yield Performance: West

Variety	Multi-Year % of Checks
6585Q	106
55V50	99
55Q27	96

Data from FGI Trials in Washington from 2017-2019

6906N

HIGH YIELDING FALL DORMANCY 9

- Provides salt tolerance at critical stages in plant development.
- High resistance to Stem Nematode.
- High resistance to critical aphids.



Agronomic Features

Fall Growth	Non-Dormant
Stand Persistence	Very Good
Early Seedling Growth	Excellent
Drought Stress	Good
Recovery After Cutting	Very Fast
Forage Quality	Very Good
Salt Tolerance	Germination

Disease Tolerance

Bacterial Wilt	Moderate Resistance
Fusarium Wilt	High Resistance
Anthraco nose (Race I)	Resistance
Phytophthora Root Rot	Resistance

Pest Resistance

Pea Aphid	High Resistance
Spotted Aphid	High Resistance
Blue Aphid	High Resistance
Stem Nematode	High Resistance

Fall Dormancy: 8.9



Variety Yield Performance: West

Variety	Multi-Year % of Checks
6906N	107
PGI 909	98
HYBRIFORCE-800	95

Data from FGI Trials in California from 2012-2015

PLANTNEXGROW.COM



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