



AmeriStand 481 HVXRR



FALL DORMANCY: 4.0

WINTERHARDINESS: 1.9

CUTTINGS/SEASON: 3-4

PERFORMANCE PROFILE

Yield Potential: Excellent

Forage Quality Potential: Excellent

Stand Persistence: Excellent

Recovery After Cutting: Fast

RESISTANCE RATINGS

Phytophthora Root Rot: HR

Aphanomyces Root Rot
RACE 1: HR
RACE 2: HR
RACE 3*: R

Anthracnose RACE 1: HR
Anthracnose RACE 5:** R

Verticillium Wilt: HR

Bacterial Wilt: HR

Fusarium Wilt: HR

Pea Aphid: R

Stem Nematode: R

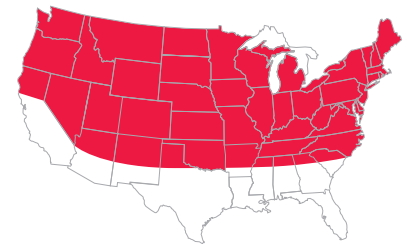
HR = >51% Resistance
R = 31-50% Resistance
MR = 15-30% Resistance
LR = 6-14% Resistance

*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 race. This research was initiated in 2017 and we anticipate completion in 2019.

**Anthracnose Race 5 was recently confirmed by researchers at Forage Genetics International, LLC (FGI) and USDA's Agricultural Research Service.

HarvXtra® Alfalfa with Roundup Ready® Technology is the Industry's First Genetically Enhanced Alfalfa Technology Developed to Maximize Quality

- Latest advancement in disease resistance, which includes High Resistance to Aphanomyces Root Rot Race 1, 2 and 3*; and includes multi-race resistance to Anthracnose**
- HarvXtra® Alfalfa gives growers the ability to better manage the yield-versus-quality tradeoff. 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
- Expect fast recovery for frequent harvest schedules under intensive management



• Primary Adaptation

POTENTIAL BENEFITS OF HARVXTRA® ALFALFA WITH ROUNDUP READY® TECHNOLOGY

Forage quality advantage

- Maintain current harvest schedule
- Higher likelihood of harvesting premium quality hay

Delayed harvest

- Potential for fewer harvests
- Potential for higher forage yield
- Potential for improved persistence

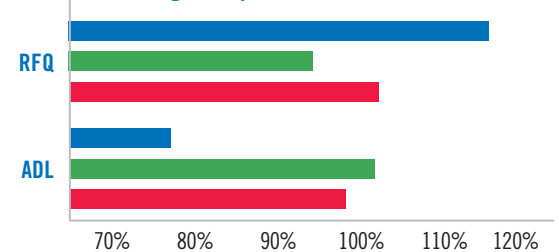
Flexibility

- Increased harvest timing flexibility

PRODUCT	FORAGE YIELD (% COMMERCIAL CHECKS)		
	WEST SALEM, WI	BOONE, IA	MT. JOY, PA
AS 481 HVXRR	120%	108%	110%
PIONEER 54R02	100%	104%	105%
HYBRIFORCE 3400	99%	100%	100%
WL 372HQ.RR	103%	99%	98%
ATTENTION II	95%	94%	98%

2015 HarvXtra® Alfalfa Demo [WI, IA & PA] - Aug 2016-17 data collected demo harvested at late bud stage; 28-32 day cutting schedule.

Forage Quality (% of Commercial Checks)



- AmeriStand 481 HVXRR
- Pioneer 54R02
- HybriForce 3400

In the following states, purchase and use of HarvXtra® Alfalfa with Roundup Ready® Technology is subject to a Seed and Feed Use Agreement, requiring that products of this technology can only be used on farm or otherwise be used in the United States: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. In addition, due to the unique cropping practices do not plant HarvXtra® Alfalfa with Roundup Ready® Technology in Imperial County, California, pending import approval and until Forage Genetics International, LLC (FGI) grants express permission for such planting.

Forage Genetics International, LLC ("FGI") is a member of Excellence Through Stewardship® (ETS). FGI products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with FGI's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. As of June 2017, HarvXtra® Alfalfa with Roundup Ready® Technology has pending import approvals. GROWERS MUST DIRECT ANY PRODUCT PRODUCED FROM HARVXTRA® ALFALFA WITH ROUNDUP READY® TECHNOLOGY SEED OR CROPS (INCLUDING HAY AND HAY PRODUCTS) ONLY TO UNITED STATES DOMESTIC USE. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Growers should refer to <http://www.biotechstatus.com/> for any updated information on import country approvals. Excellence Through Stewardship® is a registered trademark of Biotechnology Industry Organization.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready® crops contain genes that confer tolerance to glyphosate. Glyphosate herbicides will kill crops that are not tolerant to glyphosate.

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Due to factors outside of Forage Genetics International's (FGI) control, such as weather, crop production patterns, and other factors, results to be obtained, including but not limited to yields or financial performance, cannot be predicted or guaranteed by FGI. Results are based upon FGI controlled tests and field trials and public trials. Actual results may vary.



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